GradEX
2015

15 May
Stoke-on-Trent
and Stafford

Contents

Stoke

Stafford

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Welcome to GradEX 2015

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It is our great pleasure to welcome you all to GradEX, our annual exhibition of project work undertaken by final year students at Staffordshire University. For the second year running this event features students from the Faculty of Computing, Engineering and Sciences and students from the Faculty of Arts and Creative Technologies showcasing their work. You can find our Engineering and Science students based in fantastic new facilities in the Mellor Building at the Stoke campus. As in previous years our Computing students and Entertainment Technology students (Games, Film and Music) will be exhibiting their work at the Stafford campus.

The purpose of the exhibition is to allow our students to showcase their work to prospective employers, the public, friends, family, and colleagues, and it has become a well-established event in the University's calendar.

GradEX offers our students a chance to explain their work to others and as such it plays an important and formative role in their development. Key to GradEX's success is the involvement of employers and every year the personal interactions that take place between our students and key industry figures result in genuine job offers and career opportunities.

This year, a special mention must go to the School of Computing as 2015 Marks our 50th anniversary of delivering computing degrees in the UK and across the world. During that time we've supplied tens of thousands of high calibre Staffordshire University graduates have joined and contributed to an industry that has revolutionised the way we live our lives. GradEx2015 will now give our Computing students will give you an opportunity to offer you an insight into what the next 50 years hold.

GradEX 2015 is sponsored by a range of employers and professional organisations. We are very grateful for their support as not only does it serve as a mark of recognition for the work of our students, but it also adds significant value and esteem to the event.

Thank you for taking the time to visit. We are very proud of our students and GradEX provides an excellent opportunity to celebrate their achievements. We both hope that you can share in this celebration and that you enjoy your day with us at Staffordshire University.

Main Event Sponsors

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Our vision is to be a world-class organisation for IT. Our 70,000 strong membership includes practitioners, businesses, academics and students in the UK and internationally. The British Computer Society has been instrumental in the support, development and recognition of Staffordshire University's School of Computing which celebrates its 50th year in 2015.

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LEONI has a strong partnership with Staffordshire University. In 2010, LEONI and the University worked together to create a bespoke Electrical Course, written specifically to address the LEONI skills requirements. We will continue to work closely with the University, to provide solutions to our technical training needs and we hope to further build this partnership in the future.

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Waqar Ahmed
W_Ahmed123@hotmail.co.uk

BSc (Hons) Aeronautical Technology

The Advantages of Redesigning the Airbus Flight Deck System
There are ongoing design flaws with the Airbus pilot flight deck interface, due to the insufficient feedback to the pilots provided from the control systems. Minimal sensitivity feedback is supplied from a single operated spring side stick as it is controlled by a computer system known as 'fly by wire system'.
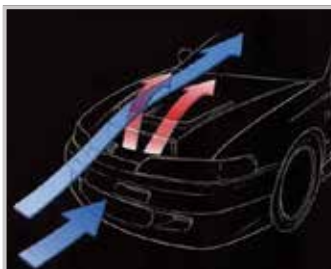
Paul Aucott
paulaucott@gmail.com

BSc (Hons) Automotive Technology

An Investigation into an Engine's Most Efficient Air-path
This project will discover the most efficient ways of controlling the air and dissipating the hot air built up inside a car's engine bay preventing stagnant air warming the engine and reducing the performance.


Charlie J W Blundell
c.blundell@hotmail.co.uk

BSc (Hons) Motorsport Technology

Aerodynamic Design of a F24 plus Challenge car
Aerodynamic design of a F24 plus Greenpower challenge vehicle. This will be designed within pre-designated dimensions to conform to regulations. Which will be tested with fluid dynamics software to analyse the data and determine the success of the design along with improvements if needed.
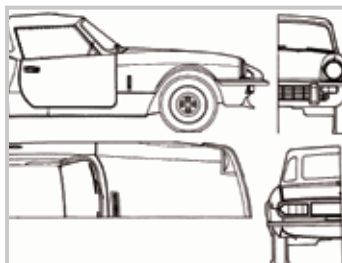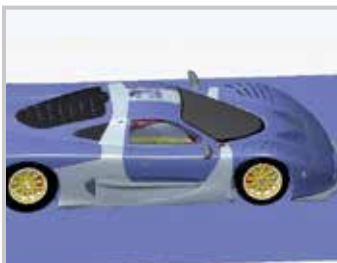

James Brook
uk.linkedin.com/in/jameswbrook

BSc (Hons) Motorsport Technology

Integration of Data Logging Systems into Historic Race Cars
This project investigates how data logging systems can be used with historic vehicles. Including the Design, Development and Implementation of a data logger.

Jennifer Broom
jennifer.broom@hotmail.com

BSc (Hons) Motorsport Technology

Design and Development of a High Performance Air Box
This project is about designing and developing an air intake box for the university's Mosler race car. This air box will be tested a number of different ways to make sure it is up to the standard to provide the correct amount of air to each cylinder.

James Bruce
jbruce2610@gmail.com

BSc (Hons) Motorsport Technology

Mathematical Vehicle Dynamics vs Physical Performance
A comparison of mathematical vehicle dynamic behaviour with physical handling characteristics with the use of data logging.

Jack Butler

BEng (Hons) Automotive Engineering

An Investigation into Improved Designs for F1 Rear Wings
This aim of this project is to design a Formula 1 rear wing that can be used by F1 teams at any circuit regardless of downforce or drag requirements.

Jonathan Cobham
jonathan-cobham@outlook.com

BSc (Hons) Aeronautical Technology

The Effects and Monitoring of Fatigue in Commercial Pilots
Pilots who are fatigued are liable to have slower reactions and can be impaired mentally, which is dangerous. This is why I'm designing a system that is able to monitor a pilot's fatigue level accurately.

Jack Ellis

BSc (Hons) Automotive Technology

The Feasibility of Rapid Prototyping Exhaust Mufflers
The feasibility of producing scale model exhaust mufflers to be used for transmission loss testing, so as to speed up analysis and the implementation of adaptions to the design of the muffler components.

Kevin Ennin
KevinEnnin@outlook.com

BSc (Hons) Aeronautical Technology

Comparing the Performance of Quad Copter from a Helicopter
This project focuses on the performance from a Quad copter UAV from a helicopter UAV. Looking at the performance and possible improvements that can be made by doing several field tests and using software's like phoenics.


Jake Hall
jake@hall05.co.uk

BSc (Hons) Motorsport Technology

Underfloor Aerodynamics of Performance Road Cars
Throughout this project varying aspects of underfloor aerodynamic designs, specifically for performance road cars will be examined. The purpose will be to display how each section of the different underfloor designs are working together to create the most efficient system possible.
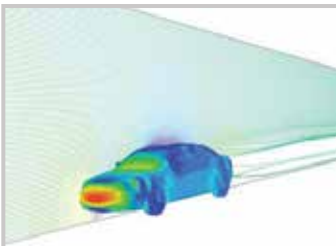
Christopher Harpham
c.harpham@live.co.uk

BSc (Hons) Motorsport Technology

The Aerodynamic Effects of Oversteer in Performance Vehicles
Oversteer (yaw) in performance vehicles has been investigated using CFD and CAD software. Consideration is given to aerodynamic design and minimising performance loss. Research is presented to support the findings and design aspect of the project, culminating in a fully CFD-tested wing design, ready for FEA testing.

Christopher Houghton
chrishoughton18@yahoo.co.uk

BSc (Hons) Aeronautical Technology

Principles, Theories and Applications of Forward Swept Wings
Wing sweep was a major design alteration which lead to safer flight at transonic speed. The convention is to adhere to a rearward sweep, but forward sweep has been found to possess some distinct advantages. Yet, they are found rarely on prototype aircraft; Even rarer still on production aircraft - Why?
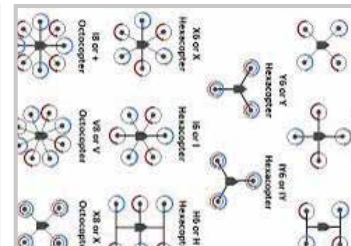

Andrew Jamieson
andrewjamieson1994@hotmail.com

BSc (Hons) Aeronautical Technology

Design and Investigation into UAV Propeller Blades
To research, design and test UAV propeller blades using my own test rig. Extensive research into propeller blade dynamics and geometry effects will be undertaken.

Robert Kameny
RobertKameny@gmail.com

BEng (Hons) Aeronautical Technology

Heli-rotor UAV Rotor Arrangement
This particular project is targeting a multiple aerodynamic issues associated along with various rotor arrangements used on small UAV multicopters.

Chris Kavanagh
chriskavanagh94@hotmail.com

BSc (Hons) Aeronautical Technology

Viability of introducing Hydrogen Fuel Cells into Aviation
Having a detailed review on current fuel cell technologies to see where they excel as well as their apparent limitations. The history of propulsion, the history of hydrogen fuel cells, how fuel cells work, current technologies and future potential applications are all discussed in this report.
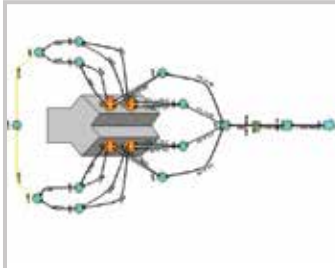
Frazer Killops
killopsf1@hotmail.co.uk

BSc (Hons) Automotive Technology

Feasibility of a V4 Engine with Cylinder Deactivationm
The outcomes of the project are to see whether there are any advantages to having a small capacity V4 engine with Cylinder Deactivation over the standard in-line 4. Fuel Economy and Emissions are at the forefront of the project.

William Kwarteng-Ferradas
w_k_f91@hotmail.com

BSc (Hons) Aeronautical Technology

Investigation of Pre-spin in Aircraft Landing Gear Wheels
To develop a mechanism that will enhance the spinning of the main landing wheels prior to touchdown.

Jake McCann
jakemccann94@outlook.com

BSc (Hons) Aeronautical Technology

Research of Gas Turbine and Electric Hybrid Aircraft Engines
This is a research paper on future engines that could replace current traditional gas turbine engines. By looking into gas turbine and electric hybrid engines, accessing how the engines work, whether they can work and whether it would be plausible for these engines to work in the aviation industry.

Jamie Millington
jamiemillington93@gmail.com

BSc (Hons) Aeronautical Technology

Modification of UAV Airframes for Increased Performance
This project shows the benefits for the modification of the aerodynamic and other physical properties of UAV airframes to improve performance over the common quad-rotor design.

Jorge Morais
jorge.morais@formulauem.es

BEng (Hons) Mechanical Engineering

Design and Development of a Dual Resonant Intake System (FS)
Formula Student competition is an event held by the IMeche in which universities of all over the world compete by designing, developing and manufacturing a racing car. This project will focus on the development of the dual resonant intake system, the first of its kind in this competition.

Owen Morgan
owenmorgan23@hotmail.com

BSc (Hons) Automotive Technology

Improving a Track Day using Aerodynamics to Modify a Vehicle
The main aim is to improve a track day experience for a road vehicle by adding parts to improve the aerodynamics of a vehicle. This will be done by producing several aerodynamic modifications to a 3D vehicle and to improve aerodynamics for track purposes and by modelling in Creo.
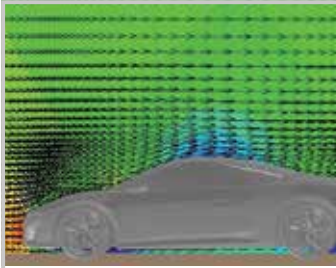
Michael Mpofu
michael_mpofu@hotmail.co.uk

BSc (Hons) Motorsport Technology

Airless Tyres in Motorsport
This project looks into the use of airless tyres. There are products out there such as the twheel that uses a system of flexible spokes rather than air to support the wheel. These are a safer alternative as they cannot deflate of explode unpredictably.

Nikhil Panchal
nikhilpanchal92@gmail.com

BEng (Hons) Automotive Engineering

The Aerodynamic Performance of an Exhaust Blown Diffuser
The aim of this project is to investigate whether an exhaust blown diffuser on a production car can improve the aerodynamic efficiency of a diffuser. This is done through the use of CFD simulations, with different vehicle setups to see which provides the best overall result.
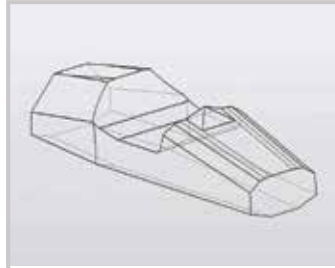

Steven Peacock
steven-peacock@hotmail.com

BSc (Hons) Aeronautical Technology

Re-design of the Cirrus SR22 Landing Gear
Taken the 2001 Cirrus SR22 and redesigned its current fixed landing gear for a new retractable landing gear system. The design will undergo multiple tests such as Stress Analysis, Aerodynamic analysis.


Daniel Poole
DPoolePSP@gmail.com

BSc (Hons) Motorsport Technology

Testing the Mechanical Properties of CFRP Components
Three CFRP components found on motorsport vehicles; the chassis, prop shaft, and wing structure, will undergo static tests to discover their mechanical properties. They have been designed and simulated on CAD before being professionally made using pre-preg laminates and tested to discover their actual performance.
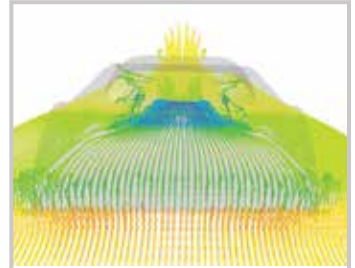
Jai Premji
jaipremji93@hotmail.co.uk

BSc (Hons) Motorsport Technology

Flat Floor and Diffuser Design for a Mosler MT900 Race Car
This project looks to improve the current design of the OEM diffuser and flat floor of the Mosler MT900M series race car through computational fluid dynamics analysis and computer aided design.

David Reeves
reevesylfc@gmail.com

BSc (Hons) Aeronautical Technology

Levels of Automation in the Cockpit and its Effect on Airmen
Are commercial aircraft becoming too automated and are pilots relying on this automation so much that it is decaying their natural skill and is this causing a safety issue within the industry? Is pilot training to blame? Or should manufactures re-think flight deck design?

Smarak Thapa
smarak_thapa@hotmail.com

BSc (Hons) Aeronautical Technology

Blimp as Small UAV
Blimp is a small UAV which is used for surveillance and spying.

Daniel Ward
https://www.artstation.com/artist/danleeward

BSc (Hons) Games Concept Design

Creatively Exploring Automotive Design
Presenting a display of automotive and transport design, exhibiting both the exterior and interior of vehicles and aiming to apply a high level of innovation and creative thinking to more abstract areas. Complimenting this is the exploration of 3D modelling, a key aspect of producing conceptualised ideas.stages to gain valuable information on the area.

Matthew Wright
wright_13@hotmail.co.uk

BSc (Hons) Aeronautical Technology

UAV Ground Effect Testing Rig
UAVs, the need to understand and improve efficiency is ever ongoing. But an area with little research is ground effect. The creation of a testing rig to understand this further would be of great benefit. I will go through the design, manufacture and testing stages to gain valuable information on the area.

Rebecca Bostock

BSc (Hons) Biology

The Effect of Preservatives on Spoilage Microorganisms
This project evaluates the necessity of the addition of preservatives to fruit juice. The aim is to ascertain whether the successful growth of spoilage microorganisms is affected by the presence of preservatives compared to its growth in juices that are preservative free.
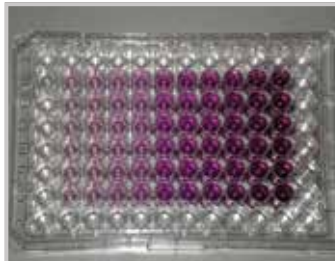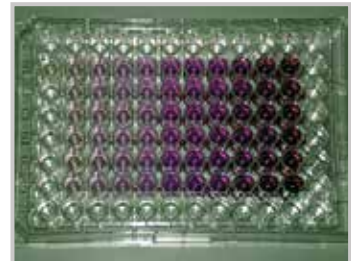

Brett Bourne
bourni0@hotmail.co.uk

BSc (Hons) Human Biology

Comparable Effects of the Antioxidants on Doxorubicin
Comparable effects of the antioxidants L-ascorbic acid (Vitamin C) and Galangin on cancer treatment with Doxorubicin.

Cordell Bryan
Cordell_28@hotmail.com

BSc (Hons) Biology

Effect of Concentration of Oestrogen on MCF-7 Cells
I made a cell culture medium for my MCF-7 cells to grow in, these are placed into flasks. Once my cells reached the desired cell count I want. I plated the cells into a 96 well plate, estradiol was added now, the plates are incubated and tested with an MTT assay. I will make a proliferation curve to show my results.

Jeanette Campbell

BSc (Hons) Biology

Co-ordination, Neuroplasticity, Fitness and Reaction Times
The aim of this experiment is to determine whether or not the development of co-ordination can be improved by increasing an individual's level of physical fitness, thereby increasing the exercise-induced neuroplastic effects seen in previous studies.

Christian Cartwright
ccc90@live.co.uk

BSc (Hons) Human Biology

Heavy Metal Resistant Bacterial Cellular Culture
Growing bacterial specimens and observing whether there is resistance of heavy metals in samples of soil found at quarry sites in the Staffordshire area. Observations and analysis will be based upon population growth from contaminated and non-contaminated sites and comparing the results.
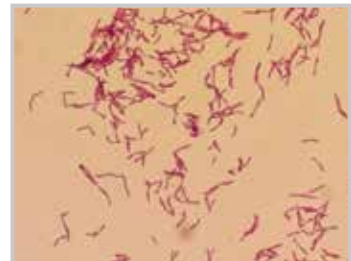

Lopa Das
lopadas91@yahoo.co.uk

BSc (Hons) Human Biology

Phytonutrients and their Bio-availability to the Gut
Use of an In-vitro model to assess the effects of cooking and chewing on the total polyphenol and ascorbic acid content of Brassica vegetables and their total antioxidant capacity.

Mathew Dixon-Young
mathewdy@hotmail.co.uk

BSc (Hons) Biology with Microbiology

Microbial Resistance: Friend or Foe
This investigation screened for resistance to heavy metal ions in bacteria, investigated resistance thresholds, links between heavy metal and antibiotic resistance, and the potential benefits in the form of bio-remediation for environmental clean-up.

Biological Science
STOKE

Cecilia Erhabor
ceciliahelen.erhabor@gmail.com

BSc (Hons) Animal Biology and Conservation

The Benefits of Walking for Dogs
Dogs were walked from Battersea Dogs Home and cortisol - a stress hormone - samples (found in the saliva) were taken before and after the dogs were walked. The study aimed to provide biological evidence to reiterate the importance of dog walking, especially with dogs that are kept in kennels.

Donna Evans
DOLLYPEG80@hotmail.co.uk

BSc (Hons) Animal Biology and Conservation

The Effects of Nano Silver Particles on *Pisum sativum*
This project looks at the potential effects of Nano Silver Particles upon the growth of the pea plant *(Pisum sativum)*. A colloidal silver solution was used and measurements were taken of stem and root growth rate, photosynthesis, chlorophyll content, and bacteria present within the soil.

Christopher Ficarotta
chris.ficarotta@hotmail.com

BSc (Hons) Biology

Can Glutamine Supplementation Help Athletes Avoid Urti?
This experiment required volunteers to run until they were physiologically exhausted to suppress their immunity. Runners consumed a glutamine supplement drink following exercise to determine the change in immune function, based on white blood cell and salivary immunoglobulin concentrations, compared to a control group.

Thomas Flint
thomasflint@ymail.com

BSc (Hons) Biology

The Viability of Porcine Bone Marrow Cells Post-Mortem
Bone marrow transplants are used to treat patients with a multitude of diseases. It has been suggested that transplants from deceased donors could be made, however this does not currently take place. This research aims to test this concept by investigating the viability of the cells in the bone marrow post-mortem.

Jordan Fulcher
jordan.fulcher@icloud.com

BSc (Hons) Human Biology

Effectiveness of Natural and Synthetic Repellents on Feeding
Synthetic insect repellents are now commonplace primarily in most regions of the world. Environmental, health, and economic concerns have led to a search for natural based repellents. The efficacy of the buttercup squash plant leaves along with DEET and Picaridin, and natural neem oil, was tested on Culex mosquitoes.

Zara Gallagher
zaragallagher@hotmail.co.uk

BSc (Hons) Biology with Microbiology

Micro-organisms in Mascara
Mascara is known to be one of the most easily contaminated cosmetics. The aim of the project is to examine whether different micro-organisms grow and survive in mascara, for how long and the potential diversity of micro-organisms.

Oliver Gibbs-Murray
olivergibbsmurray@yahoo.co.uk

BSc (Hons) Human Biology

Do E-cigarettes Affect Salivary Antimicrobial Components?
Saliva supernatant samples obtained from Non-smokers, Smokers and Electronic cigarette users where n=7 for each group. Measurement of pH and three assays were then conducted: Spectrophotometry Lysozyme assay with Micrococcus luteus as the substrate and Mancini's Radial Immunodiffusion plates for IgA and Lactoferrin.

Raflyn Gloria
apeng_gloria@yahoo.co.uk

BSc (Hons) Biology with Microbiology

Possible Antibacterial Effect of *Penicillium. roqueforti*
In this study, possible antibacterial activity of *Penicillium.roqueforti* isolated from two types of blue-veined cheese was investigated. Two types of agar diffusion test (disc and well method) were performed against six different bacteria using sterile culture filtrate of *Penicilium. roqueforti*. Zone of inhibition was noted.

Biological Science
STOKE

Vaness Goh
vanessgoh@yahoo.com

BSc (Hons) Biology with Microbiology

Can Saw Toolmarks Left on Bone be linked to Individual Saws?
The experiment has been done to find out if tool mark left on bones by saw can be linked to individual saw mark using VSC. This experiment is being done due to the reason that saws are commonly used for body dismemberment. Lastly, different saw blade leaves different striation depending on their characteristic.

Christopher Graham

BSc (Hons) Biology

Influence of Habitat on Two *Microcebus* Populations
The aim of this study was to determine the environmental and anthropogenic factors that affect the distribution of *Microcebus ravelobensis* and *Microcebus murinus* in the Mariarano region of Madagascar. The study was conducted to understand the effects of diminishing Microcebus population with respect to the habitat.

Kieren Hawthorne
kierenhawthorne@hotmail.com

BSc (Hons) Biology

The Effects of Lighting on Bat feeding
This project looks into the effects of which different coloured lighting has on the behaviour of bats. Do various colours increase feeding in an area or deter feeding in an area? The project records effects of the light on Insects the food source for Bats.

Michaela Howlett
mlhowlett91@gmail.com

BSc (Hons) Human Biology

Nutrition and Health Project
A comparison of the total polyphenol content, vitamin C concentrations and carbendazim in organic and non-organic conference pears.


Matthew Jepson
matt170993@hotmail.co.uk

BSc (Hons) Human Biology

Effects of White Grapefruit on the Epilepsy Drug Tegretol
A study looking at the potential inhibitory effects of white grapefruit juice on the human cytochrome p450 enzyme CYP3A4. This inhibition in turn inhibits the metabolism of the epilepsy drug carbamazepine (commercially known as tegretol) and could potentially cause a drug overdose in epilepsy patients.
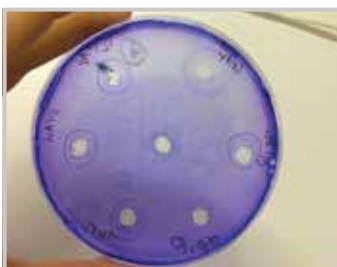
Anastasia Kapsali
anastasia.kapsali@yahoo.gr

BSc (Hons) Biology

Can Zinc Beneficially Affect the Human Immune System?
This project is testing if there is a change in lymphocytes concentration and salivary IgA concentration of each subject after zinc supplementation and dark chocolate consumption. RID method is used to assessed salivary IgA and full blood count to assessed lymphocytes concentrations.


Katlin Kurg

BSc (Hons) Animal Biology and Conservation

Can Calcium Save Daphnia- a Climate Change Perspective?
The mean global temperature and the amount of anthropogenic pollution is rising and it is important to know what effect these stressors have on each other and on ecosystems and if there is a way how to counteract this. This study investigated the combined effect of Ni, Ca and temperature on *Daphnia pulex*.
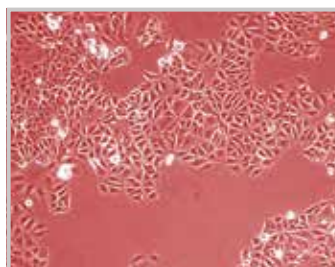
Christopher Legge
chrislegge20@gmail.com

BSc (Hons) Human Biology

Effect of Methyl Paraben on MCF-7 Breast Cancer Cells
Methyl paraben is an antifungal agent in cosmetics that has been found within biopsies of breast cancer patients. I cultured MCF-7 cells to use in an MTT assay to measure the growth of MCF-7 cells in varying concentrations of Methyl paraben to determine if there's an increase in proliferation with exposure to parabens.

Jordane Marsh
jordi159@hotmail.com

BSc (Hons) Biology

Can Onions Affect the Growth of Opportunistic Oral Bacteria?
Dormant opportunistic bacteria commonly exist within the oral cavity and rely on depleted immune health to proliferate. Common folk remedies have often suggested the ingestion of onions, in the form of soups and teas, to maintain immune health and ameliorate the effects of disease.

Ashley Martin

BSc (Hons) Animal Biology and Conservation

Species Richness, Composition and Abundance in Bees
Species richness and composition had a direct relationship with plant species diversity so the hay meadows which contained a lot of wild flowers resulted in high abundance of bees oppose to heathland which contained more bees than any site but there was a lot of the same species rather than lots of different species.

Stephanie Roy
stephanie_roy2013@yahoo.co.uk

BSc (Hons) Animal Biology and Conservation

Could Frogs be Absorbing Water Pollution?
Many, if not all, frogs and amphibians absorb water from their environment to keep their thin skin moist in order for them to breathe through it. Yet the water they absorb may not always be as clean as it could be; but rather contaminated or polluted. There is a chance the frogs may be absorbing these pollutants as well.

Nina Selby

BSc (Hons) Human Biology

Antioxidant Effects of Red Wine and Green Tea on Cooked Salmon
This project looked at the effects of polyphenols found in red wine and green tea on cooked salmon and their potential ability to prevent the peroxidation of polyunsaturated fatty acids.

Megan Shenington-Gunn
megangunn@rocketmail.com

BSc (Hons) Human Biology

Bioinformatics the Future of Fungal Metagenomics
Within the scientific community Bioinformatics is an ever increasing method of research for Fungal Metagenomics with new technology being created, this allows data to be sequenced faster and more accurate than before from using traditional methods producing a greater knowledge of new and known fungal samples.

Rebecca Smith

BSc (Hons) Forensic Biology

Do Medicinal Drugs Affect the Development of Larva?
This project is based on Forensic Entomology, this is the field of studying insects which are examined at scenes. The main use for this study is to estimate the post mortem interval (PMI) of a decomposing body through examining species of insects and the age of the insect with the additional use of Medicinal Drugs.


Emma Stanfield
emmastanfield79@hotmail.co.uk

BSc (Hons) Biology

The Cognitive Enhancement Effect of Ginkgo Biloba Extract
The cognitive enhancement effect of Ginkgo Biloba Extract (GBE) was evaluated in *Helix aspersa* using an associative learning technique (a form of classical conditioning) and a series of Y maze experiments, in order to establish if GBE increases the rate of locomotion, and enhances spatial awareness and working memory.
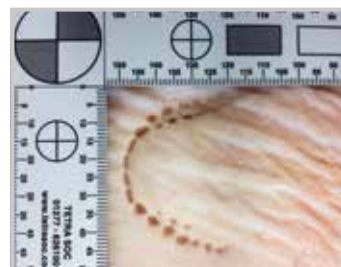
Georgina Stavrakaki
georgina472@hotmail.com

BSc (Hons) Forensic Biology

Bite Marks from New and Old Dentures from the Same Patient
With the aid of porcine skin samples, both the old and new set of dentures from the same person will be subjected to a bite mark injury. This will help to investigate whether or not the bite marks inflicted by the dentures are forensically similar or not and if they can be traced back to the certain individual.

Biological Science
STOKE

Natasha Tams
natashatams@hotmail.co.uk

BSc (Hons) Animal Biology and Conservation

Problem Solving and Hierarchy Effects on Captive Meerkats
Using three different tasks with 33g of mealworms inside, the meerkats interactions with each other and the task are recorded. Each task is given 30 minutes to be completed by the meerkats. If a meerkat is successful on the same task more than once, the timings are compared to see if learning processes are present.
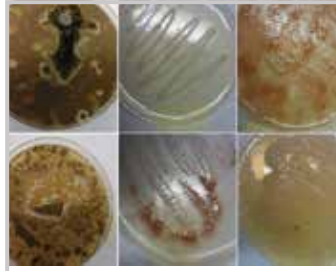

Rebecca Trow
rebeccatrow@outlook.com

BSc (Hons) Biology

Calorie Restriction Diet versus Food Group Restriction Diet
In light of the current obesity epidemic I am looking at the effect of two different dietary regimes on important health biomarkers used to measure risk factors related with obesity and the development of chronic illness.

Thomas Wilkes
tom24.wilkes@mypostoffice.co.uk

BSc (Hons) Human Biology

Identification and Quantitative Effects of Antibiotics
Fertile soil was obtained from 3 sites. Fungal and actinomycete species selected using Czapek Dox agar. Isolates were grown in Nutrient broth, centrifuged at 29220g for 20 minutes. The supernatant analysed via HPLC. MIC controls were carried out and analysed with photospectrometry at 240nm and 600nm.

Farjana Akhtar
farzana-akhtar@hotmail.com

BSc (Hons) Biomedical Science

The Antioxidant Effect of Allium Vegetables & Supplements
This aim of this study is to investigate the antioxidant effects of Allium vegetables in comparison to supplements of garlic extracts. The total radical antioxidant potential of the foods will be assessed as the extracts age over time. A TBARS assay will be used as an index of lipid peroxidation and oxidative stress.

Dawud Arishad
dawud.a94@gmail.com

BSc (Hons) Biomedical Science

Oil-pulling Therapy: An Ancient Practice for a Modern Time
Oil pulling is an extensively practised folk remedy involving swishing plant essential oils. It is thought that essential oils, a secondarily metabolite derived from plants, contain antibacterial properties. With this knowledge, an interest into the efficacy of natural alternatives used in oral healthcare is examined.

Mahbooba Azizi
mab.azizi@hotmail.co.uk

BSc (Hons) Biomedical Science

Can Ingestion of Okra Water Reduce Glucose Uptake?
The aim of this study is to investigate whether ingestion of okra water can help to reduce glucose uptake. Blood samples will be taken over a period of 4 weeks from every participant. The results will be then analysed using analysis of variance (ANOVA).


Aakash Balaji
aakashrajbalaji@hotmail.co.uk

BSc (Hons) Biomedical Science

The Effect of Smoking Induced on Human Oral Flora
Does smoking change the human oral flora and trigger oral diseases? Although smoking predominantly gives rise to lung diseases, its impact on oral infections is often undermined. This study provides an insight onto the correlation between periodontal diseases caused by changes in the ecology of a smoker's oral flora.
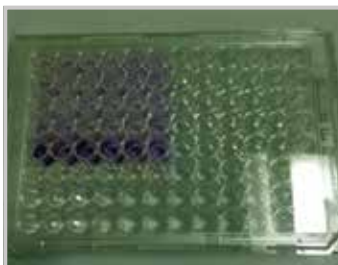
Farhana Begum
begumfarhana1992@gmail.com

BSc (Hons) Biomedical Science

Vitamin C Increases Sensitivity of MCF7 Cells to Cisplatin
The aim of this study is to explore whether the co-administration of vitamin C will enhance the anti proliferative effect of Cisplatin in MCF7 breast cancer cells. MCF7 cells will be treated with vitamin C, and Cisplatin followed by an MTT assay. A one way Anova test will be carried out to analyse the results.

Charles T Bennett

BSc (Hons) Biomedical Science

Alcohol in Mouthwash - Is it worth it?
Many of us use mouthwash to improve our oral health, with both alcohol- containing and alcohol-free brands available, but are they equally effective? This project is designed to test if there is a difference in antibacterial effectiveness of alcohol-containing and alcohol free mouthwashes on specific oral microbiota.

Liliyan Beyene
lilifaithpet@hotmail.com

BSc (Hons) Biomedical Science

Compare Effect of Brand and Cheap Mouth Washes on Tooth Bacteria
The aim of the project is to determine the comparisons of expensive and cheap mouthwashes against mouth bacteria that has been implicated in causing tooth decay so as to establish the role of alcohol based mouthwashes and alcohol free based mouthwashes. And briefly relate the result cost wise.

Imtiaz Bibi

BSc (Hons) Biomedical Science

Curcuma-induced Apoptosis in Human Breast Cancer Cells
Study of concentration and time dependent induced apoptosis of human breast cancer cells MCF 7 cell line with the utilization of Turmeric (Curcuma longa). And to establish the effects and mechanisms with which turmeric mediates anti-proliferation of breast cancer MCF 7 cell line.
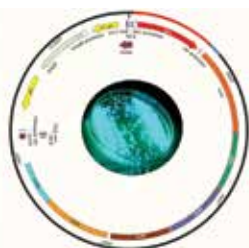
Eleftherios Boutas - Gkekas
rio.gkekas@gmail.com

BSc (Hons) Biomedical Science

Using Bioluminescence Genes of *V.Fischeri* as Biomarkers
Designing a biomarker for lactose with the use of the bioluminescence genes of *Vibrio fischeri* by replacing the regulating genes of the lux operon, a set of genes that form a luciferase system which is responsible for the luminescence of the bacterium, with the regulating genes of lactose operon.
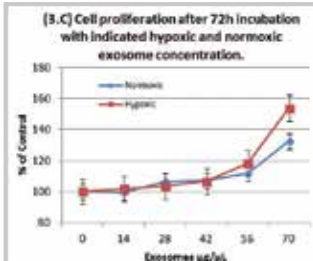

Lewis Buckler
gommyboys@hotmail.co.uk

BSc (Hons) Biomedical Science

Muscle Hypertrophy and Creatine Supplementation
This project is based around a muscle building supplement known as creatine. Its aim was to determine how potent the creatine supplement is when trying to build muscle mass as opposed to using no supplements.


Annie Corden
anniecordon@hotmail.co.uk

BSc (Hons) Biomedical Science

The Effect of Hypoxic Exosomes on Cell Viability
The aim is to determine if exosomes derived under hypoxic conditions, a condition common to the tumour microenvironment, can influence the growth of L929 cells grown under normoxic conditions. Hypoxic exosomes will increase the viability and proliferation of L929 cells grown under normoxic conditions.
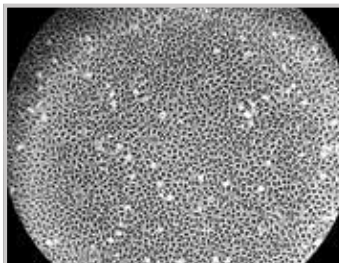
Jonathan Cruickshank
jacru91@gmail.com

BSc (Hons) Biomedical Science

Immuno-modulatory Effect of Exosomes on TNF Alpha Release
MCF7 cells treated with LPS release the inflammatory cytokine TNF alpha. Previous research indicates that exosomes released by cells can mediate the immune response. Therefore, flasks of MCF7 cells were set up with or without being incubated with exosomes and LPS to measure the exosomes' effect on TNF alpha release.
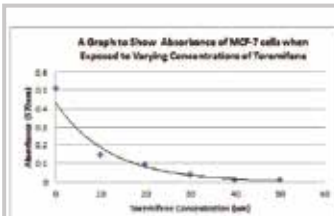

Ryan Evans
revans1991@gmail.com

BSc (Hons) Biomedical Science

Feline Interaction and *Toxoplasma Gondii* Transmission
To determine whether feline interaction a significant transmission method for *Toxoplasma gondii*.


Katie Forester

BSc (Hons) Biomedical Science

The Effects of Toremifene on Growth of MCF-7 cells
This project aims to identify how toremifene a hormone treatment used for women who have secondary oestrogen positive breast cancer affects the growth of MCF-7 breast cancer cells using techniques such as MTT assays and H&E staining. Then comparing the results to other SERMs used in the UK such as tamoxifen.
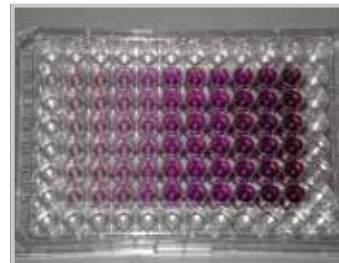
Stephen Foster
stephen.foster35@virginmedia.com

BSc (Hons) Biomedical Science

The Effects of Curcumin and Bisdemethoxycurcumin on MCF7
Curcumin and Bisdemethoxycurcumin are Curcuminoids found in Turmeric. They have both been found to have antiproliferative effects on breast cancer cell line MCF7. The project seeks to compare the antiproliferative effects of these Curcuminoids.

Biomedical Science
STOKE

Sarah Green
greensarah58@yahoo.com

BSc (Hons) Biomedical Science

Effects of Immunace and Omega 3 on Leukocytes and IgA
Omega 3 and Immunace are compared to observe the effects on Leukocyte proliferation and IgA expression. The leukocyte count was at its maximum for students that were taking exams which is caused by stress or anxiety. The saliva samples were tested by radial immunodiffusion to test the effects on IgA concentration in saliva.
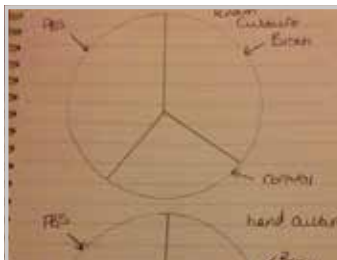

Elena Griffiths
elliegriffiths43@icloud.com

BSc (Hons) Biomedical Science

***Trichomonas Vaginalis* Detection by Real-Time PCR**
Is Real-Time PCR a more sensitive and specific tool for detection of *Trichomonas vaginalis*, compared to the routine methodology currently used in clinical practice?


Jenny Hall
jenny-hall1@hotmail.co.uk

BSc (Hons) Biomedical Science

Skin Infections in the Community
Using killing curves it will be determined whether or not everyday alcohol hand gel work as well as they claim. The focus will be how well these gels create a sterile environment. This is key as there are many papers documenting alcohol gel use in a clinical setting there are little about its use in the community.
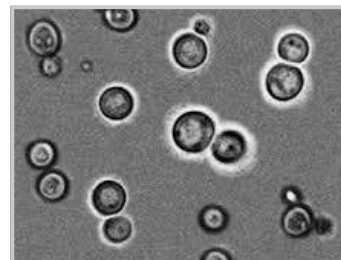
Miriama Havrilova
mimi_havrilova@yahoo.co.uk

BSc (Hons) Biomedical Science

Production of Human Gastric Lipase by *Hansenula polymorpha*
Hansenula polymorpha was used to investigate the effect of environmental stress and mutation on the production of human gastric lipase. However, transformation was unsuccessful. Therefore, no results were generated to assess any possible effects on the production of human gastric lipase.

Hamza Khalid
khalh003@gmail.com

BSc (Hons) Biomedical Science

Determining Mutagenicity of Stains by Using the Ames Test
Biological stains are an essential part of Science, highlighting details of specimens by adding colour. Despite the benefits some stains acquire mutagenic capacity. The aim is to determine if stains are mutagenic and also analyse the degree of mutation they cause, this will be achieved by using the Ames test.

Christine Khatchaturianmaity
chrisforu_93@yahoo.co.uk

BSc (Hons) Biomedical Science

Can Switching to E-Cigs Improve Lung Capacity?
Each year more than 100,000 people in the UK are diagnosed with smoking related illness. In 2006 E-cigs were introduced as the new 'Healthier' alternative due to the low percentage of carcinogens present in it. In my investigation, young adults were chosen to test the effects of E-cigs on lungs at early stages of life.

Mathew Kirk
matty199006@hotmail.com

BSc (Hons) Biomedical Science

Additional Importance of Vitamin D
The aim of the study is to provide evidence of the effective role of vitamin D in the reduction of inflammation. Recent studies have shown vitamin D and its interaction with the immune system. This was achieved through examination of TNF-alpha concentration between a control group and a vitamin D supplement group.

Sunite Lauchande
slauchande@gmail.com

BSc (Hons) Biomedical Science

Can Iron Supplements Cause Changes in the Immune System?
The immune system is dependent upon iron. Iron supplements can have an effect on the human body by aiding and preventing anaemia and pathogen infections. This study aims to determine the extent to which dietary iron supplements have on the immune system by measuring levels of IgA, white blood cell and lymphocyte count.

Biomedical Science
STOKE
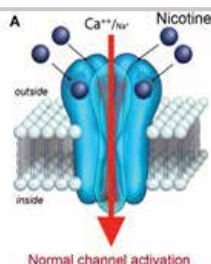
Kevin Li
Kevin.li35@gmail.com

BSc (Hons) Biomedical Science

Can Nicotine Affect Cell Proliferation of H69 Cells?
There have been a surge in E-cigarette us aage. Can the nicotine within the e-cigarette fluid affect the growth rate of lung carcinoma cells? This project investigates whether or not individuals with lung cancer are at risk by using these novel nicotine replacement products.

Jessica Luke
jessieluketms@aol.com

BSc (Hons) Biomedical Science

Dust: The Future of Forensics?
In criminal investigations, placing someone at the scene of a crime is a major part of building a criminal case. Dust is everywhere, and has the potential of unlocking a new area of forensic investigations. Using accurate and sensitive tests combined with further research could result in a DNA profile being created.

Valerie Mabunda
mabunda.nsv@live.co.uk

BSc (Hons) Biomedical Science

Flavanoids: Doing more Harm than Good?
An investigation on whether Chrysin, a dietary flavanoid, will induce insulin resistance in adipocytes. Previous studies have shown that Chrysin inhibits the Akt/PI3K pathway in insulin action and any impairment to insulin action could lead to decreased glucose uptake and insulin resistance.


Shamiso Marufu
shamiso2009@hotmail.co.uk

BSc (Hons) Biomedical Science

An Investigation into Effects of Choice In-Vitro Solvents
An investigation into the effects of choice of solvent and their effectiveness on cell line. Three solvents DMSO, DMF and ethanol which have different structure, polarity, and mode of action were tested. The solvent which had minimum impact on cell development was noted. DMSO proved to be the most effective solvent.
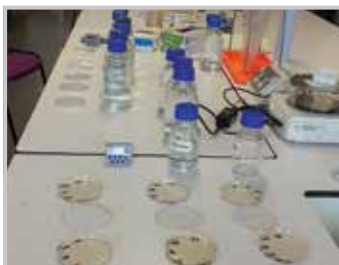
David McGregor

BSc (Hons) Biomedical Science

Does Smoking Directly Effect Lymphocyte & IgA Levels?
Herbert & Cohen stated that there is a link between stress and a weakened immune system. Parrot & Garnham stated that smokers have a higher level of stress before a cigarette, which decreases after a cigarette. This experiment directly investigates the effect of smoking on the immune system.

Maryam Mehdi

BSc (Hons) Biomedical Science

Do Spices Possess Antimicrobial Activity?
To determine whether different spices possess antimicrobial activities against bacteria. Spices used:- turmeric, chilli, garlic, ginger and cinnamon against bacteria which were either Gram positive or Gram negative. Gram positive bacteria used was Bacillus cerus and Gram negative bacteria used was *Escherichia coli*.

Ivy Mensah
Ivy.mensah@outlook.com

BSc (Hons) Biomedical Science

Antibiosis of the Skin
Research has shown that the skin microflora may inhibit the physiological action of pathogenic bacteria through the production of antimicrobials but there is still further work to be done in this area. This project investigates the antimicrobial action of the skin microflora against pathogenic bacteria on the skin.

Maryam Munir
maryammunir11@hotmail.co.uk

BSc (Hons) Biomedical Science

What is Effective at Reducing Microorganisms in the Mouth
This experiment determines what reduces microorganisms in the mouth most effectively. Brushing vs. not brushing is compared to Aquafresh and fresh mint Wilkinson branded toothpaste allowing differentiation between which is best suitable to use; as results show this in terms of reduction of oral microorganisms.

Biomedical Science
STOKE

Badrun Nessa
badrun.nessa1993@gmail.com

BSc (Hons) Biomedical Science

Globalisation - the Root of Cancer
Research shows that curcumin can induce the apoptosis of cancerous cells; it also indicates clearly that insulin in the body can increase the chances of breast cancer and supports the proliferation of cancerous cells. However, if the two can affect each other is yet to be found.

Dennis Nyabezi
dovetee@google.com

BSc (Hons) Biomedical Science

Effect of Flavonoids on Chemo Agents on Colon Cancer Caco-2
The investigation aims to determine the synergistic effect of flavonoids, quercetin and silibinin chemo agents' doxorubicin and cisplatin on human intestinal adenocarcinoma cells Caco-2.The investigation covered antioxidant activity of flavonoids and the cytotoxicity of different synergistic concentrations.
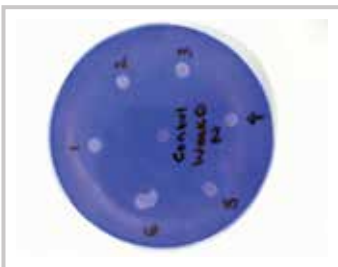
Sean O'Hehir
seanohehir@hotmail.com

BSc (Hons) Human Biology

Evaluating the Effect of Folic acid on the Immune System
Are additional benefits of Folic acid being overlooked? This research project evaluated the effect of Folic acid supplementation in healthy subjects on various biological systems, with the aim of associating folic acid with the promotion of a healthy Immune System.
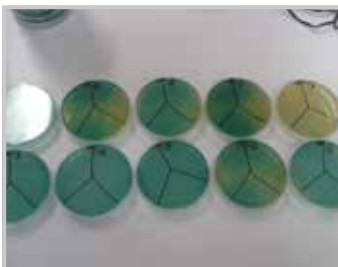
Abi-Jade O'Neill
abijade@hotmail.co.uk

BSc (Hons) Biomedical Science

Catheter Associated Urinary Tract Infections (CAUTI)
75-80% of all healthcare associated UTIs follow the insertion of a urinary catheter, this standard medical device allows the introduction of opportunistic pathogens. This study investigates CAUTIs caused by the uropathogens *Escherichia coli* and *Proteus mirabilis*, both normal flora in the intestinal tract.
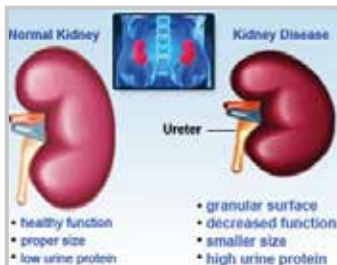
Melissa Parsons

BSc (Hons) Biomedical Science

Improving Diagnosis of Chronic Kidney Disease in the Obese
Accurate diagnosis of chronic kidney disease is vital to allow treatment and delay disease progression. Current clinical markers of renal function have proved inaccurate in obese individuals, and new guidelines have suggested the use of serum cystatin c levels to improve diagnosis. This theory will be investigated.

Dushyantha Pilapitiya

BSc (Hons) Biomedical Science

Cinnamon, Almonds and Blood Sugar
Could cinnamon and almonds help regulate your blood sugar?
This project investigates the immediate effects of cinnamon and almonds on blood sugar levels, on the basis that a small dose can make a significant difference to the blood glucose spike following a meal.

Raveena Rani
raveenarani_6@hotmail.com

BSc (Hons) Biomedical Science

Testing Microbial Growth on Meat In Relation to Shelf Life
This project consists of studying the bacterial growth on chicken when stored under different storage conditions against its shelf life date. Its relevance today is that people can acknowledge how lack of sanitation and lack of knowledge of chicken's storage conditions can lead to certain foodborne infections.

Laura Scully

BSc (Hons) Biomedical Science

The Effects of Green Tea on Breast Cancer Proliferation
Research suggests that green tea can slow down the rate of cancer growth. This experiment is designed to see if, varying amounts of green tea can slow proliferation. Breast cancer cell lines will be treated with green tea dissolved in water to see what effect they have on the cell proliferation.

Kanza Sharif
kanza.sharif@hotmail.co.uk

BSc (Hons) Biomedical Science

Can Lifestyle Affect the Risk of Developing Diabetes?
Diabetes is increasing in UK; in 1996 1.4 million to 2.9 million and by 2025 it is about 5 million people. To diagnose diabetes a blood test is used as it is a more accurate method compared to with urine test. A clinical oral glucose tolerance test is used to standardise the experiment to national data information.
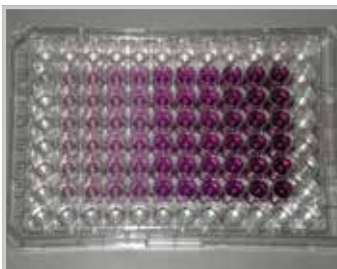
Nikita Sinha
sinha.nikita7@gmail.com

BSc (Hons) Biomedical Science

Increasing the Efficacy of Cisplatin in Breast Cancer
Adjuvant mild hyperthermia has been shown to increase the sensitivity of bladder cancer cells to cisplatin yet this effect has not been studied in relation to the treatment of breast cancer. Adjuvant mild hyperthermia has the potential to present a cost effective treatment option that can be used in clinics.

Tamanda Smoke
smoketam2@yahoo.co.uk

BSc (Hons) Biomedical Science

Effect of Antibiotics and Nature Remedies on Acne
Antibiotic treatments for acne may take months. Some patients feel uncomfortable in taking antibiotics for long periods of time, in addition to this, the cost of these antibiotics may prove to be expensive over time therefore alternative use of natural oils in the treatment of acne could prove to be a better option.


Matthew Wainwright
matthewwainwright78@gmail.com

BSc (Hons) Biomedical Science

Can MicroRNA's be used to link Obesity with Osteoarthritis?
Is there a correlation between microRNA biomarkers identified in obese individuals with incidence of osteoarthritis? If successfully proven, it may highlight a mechanical link between an individual's metabolic status and joint erosion/remodelling; possibly providing a target for future therapies.
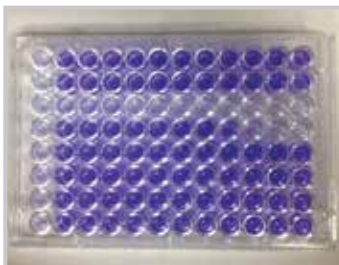
Danielle Wakley
danielle.wakley@hotmail.co.uk

BSc (Hons) Biomedical Science

The Inhibitory Effects of Ginger Regarding Biofilm Formation
Alternative treatment methods for biofilm-related ailments must be innovated in order to maintain the control of infectious agents. This study looks into the ability of ginger to prevent biofilm formation which would increase susceptibility to current antibiotics by reducing protective bacterial barriers.

Michelle Watson
m.hogan@nhs.net

BSc (Hons) Biomedical Science

Evaluation of the EntericBio Gastro Panel I Assay
This study evaluated the EntericBio® PCR assay to determine if it could be implemented into routine use at Sandwell and West Birmingham Hospitals NHS Trust to replace stool culture methods. It was hypothesised that turnaround times, sensitivity and specificity would be improved using the PCR method.

Paul Watson
paul.watson@dgh.nhs.uk

BSc (Hons) Biomedical Science

Use of Enzyme IAT for Improved Kidd Antibody Identification
The transfusion blood products remains controversial, due to the potential to develop alloantibodies post-transfusion and the risk of transfusion reaction. This project investigates the benefits of using enzyme indirect antiglobulin testing, with the aim of reducing the incidence of haemolytic transfusion reactions.

Grace Waweru

BSc (Hons) Biomedical Science

Microbiological Evaluation
The aim of this project is to compare the effectiveness of leading brand antibacterial soap against supermarket own brand antibacterial soap. Volunteers will have their hands swabbed before washing their hands with different soaps, swabs will then be taken at different time intervals and plated to look for colonies.

Biomedical Science
STOKE

Christopher Weaver

BSc (Hons) Human Biology

Are E-Cigarettes a Safe Alternative?
This study is designed to discover/ highlight any reactions (adverse or otherwise) that the body might have towards the use of electronic cigarettes (e-cigs). A battery of tests will be used in order to try to identify any significant differences between the body at rest and after exercise.

Sarah Welch
biologywelch@gmail.com

BSc (Hons) Biomedical Science

The Effect of Sweeteners on the Lifespan of *C.Elegans*
The 'SmartSwaps' campaign encourages families to swap dietary sugar to sweeteners. Recent studies indicate that chronic sweetener use may have negative health effects, and current scientific knowledge on sweeteners is lacking. *C.elegans*' lifespan was tested with glucose, maltitol, xylitol and saccharin supplements.


Ivy Williams
ivywilliams2803@gmail.com

BSc (Hons) Biomedical Science

The Activity of Lactobacillus found in Actimel®
To evaluate how lactobacillus species, found in the probiotic drink Actimel®, efficiently inhibit the growth of pathogenic stains causing gastrointestinal tract infections and to examine the lactobacilli tolerance to certain pH and bile conditions that mimic the environment of the stomach.
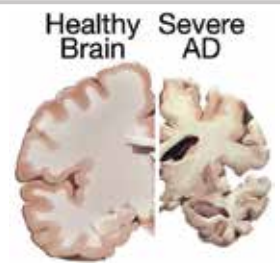
Jack Wood
wood.jack030128@gmail.com

BSc (Hons) Biomedical Science

A Yeast Model for Alzhiemer's Disease
Alzheimer's (AD) is a neurodegenerative disease characterised by the presence of Aß. The neuronal cell death associated with AD is due to the presence of Aß. This project will give an insight into the molecular mechanisms behind cell death caused by Aß using a yeast model.
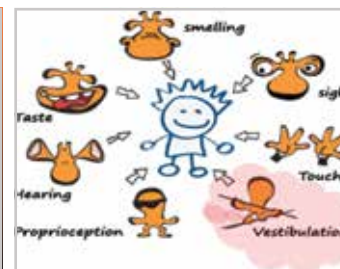
Engineering and Design

STOKE 15 MAY

Colin Astley
Colin904@hotmail.com

FdSc Manufacturing Technology - Foundation

Wireless Inspection Robot
My project is to design and create a Wireless Inspection Robot. Many maintenance and fault finding tasks within the Industrial Workplace Environment involve some degree of Health & Safety Risk. In my current employment, I come across such situations, hence this project being progressed.

Emily Bailey
emilygrace1993@hotmail.co.uk

BEng (Hons) Product Design Engineering

To Design an Aid to Support Sensory Integration Strategies
This project is aimed to design an aid to support sensory regulation strategies for children and young adults with special educational needs. The product will incorporate modern technology and smart materials.

Chelsea Baker
chelsea_rose_90@yahoo.co.uk

BEng (Hons) Electronic Engineering

Control of Domestic Appliances via the "Internet of Things"
The Internet of Things was researched thoroughly to show how and why it is being applied to devices. A thermostat was the specific SMART domestic device chosen to model a prototype embedded design to, and shows how GSM technology allows us to connect and control objects to benefit our everyday lives.

Jamie Beardsall
Jamie.Beardsall@outlook.com

BEng (Hons) Electrical Engineering

Automation of Industrial Power System Analysis Procedures
Power system analysis within power generating plants requires manual input and calculation of vast amounts of plant data - both very arduous and potentially dangerous tasks. This project aims to automate these tasks, eliminating manual process flaws whilst improving performance, saving engineer time and reducing cost.

Benjamin Briggs
benbriggs22@gmail.com

BEng (Hons) Mechanical Engineering

Reducing the Environmental Impact of Clay Target Shooting
Looking to reduce the environmental impact that Clay Pigeon Shooting has on the countryside, through introducing a biodegradable material for wads in the shotgun shell that mimic the properties of plastic wads. Plastic wads provide a more accurate shot and is desirable for many shooters.

Gonzalo De La Calle Gonzalez
gonzalo.dlc@hotmail.com

BEng (Hons) Electronic Engineering

A Smart Item Manager using Arduino and Android App Developer
The project addresses a possible solution to an everyday problem users experience regarding the management of their items when leaving their households. The Smart Item Manager is a system based on RFID tag technology and a software Android application developed for smartphones.

Matthew Drew
matthew.drew@unilever.com

BSc (Hons) Electrical and Electronic Technology

Energy Audit of a Manufacturing Process
The ability to conduct a thorough investigation within manufacturing to reduce energy consumption, increase line efficiency and reduce maintenance is invaluable. Following a standard procedure allows for identification of industrial saving, environmental savings and personal knowledge gain shown within this project.

Ryan Elliman
rlelliman@msn.com

BEng (Hons) Electrical Engineering

Energy Harvesting and Water Discharge
Within our daily lives, we fail to harness the potential electrical power that can be generated from the flow of waste water. This project researches and develops a novel energy harvesting device capable of harnessing the energy currently unutilised within this water, enabling it to be used within varying applications.
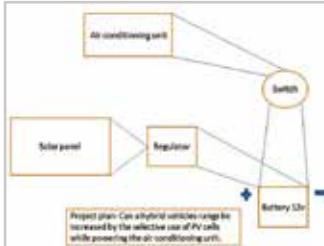
Cihan Gokce

BSc (Hons) Automotive Technology

Solar Panels on Hybrid Vehicles
The aim of this project will be to investigate if the range of a hybrid vehicle will be increased by the use of PV cells. This project will demonstrate if a robust design can be built in order to power the air-conditioning unit in a hybrid vehicle entirely from the solar energy gathered from the solar panels.
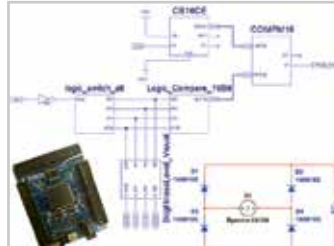
Jordan Green
jordan.andrew.green@outlook.com

BEng (Hons) Electronic Engineering

Low Voltage, High Output Power Bicycle LED System
The design and implementation of a bicycle lighting system producing a high luminosity output from a low voltage DC source, charged via the rotation of a bicycle wheel. Input controls for brightness and pulsing of the LED output. The hardware used for this project involves a Polmaddie1 CPLD and Xilinx ISE software.

Andrew Hall
andyhall1805@gmail.com

FdSc Electrical and Electronic Technology

Electric Forklift Truck
This project aims to provide an example of the implementation of electronic control equipment into a forklift truck chassis. This purpose of this project is to create a high quality, zero emissions industrial transportation machine, showcasing AC inverters and motors.
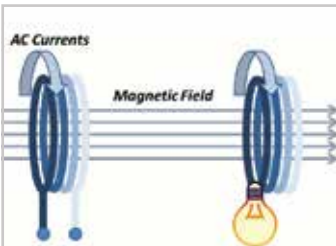
Iliyan Ivanov

BEng (Hons) Electrical Engineering

Wireless Transfer of Electrical Power
Development of a novel application of wireless transfer of electrical power.

Benjamin Jones
92_bt_jones@live.co.uk

BSc (Hons) Product Design Technology

Unmanned Coastal Search and Rescue to Minimise Risk
Exploring new methods to assist coastal guards with the search and rescue of patients whilst also increasing survival rates.

Samuel Joynson
S.j.joynson@gmail.com

BSc (Hons) Product Design Technology

Improve the Lives of those with Alzheimer's
The aim of the project is to utilise modern technology to improve the quality of life of those with Alzheimer's and their caregivers.
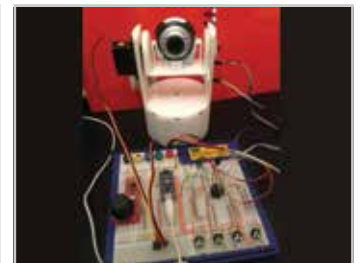
Paul Krynauw
paulk@yahoo.com

BEng (Hons) Mechatronics Engineering

Object Tracking Camera System
The 3D printed pan-tilt system houses two control servos, a feedback system on both axes and the webcam used to obtain a video feed. Control of the pan-tilt system and movement checking is accomplished by the ATmega 328 microprocessor and the OpenCV libraries are used in the human/object detection process software.

Uzair Malik

BEng (Hons) Electrical Engineering

Investigation and Improvement of Dissectible Machine
Dissectible machine system is a trainer which is commonly used in training centres and academia's to give students an insight into the operating principles of electrical mac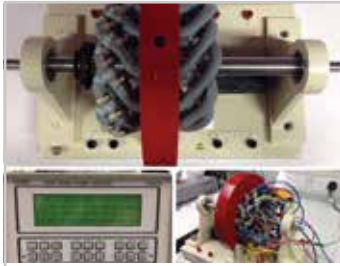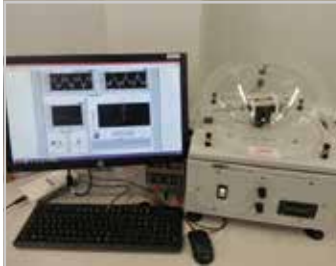hines. This project aims to investigate the system and subject the investigated configurations to EMC testing to make relevant improvements.

Jire Masaki

BEng (Hons) Mechatronics Engineering

Feasibility Study to Improve the HTM70 Gyroscope Rig
An feasibility study into the design and improvement of the HTM70 Gyroscope Rig. The rig studies the moments generated by the gyroscopic effect and demonstrates the principles of the gyroscopic torque. The aim of the project is to design, develop and implement a device system which will enable continuous measurement of the gyroscope's attitude when the rig is in operation.

Aaron Mayell-Hackett
aaron_j_hackett@hotmail.com

BSc (Hons) Product Design Technology

Future Domiciliary Care
Using modern technologies to reduce external input and promote independence of users within supported living environments. RFID and wireless connectivity are utilised to passively monitor the user and environment with the aim of reducing hospital admissions by intervening before a situation becomes detrimental.

Karl Mills
karlmills@outlook.com

BSc (Hons) Product Design Technology

Rugby Training Aid with Modern Materials and Technology
Product design technology project with a focus on sport training aids that utilises modern materials and integrated technology.

Anju Pant

BEng (Hons) Electronic Engineering

Radio Frequency Energy Harvesting System
The development of a novel radio energy harvesting system uses ambient radio energy which can power up battery-less and low power microelectronic devices being used at the present with an advantage over other harvesting systems of being available at any time, situations where replacing battery is practically unviable.
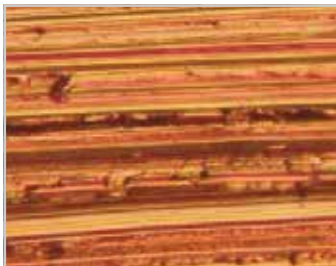
Matthew Pennington
gingercake123@hotmail.co.uk

BEng (Hons) Mechanical Engineering

Developing a New Metallographic Protocol for Students
The development of a metallographic protocol, including the use of a material polisher/grinder; a precision cutting saw; automatic compression mounting system and a range of etchants for specific metals. These metals will also undergo microscopic evaluation.

Daniel Rabbitt
rabbitt773@gmail.com

BSc (Hons) Product Design Technology

Secure Entry Systems Utilising Technology
A secure entry system for use in businesses. Intended to restrict access based to position within the business whilst being easier to use than current systems with a similar purpose.

Edmar Thompson
edmar@live.co.uk

BEng (Hons) Mechanical Engineering

Simulation of Autogyro Handling Problems
Investigating handling problems associated with autogyros, using X-Plane simulation software as an engineering tool. The project field is unknown and knowledge of aerospace engineering and X-Plane is limited. The project will test the engineering skills I've learnt at University but will be tackled head on.

Engineering and Design
STOKE
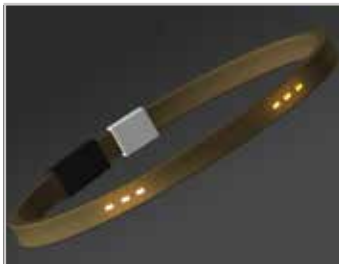
Carmen Villafruela
c.villafruela@gmail.com

BEng (Hons) Electronic Engineering

Turnlight Belt for Cyclist
The present project aims to create a safety device for urban cyclists that is unnoticeable when not in use. Belt and controller communicate wirelessly and LED technology provides more visibility to users in order to reduce accidents.

Rhys Williams
rhyswill24@hotmail.co.uk

FdSc Electrical and Electronic Technology

Ribbon Cable Tester
The aim is of this project is to provide a testing solution for various sizes of ribbon cables. The project uses a PIC micro-controller to test the ribbon cables and produce a pass or fail reading which will appear on an LCD display. The user can also input information to the unit using a keypad.

Forensic, Policing and Criminal Investigation

STOKE 15 MAY

Wasim Akhtar
bbw11@hotmail.co.uk

BSc (Hons) Forensic Science

Detection of Latent Fingermarks Using Lanthanide Powders
Enhancement of latent fingermarks using lanthanide placed onto non porous surfaces in comparison to aluminium powders. These powders were europium and Turbium. Once applied onto the mark they were then placed under a VSC machine. Due to their fluorescent properties, the compounds are able to fluoresce under UV light.


Razeem Akhtar

BSc (Hons) Policing and Criminal Investigation

The Effectiveness of the UK Counter Terrorism Strategy
This research will evaluate The Effectiveness of The UK Counter Terrorism Strategy and the impact it has on British Policing in preventing radicalisation. Radicalisation is taking place around the world, including within the United Kingdom. The focus of the research will in relation to the Prevent Strategy of CONTEST.
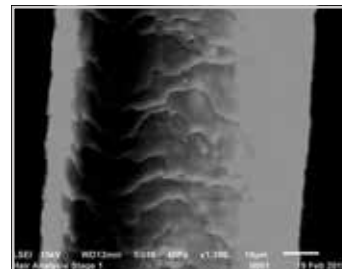
Benedicte Amery
amery.benedicte@hotmail.com

BSc (Hons) Forensic Science

Analysis of Heat Damage to Animal Hair and Skin
Animal hair and skin was analysed before and after dealing heat damage. The purpose of this research is to find out whether different kinds of heat sources result in different kinds of heat damage. In this way animal hair could become of great evidential value in cases with animal mistreatment or animal murder.

James Backham
james.backham@btinternet.com

BSc (Hons) Forensic Science

Analysis of the Variants Heckler and Koch MP5 Weapons Family
Investigating the different characteristics between the 3 main variants of the MP5, to aid in the analysis and reconstruction of firearms incidents.

Owen Bateman
owen_bateman@hotmail.com

BSc (Hons) Forensic Investigation

'MagicPlan CSI' - Mapping Crime Scenes
This project aims to determine whether the use of the app 'MagicPlan CSI' can maintain the accuracy of measurements and also increase the speed in which those measurements are taken. The use of a handheld device allows for measurements to be taken in situations where hand measurements might not otherwise be possible.

Danielle Boothby
Danielle1087@virginmedia.com

BSc (Hons) Policing and Criminal Investigation

Human trafficking- the UK Response
To effectively analyse the UK response to tackling human trafficking and reducing its impact.

Shauni Brabiner
Brabiner002@hotmail.co.uk

BSc (Hons) Forensic Investigation

Reproducible Bloodpattern Analysis and Reconstruction Method
This project looks at the Stringing and Protractor method on bloodstains, to see how accurate it is for reconstruction of crime scenes.
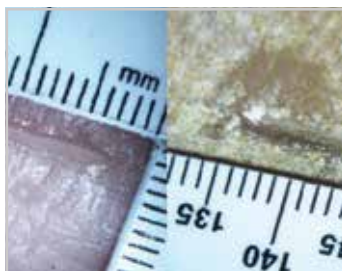
Charlotte Brough
c.brough@hotmail.com

BSc (Hons) Forensic Investigation

Stab Wound Decomposition
This project examines how different temperature environments affect the way in which stab wounds decompose and also considers different techniques for measuring these wounds.

Maryam Bukhari
bukhm002@gmail.com

BSc (Hons) Forensic Science

Stability of Blood Alcohol under Various Storage Conditions
Stability of alcohol in blood alcohol samples is an important factor regarding obtaining reliable data on the level of alcohol in an individual's blood. The main aspects determining the stability and ways to prevent alcohol loss by using alternative storage methods is the object of this research.

Kirsty Copeland

BSc (Hons) Policing and Criminal Investigation

Policing of Suicide Terrorism
An Analysis of the Effectiveness of Policing Tactics Utilised in the UK to Combat the Threat of Suicide Terrorism.

Lauren Fleming
laurenfleming2@btinternet.com

BSc (Hons) Forensic Biology

Fire Accelerants and Forensic Entomology
In cases of murder it is not uncommon for the perpetrator to attempt to destroy a body using fire. This investigation aims to establish whether the development rate of C. vomitoria larvae is altered when fed on porcine models soaked in liquid fire accelerants.

Samuel Galway
sgalway_94@hotmail.com

BSc (Hons) Forensic Investigation

Fingerprint Development Techniques on Non-porous Surfaces
A Comparison of black Wet Powder Suspension (Iron Oxide and Carbon) and Powder Dusting Techniques (Aluminium and Black Powder) in the development of sebaceous latent fingerprints on a variety of Non-porous surfaces.

Max Grundill

BSc (Hons) Forensic Science

Analysis of Crime Scene Fibres for Police Forces
The purpose of this project is to find a way to make fibre analysis cheaper. This is done using EasyLift tapes. With EasyLift it takes away the need to dissect tapes and mount the fibres on to a slide in water, the Depex. With EasyLift the analyst can place it on to a gelatine-coated slide and analyse it microscopically.
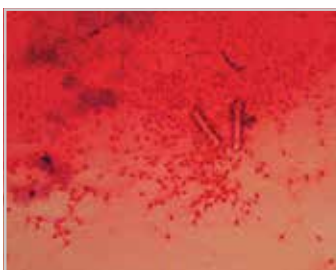
Eleanor Hannaford
eleanorhannaford@outlook.com

BSc (Hons) Forensic Science

Recovery of Semen from Sexual Assault Victims Post-Bathing
Semen is the most valuable evidence that can be found in relation to rape and sexual assault cases. Varying dilutions of semen and water were placed into a sink; samples were taken and analysed using presumptive and confirmatory tests for semen. The results give an indication of whether semen can be detected in different volumes of water.
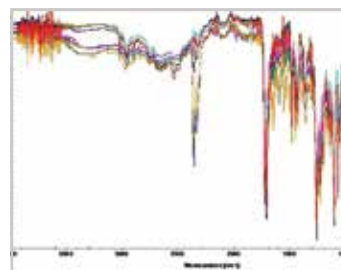
Jamie Hitchcock
jamiehitchcock@hotmail.co.uk

BSc(Hons) Forensic Investigation

The Chemical Characterisation of Seized Cocaine Samples
Cutting agents are chemicals added to a drug to increase the volume, so they can be sold for a higher profit. The aim of the research study was to identify the cutting agents found in cocaine samples that had been seized by the police. This was achieved by using Gas Chromatography paired with Mass Spectrometry (GCMS).

Emma Hollingworth
applemacemma@gmail.com

BSc (Hons) Forensic Investigation

Weapon Identification from Passive Blood Pattern Analysis
Blood is one of the most commonly found evidence types at crime scenes. Single blood drops were created passively onto a variety of surfaces from a range of weapons. They were examined to determine whether it was possible to identify the weapon that created them from upto eight characteristics of their resultant stains.

Lee Hope
leebrandonhope@live.co.uk

BSc (Hons) Forensic Science

The Transfer and Persistence of Biological Matter on Soil
The primary aim of this investigation is to see whether once a body or bodily matter/fluid is removed from soil after a specified period of time, are there any traces of the bodily matter/fluid still present, and if so, how much is remaining and is it applicable for forensic use.

Alice Ingle

BSc (Hons) Forensic Biology

Surface Type Impact on Accuracy of Angle of Impact Calculation
The aim of this project was to determine the effect surface type has on the accuracy of angle of impact calculations. Blood was pipetted at 5 pre-determined angles onto 30 different surface types. Mock crime scenes were also created for more realistic representation which were then analysed via the stringing method.

Claire Johnson
clairej1994@live.co.uk

BSc (Hons) Forensic Science

Can Cast-off be Mistaken for Impact spatter
To determine the impact spatter on hydrophobic weapons that are used in crimes and the cast off they produce, to determine whether, cast off on a weapon close by to the assault may be mistaken for impact spatter.


Amy Kalnins
amykalnins@outlook.com

BSc (Hons) Forensic Science

Influence of Packaging Type on Heroin Degradation over Time
Drug profiling is often used to link seized samples to one another with a major part of this based on the content of the sample. The degradation of diacetylmorphine in different types of packaging over set time periods was investigated to determine if packaging type could impact upon the degradation of heroin samples.
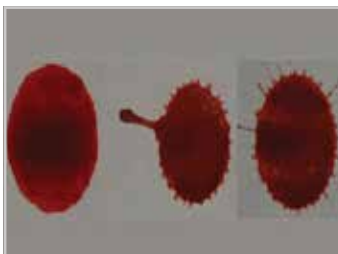
Richard Kings
r.kings@outlook.com

BSc (Hons) Forensic Science

The Effect of Height on Blood Spatter
This research focuses on finding if there is a statistical difference between the sizes of a blood stain and the spatter created when it is passively dropped from a perpendicular angle from different heights.
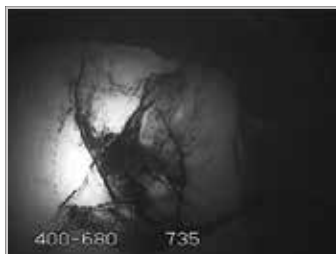
Daniella Knowles

BSc (Hons) Forensic Investigation

Tattoo Identification of Chemically Disposed Bodies
It is possible to apply tattoo identification to identify skin after attempted disposal of a body using household chemicals. Significant evidence may be lost including fingerprints, facial feature etc. This study may assist towards identifying chemical burn victims depending on the position physical state of the body.
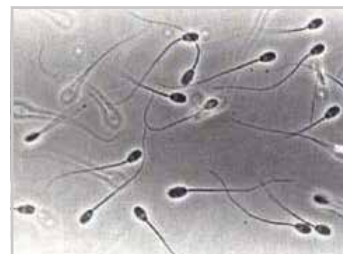
Tanya-Leigh Lane
tanyaleighh@gmail.com

BSc (Hons) Forensic Investigation

Transfer and Persistence of Semen onto Different Materials
The aim of this research is to determine the possibility for detection of semen onto different materials at differing degrees of transfer; primary, secondary and tertiary.

Alexandra Langley

BSc (Hons) Forensic Science

Underwater Decomposition and Odour Analysis
Pork was placed into various bodies of water; specifically distilled, artificial salt and local river water. Over 6 weeks, water samples were collected to investigate the concentrations of biogenic amines. Amines included putrescine, cadaverine and methylamine - distinctive during decomposition due to their foul odour.

Poppy-Anne Macky
PoppyMacky@hotmail.co.uk

BSc (Hons) Policing and Criminal Investigation

The Public Perception of Policing in Rural Areas
Rural crime is on the increase, and the police are resorting to new ways to tackle crime. But do the Police focus their resources more on urban areas then rural? This project analysed sixty households and their opinions on their local police. Victims of crime rated their local police on a number of attributes.

Joshua Mansfield
joshmansfield36@yahoo.com

BSc (Hons) Forensic Science

Headspace Analysis of Ignitable Liquids
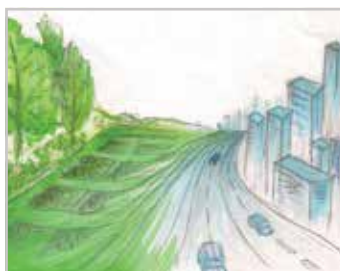An investigation into the effects of concentration, sampling conditions and water volume on head space analysis of accelerants on carpet samples.

Alexandra Miller
alex.miller_@hotmail.com

BSc (Hons) Forensic Science

Heat Related Bone Fractures
Differentiating between Bone Fractures Caused by Heat and Pre-Existing Injuries as a Result of Trauma.

John Mottram
johnjmottram@gmail.com

BSc (Hons) Forensic Science

Establishing a Framework for Bolt Cropper Evidence
This project is an analysis of the main form of evidence gathered from bolt croppers - striations. It measures and analyses the number of consecutive matching striations taken from various pieces of cropped steel.

Sascha Naylor
saschaleighnaylor@hotmail.com

BSc (Hons) Forensic Science

A Comparison of the Effectiveness of Bluestar and Luminol
Bluestar and Luminol were tested on blood stained clothing that had been washed at various temperatures with various washing detergents. Two of the detergents containing oxygen based bleaching agents oxidised the blood to such a degree that it was almost undetectable when exposed to these presumptive tests.

Megan Needham

BSc (Hons) Forensic Investigation

Latent Fingermark Longevity in Fresh and Salt Water
The discovery of bodies/ weapons in aquatic environments is commonly heard. However, the longevity of fingermarks in these conditions and the most effective development technique to use are unknown due to the deficiency of research. WPS is advised for wet surfaces, yet this study indicates CA is more effective.
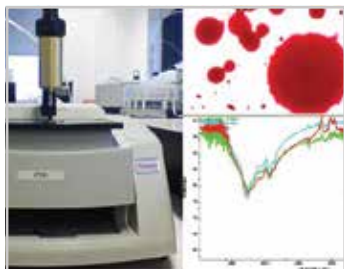

Charlotte Nicholson
charlotte.dawn.nicholson@ hotmail.co.uk

BSc (Hons) Forensic Science

Analysis of World War Two Weapons on Alderney, Saye Bay
The identification of World War Two weapons, and their firing ranges from archaeological infrastructure that remains - through measurements and theoretical research.

Philip Pikula
philip_pikula@hotmail.com

BSc (Hons) Forensic Science

Age Determination of Blood and Semen Stains
An investigation into the use of spectroscopic methods to study the aging of deposited blood and semen stains. Analysis of stains was carried out using Raman spectroscopy and FTIR to obtain spectral information from the stains at set time intervals that could potentially assist in determining time since deposition.

Amy Privett
BSc (Hons) Forensic Investigation

Detection and Transfer of Bodily Fluids after Washing
To see if bodily fluids and pubic hair from sexual assault cases can be detected on clothing after various washes and if there is potential for transfer onto other clothing during washes.

Stuart Read-Smith
stusmit@gmail.com

BSc (Hons) Forensic Investigation

All Body Image Identity Parade
The project aims to provide an alternative viewing media for video identity parades & to test the accuracy of this new method against the current system (VIPER) in the hope of increasing the accuracy rate, leading to a greater conviction rate whilst facilitating the elimination of the innocent.

Laura Roberts
laura.e.r.roberts@outlook.com

BSc (Hons) Forensic Investigation

Comparing Hand Drawn and iPad Crime Scene Sketches
Tablet devices are becoming more widely used in society. This study aimed to find out whether there is a potential for these device to be adapted in a policing and forensic environment by comparing crime scene sketches created on iPad application sketching software to hand drawn sketches.

Andrew Robinson
a_j_r0bins0n@yahoo.co.uk

BSc (Hons) Forensic Science

Variables Influencing the Growth Rate of Carrion Insects
The age of carrion insects can be used to indicate an estimate post mortem interval (PMI). There are factors that can affect the growth of these insects, such as temperature, which may cause inaccurate PMI estimations. This study used differing materials as potential variables that may be present at a scene.

Catherine Sadler
c_sadler@live.com

BSc (Hons) Forensic Science

The Transfer of Touch DNA on Victims of Manual Strangulation
The effect of pressure on the quality and quantity of touch DNA that is transferred onto victims of manual strangulation under simulated conditions. And the determination of the accuracy of the predicted pressure applied to the neck.
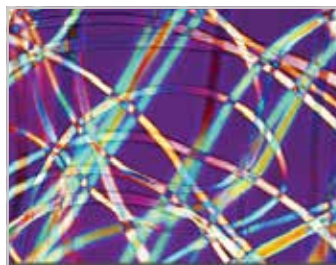
Kerrie Swift
kerrie.swift@cheshire.pnn.police.uk

BSc (Hons) Forensic Investigation

The Persistence of Fibres in Underwater Conditions
This study will report the likelihood of retrieving fibre evidence following the submersion in a river for a period of time.

Ella Taylor
BSc (Hons) Policing and Criminal Investigation

Should Police Officers Be Routinely Armed When On Duty
What would the public think if Police forces in England and Wales were armed with lethal weapons on a regular basis? 40 questionnaires were filled in and result have been finalised. 5 cases have been talked about involving weapons and police such as Mark Duggan and Jean Charles de Menezes both killed by the Police.

Rosalind Todman
rosalindtodman@gmail.com

BSc (Hons) Forensic Investigation

Environmental Factors Affecting Blood Pattern Analysis
This study focuses on two main factors: submersion and fly artefacts. The study aims to collect data to aid in the analysis of bloodstains that have been submerged underwater for different periods of time, and bloodstains that have been distorted by flies.

Antoinette Tucker
antoinette_tckr@hotmail.com

BSc (Hons) Forensic Science

Influential Effect of Scientific Evidence in Court
This research has considered the various ways in which forensic evidence are presented in court to potential jurors to form their opinions on what has happened, if it is understood and what their verdict or outcome of the case shall be from the contextual information provided.

Thomas Van Der Heyden
thomas.van.der.heyden@student.khleuven.be

BSc (Hons) Biology

Best Practice in Swab Design for Sexual Assault Examination
Different types of swabs will be tested on their capacity to capture and release semen. This to identify the optimal surface material for a vaginal swab to be used in a sexual assault case. These findings could impact on national regulations for the examination of sexual offence victims.

Jasper Vermeir
vermeirjasper@hotmail.com

BSc (Hons) Biology

The Persistence of Fibre Evidence in Water Environments
The persistence of different fibres on different recipients in water environments will be examined. The purpose of this research is to receive an insight in whether or not fibre evidence will still be able to be helpful in forensic research after it was present in a water environment for a certain amount of time.

Laura Wilkinson
laurawilkinson1992@hotmail.co.uk

BSc (Hons) Forensic Investigation

Discrimination between Different Breeds of Dog Hairs
The current method of identifying breed origin of dog hairs found at a crime scene is using DNA profiling. Using microscopical methods to identify the morphological features displayed in a dog hair could provide a cheaper method of analysis. Examining dog hairs found at a crime scene can provide links to offenders.
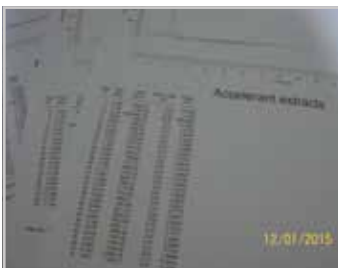
James Williamson
williamsonjames35@yahoo.co.uk

BSc (Hons) Forensic Science

Persistence of Accelerants on Clothing
The effect that environmental factors have on both the persistence and chemical profile of different accelerants was investigated using evaporation and solvent extractions as well as gas chromatography. Also, analysis of the effect or influence that biological and non-biological detergents have on the chemical profiles.

Lauren Wilson
Laurenwilson93@hotmail.co.uk

BSc (Hons) Forensic Science

Cremation of Bone: A New Insight
Previous researchers have investigated the structural changes of hydroxyapatite in bone when exposed to different temperature and exposure times. This study explores how bone thickness may also alter the rate at which these changes occur and how this may affect the analysis of recovered skeletal remains in fire cases.

Geography and Environmental Science

STOKE 15 MAY

Toni Gormley

BSc (Hons) Animal Biology and Conservation

The Use of Urban Greenspaces by Bats
This project was a simple survey using bat detectors to investigate bat location choice for feeding. Choosing 3 categories of land, surveys were carried out over several weeks to gather data on which areas were chosen by bats and what could be the reason behind this preference.

George Hooper

BSc (Hons) Animal Biology and Conservation

The Effects of Hedgerows on Urban Avian Assemblages
Finding out the validity of hedgerows as a conservation tool for birds in urban areas. By observing the impact of hedgerows in rural environments and green areas, and comparing with urban hedgerows, I will determine the amount of use from avian populations and conservation value of them.

Josie Hornby
josiehornby@hotmail.co.uk

BSc (Hons) Geography

The Effect of Climate Change on UK Malaria Risk
This research project aims to identify and analyse, with specific reference to the UK, the effect of climate change on the malarial parasite plasmodium vivax, its associated Anopheles mosquitos and habitats, resulting in the identification of possible malaria risk areas.

Stacey Hutchinson
stacey_hutchinson@aol.co.uk

BSc (Hons) Environment and Sustainability

An Environmental Study of the Britannia Stadium
The Britannia Stadium is the home of Stoke City Football Club. This project focuses on what is currently being done to reduce the club's environmental impact, and what progress is to be made? The Club is a key part of the social landscape of the Potteries and is an enticing subject for an undergraduate project.

Eve Kinsella
eve_kinsella@hotmail.co.uk

BA (Hons) Geography

The Issues Surrounding Asian Elephants in Thailand
This study focuses upon working Elephants in Thailand and how they continually struggle in this area of loose animal rights regulations and enforcement. With the great demand for working Elephants and worldwide population loss; their future is uncertain. With reference to the Elephant Nature park in Chiang Mai.

Jack Reece
jack.reece@hotmail.co.uk

BSc (Hons) Geography

An Investigation into the Nature of Earthquake Education: UK
The UK has a history of minor earthquakes and has the potential to have a major earthquake in the future. Education is an important part of damage mitigation in seismic events and how much knowledge the British population possess is integral to see whether people are prepared for an earthquake.

Jodie Rogers
jodiesrogers@hotmail.co.uk

BSc (Hons) Geography

Do Artificial Reefs Impact on the Underwater Environment?
A dive based study that looked at whether artificial reefs impact on the underwater environment at Dosthill Quarry, Tamworth. Fish populations, freshwater mussels' coverage, and water quality were measure to find out if the environment was impacted by the artificial reefs purposely sunk for recreational scuba diving.

Geography and Environmental Science
STOKE

Caroline Stone
carolinels26@hotmail.com

BSc (Hons) Geography

Amphibians Impacted by Climate Change
Climate change has widespread impacts on natural systems which are becoming vulnerable and need protecting. Mapping the distribution of amphibians in Cusuco, Honduras using MaXent will produce a probable distribution in projected climates, and help show why populations are declining.

Aaron Thurstance
aaronthurstance@gmail.com

BA (Hons) Geography

Socio-Economic Integration of Migrant Workers in the UK
With increasing rhetoric surrounding immigration and with immigration becoming an important political issue it is also important to consider the situation of migrant workers themselves. Using interviews with MP's from all 3 major parties, trade unions and migrants themselves, we uncover the true meaning of integration.

Saiful Alam
saifulomg@gmail.com

BSc (Hons) Computer Science

Sound Activated Robot which Senses Movement
Sound activated robot that is able record movement and react to sound commands.

Kiran Bhamber
kiranbhamber1993@gmail.com

BSc (Hons) Computer Science

Testing Hand-eye Coordination Using Hand Tracking Technology
My project aims to test a person's hand eye coordination using a piece of technology that can track the hands in 3D space. The test shall be based on current testing methods that exist in the field today and will aim to provide feedback based on the test results.
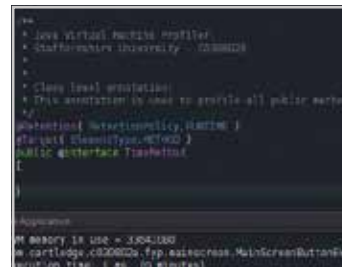
Jacob Cartledge
amery.benedicte@hotmail.com

BSc (Hons) Software Engineering

Annotation Based Java Virtual Machine Profiler
In summary the project is to create a Java Virtual Machine Profiler, for use with the Java programming language which incorporates dynamic runtime analysis. The profiler which is focused around the use of meta information (@Annotations), will be constructed through the use of byte-code manipulation.

Jasper Cashmore
jaspercashmore@gmail.com

BSc (Hons) Computer Science

Maze Mapping and Efficient Traversal using a Micromouse
An attempt at designing and creating an autonomous, mobile, robot that can navigate a path through a maze efficiently and unassisted. Measurements of efficiency include unit movement speed, shortest path algorithm implementation and software quality such as code reusability, optimisation techniques and extensibility.

Nicholas Chang
nicholasc001@hotmail.com

BSc (Hons) Computer Science

Geotagging Forensics Decoder
Create a Forensic Analysis tool that decodes Geotag data from Mobile systems.

Matthew Cole
rexrup123@hotmail.com

BSc (Hons) Computing Science

A Demonstration of 4G for Real Time Communication
Reviewing the functionality of 4G LTE to measure its suitability to send commands in real time. A Raspberry Pi will be emulating a real time control system with a Nexus 7 acting as the control device for the user, with both being connected via 4G. HD video may be live streamed to demonstrate bandwidth capability.

Looks like we can finally close bug #45848!

Robert Davison

BSc (Hons) Applied Computing

Developer Tools for Magento
Magento is a popular eCommerce Platform that provides very flexible configuration for developers; so flexible that many developers find its complexity daunting. This project will develop a browser based tool that assists developers in understanding the relationships between the configuration and the web pages Magento produces.

SYNECTICS SOLUTIONS
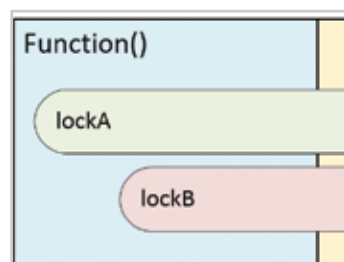
Oliver Dean
oliverjdean@gmail.com

BSc (Hons) Software Engineering

Visualisation of Threads for Concurrency Issue Detection
A prototype software tool that utilises visualisations in order to aid developers in understanding and resolving concurrency issues in .NET applications.

James Didehvar
james@didehvar.com

BSc (Hons) Computer Science

A Cross Compiler for the ARM Architecture
A program that translates a high-level language into executable code for the ARM architecture. This allows programmers to quickly prototype, develop and deploy robust applications to devices such as smartphones and embedded systems.

Jack Edwards
Jackedd92@gmail.com

BSc (Hons) Computer Science

An Interactive Voting Media Streamer
This project is a streaming system where the users are able to login via a mobile application and vote on what they would like to see from a list of available media in that area. Also administrators are able to manage the system from a separate application.

Courtney Franklin
courtneyfranklin1993@hotmail.co.uk

BSc (Hons) Software Engineering

ASP.NET MVC Injury Aid Application
An easily accessible web application to aid users with muscular injuries with the following; initial diagnosis, initial treatment, specifying an approximate recovery time and rehabilitation stretch exercises and strengthening exercises to give the muscle full functionality after a full recovery.

Daniel Garstone
daniel.garstone@live.com

BSc (Hons) Computer Science

Home Security System
A new approach to the home security system in an automated fashion used to increase the usability for users and reduce the costs involved.

Ben Harris
BenHarris@outlook.com

BSc (Hons) Cyber Security

BitAudit: Packet-level Bitcoin Monitoring System
Bitcoin payment monitoring system at a network-layer. See in real-time what Bitcoin traffic is leaving your network & how much has been sent. This tool aims to limit the susceptibility of transaction malleability/ double-spending attacks.

Alexander Hepworth
alexander.hepworth@google.com

BSc (Hons) Network Computing

The Impacts of Secure Solutions for Bring Your Own device
This project will test how security policies will affect a Wireless Network for the use of Bring Your Own Device using VPNs and Wi-Fi encryption.

Ryan Hill

BSc (Hons) Computer Science

Procedural Animation of a User Generated Skeleton
Upon creation of a user generated skeleton the system assess and generates a best fit walk cycle animation.

Daniel Hotchkiss
daniel.l.hotchkiss@gmail.com

BSc (Hons) Computer Games Programming

Dynamic World Generation Using Intelligent AI Characters
Simulating the development of a world containing AI characters which adapt to their surroundings, learn to create new tools and change their surroundings to suit them.


Christopher Johnson
c_johnson_09@hotmail.co.uk

BEng (Hons) Software Engineering

The British Boxing Hub
A Web based application that provides statistics and information regarding British boxers, this information will include boxer statistics, previous bouts and upcoming events. The application will also display information relating to a division or a specific title from the UK.
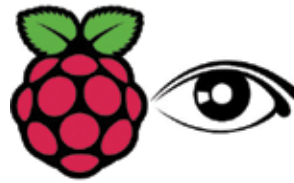
George Johnson
g.s.johnson@outlook.com

BSc (Hons) Computer Science

Home Security Automation
The artefact will detect motion/proximity the camera will take a snapshot of what may be causing the detector to trigger, attach the snapshot to an then send this off to configured address. Leaving the user with a "handsoff" approach.

Adam Johnston

BSc (Hons) Computer Games Programming

Software to Simulate Watercolour and Ink Wash Painting
A piece of software to realistically simulate the motion of ink pigments on wet paper for use in watercolour and ink wash painting by professional and amateur digital artists.

Glen Jones
gdj1947@yahoo.co.uk

BSc (Hons) Computing Science

ScorePB - An Administration System for Paintball Tournaments
The mobile app is named ScorePB created for Windows 8.1. ScorePB is used by administrators, referees and players to help manage paintball tournaments. The app allows Administrators to generate teams and fixtures, Referees to submit scores and Players to verify scores and view updated live leader boards.
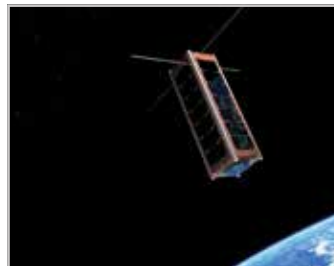

Amandeep Jutla
ajutla09a@gmail.com

BSc (Hons) Computer Science

e-Parking using Sensor Technology
Allowing users to book a specific parking space online reducing the need for users to continuously search for vacant spaces in a busy car park or town by providing real time availability using sensors utilized in bays.

Dan Kitchen
dankitchen.uk@gmail.com

BSc (Hons) Computing Science

Design and Implementation of a Prototype CubeSat
The design and prototype implementation of a CubeSat On-Board Computer System. Component Miniaturisation and secondary launch standardisation has created opportunities for small satellites. The project looks to assess the validity of rapid prototyping in the wake of this increased access to space by smaller entities.

Thomas Klages
tomklages@hotmail.co.uk

BSc (Hons) Computer Science

The Communication of Accumulated Data using Lego Mindstorms
The way in which data is portrayed from a robot to a human interface seems quite uncommon. Many people would not know how to use or control a robot effectively. Using Lego Mindstorms we can provide a method to make the use of Robotics in a specific situation clearer and show people the best ways to use such devices.

Computer Science and Software Engineering
STAFFORD

Leigh Lawley

BSc (Hons) Computer Science

Motion Surveillance System
My aim is to create an extensible and highly configurable surveillance system using a group of Raspberry Pi's and a local area network. The artefact should allow users to extend the network of cameras at their will. The functionality of the artefact should change based on the requirements of the user.
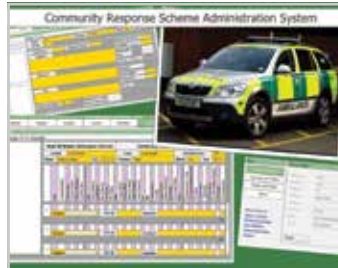
Richard Lawton
richardlawton1987@google.com

BEng (Hons) Computing Science

Community Response Administration System
The system assists in the management and administration of Community Response Schemes, their processes, operations and data within Staffordshire as part of West Midlands Ambulance Service.

Reegan Layzell
reegan.layzell@live.co.uk

BSc (Hons) Computer Science

Naturalistic Control of Robotic Devices using Gestures
This project attempts to research and demonstrate the potential benefit of motion/gesture recognition for control of robotic devices. Using gestures for coarse-grained, command based control, and a touch screen control panel for when fine-grained operation is necessary.

Ashley Littler
ashleylittler@me.com

BEng (Hons) Computer Science

Real-Time Human Diagnostics and Door Security System
I would like to use my project to create a 21st century 'front door', catered mainly towards the elderly and vulnerable. As our population becomes older we face new challenges as a society. Some of these can be solved with a computing solution. A well designed system can improve safety, access and quality of life.

Philip Loffler
philiploffler@yahoo.co.uk

BSc (Hons) Computer Science

Mobile Guitar Tuner App
A mobile application designed to tune an electric or acoustic guitar through use of the device's microphone.

Marie Lyon
marielyon93@gmail.com

BSc (Hons) Computer Science

Math Revision & Raspberry Pi Enviomental Data Logger
A maths revision program written in C++ with a combined raspberry pi that senses and logs light, temperature and noise to help the student revise in their optimal learning environment.

Adam Martindale
adam.john.martindale@gmail.com

BSc (Hons) Computer Science

Autonomous Quad Copter Control Using Object Tracking
A Quad Copter will complete a three dimensional slalom using vision based object tracking.

David Meek
davidmeek@outlook.com

BSc (Hons) Software Engineering

Automated SQL Stored Procedure Tuner
The system reads the stored procedures of a given database and looks at ways to improve it, making their next execution perform faster and more efficiently..

Computer Science and Software Engineering
STAFFORD

Sian Merriles

BSc (Hons) Computing Scienceg

Veterinary Customer System
A customer based veterinary internet site that will allow the customers to view information about their pets and do various functions in conjunction with this information.

Josh Middleton
josh@jshm.me

BSc (Hons) Computer Science

Raspberry Pi Beowulf Cluster
This project utilises a number of commodity hardware nodes - in this case Raspberry Pi boards - to construct a cluster in a series of configurations (including both mesh and bus topologies) in order to assess the effectiveness of a number of algorithms when running in a multi-core environment.

Ubaidullah Nisar

BSc (Hons) Software Engineering

Online Taxi Booking System
DG Taxis are finding it difficult to manage the many increasing amount of accounts they have. Processing all this via phone can be time consuming. The taxi booking system will allow customers and account users to book a journey with an active interface allowing tracking and feedback of job progress.

Michael Olatokun
the_olatokuns@hotmail.co.uk

BEng (Hons) Computer Science

Music Voting System Featuring Temp Detector
This project is a music voting system where users select from a range of music genres that will play on a streaming device. The primary fit for this project is in a nightclub where this system will also detect temperature in the room and change the music depending if the temperature reaches a certain point.

Peter Pickerill

BSc (Hons) Applied Computing

Student Skills Systems (Penman)
The Student Skills system or "Penman" was created to show evidence from students that they had the skills required to become a Staffordshire Graduate.

Christopher Platt
chrisplatt1991@gmail.com

BSc (Hons) Computer Science

Robotic Stacker
Investigate the functional possibilities of the National Instruments MyRio unit. It will be connected to a simple robotic stacker so that a standard library of drivers and interfaces is produced. The project will then progress so that the system can be remotely monitored and controlled.

William Prince
willprince93@hotmail.co.uk

BSc (Hons) Computing Science

Automated Employee Management System with Facial Recognition
The aim of the project is to create in an integrated clock in and clock out employee management system through the use of facial recognition on the employee's existing device.

Joshua Pritchard
jap138@hotmail.co.uk

BEng (Hons) Software Engineering

Total Football
A web and desktop application to replace the current paper based system used by the Football Association. The applications will allow for the entry of information and records, as well as displaying current statistics such as division standings and upcoming fixtures.

SYNECTICS SOLUTIONS

Joseph Reynolds
josephreecegrantreynolds@gmail.com

BSc (Hons) Computing Science

Audio recording/editing Android App
Java-based Android application that records, saves, edits and plays back audio via mobile device. Written in Android Studio.
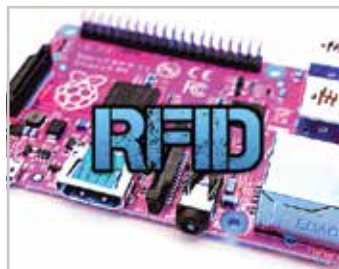
Thomas Rodd
thomasarodd@gmail.com

BSc (Hons) Computer Science

Computerised Sports Training Aid
By using sensors I am trying to record the progress of a subject's physio therapy rehabilitation and making suggestions for next steps. I am also hoping to develop the project into a training aid for sports.

Elliott Russell
E_Russell@.com

BSc (Hons) Computer Science

Radio Frequency Identification Attendance System
An automated system deployed on the Raspberry Pi to offer a budget alternative that enables fast, accurate and efficient data transfers regarding attendance times for personnel using radio frequency identification. An external database will also be developed in order to store the data and generate appropriate reports.
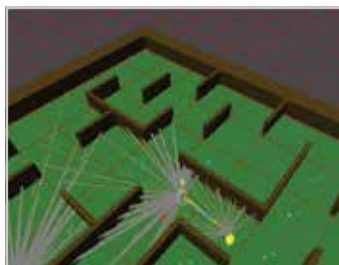
Liam Salt
iamsalt@live.co.uk

BSc (Hons) Computer Science

An Emergency Alarm System Utilizing Mobile Technology
An alarm system designed to be worn on the wrist of the user that can alert emergency services to a call of distress and provide remotely provide a rough GPS location with the aim of preventing or stopping a criminal act of personal harm.

Stephanie-May Shellam
stephanieshellam.gamedesigner@gmail.com

BEng (Hons) Computer Gameplay Design and Production

Recursive A.I.
Self-modifying artificial intelligence framework which allows deathmatch bots to modify their own behaviour over time and become more resilient and dangerous.

Mark Silvester
mgsilvester@gmail.com

BSc (Hons) Computing Science

Analysing Ambiguous Social Media Data
Social media websites collect an enormous amount of data. Some of this information will be extremely useful to the user and some will be completely worthless. This project aims to make social media analytics easier by returning only relevant information based on the users search criteria.

Michael Stephenson
m.k.stephenson@outlook.com

BSc (Hons) Game Artificial Intelligence

Traffic Guidance System
This project provides a simulated solution to city road congestion through dynamic route construction based on current road conditions. The routes which guide vehicles through a virtual city are designed to reduce citywide congestion and reduce travel times. Hopefully this solution could also be applied to real cities.
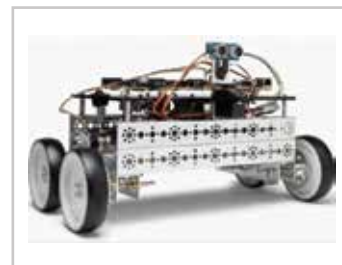
Massis Torosyan
massistorosyan@gmail.com

BEng (Hons) Computer Science: Computer Security

Minefield/Maze Solver Robot
This project is about testing the different potential solutions to the problem of getting a robot to navigate an unknown obstacle maze.

Computer Science and Software Engineering
STAFFORD

Elizabeth Wakefield

BSc (Hons) Digital Forensics

A Forensic Process Map for the Examination of Smart Devices
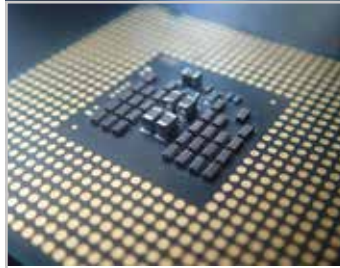Digital evidence can be found in a variety of unexpected places. This project is an investigation into current smart devices with focus towards their forensic value. The aim of which is to create a forensic process map to inform digital forensic investigators how to identify, retrieve and analyse a smart device.

Jack Williams
jackdaniel.williams@gmail.com

BSc (Hons) Software Engineering

A Dynamically Recompiling Emulation Framework
Due to the complexities of processors, emulation in turn is an inherently complex subject. This project looks to alleviate these complexities by identifying components common to all processors and with this knowledge producing a framework in which these components are already emulated.

George Wright
goldgeo46@gmail.com

BSc (Hons) Computer Science

SQL Query Analysis and Optimisation Application
I am designing and creating a tool that optimises SQL queries and educates users on how they can improve their query writing skills.

www.staffs.ac.uk/gradex

Computing and Information Systems

STAFFORD 15 MAY

PhoenixComputers
Making technology work for you

Joshua Adamson
http://adamson1991.wix.com/e-portfolio

BSc (Hons) Business Computing

E-learning - How it can Change the Future of Learning?
The purpose of this project is to discover if interactive learning websites can help to develop end-users Information Technology skills, by improving their knowledge, by building their confidence and also by giving them the motivation to use IT systems in their everyday lives.

Katie Botterill
k.botterill@hotmail.co.uk

BSc (Hons) Applied Computing

Teachers - Ready to Code?
Computing was introduced into the school curriculum in September 2014. This project aims to answer whether or not teachers and schools are ready for this introduction and expands on what impact this could have on teaching and to the technology industry as a whole.
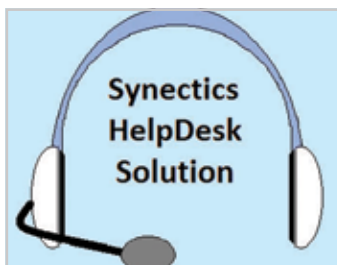
Samuel Bradley
sam.bradley1993@gmail.com

BSc (Hons) Computer Networks and Security

Anonymous Text Messaging Whilst Under Surveillance
A minimal, easily configured messaging client that allows anonymous, deniable text communication between two or more parties either publicly or privately over the internet despite total surveillance.

Nicole Chapman

BSc (Hons) Computing Science

Web based Help Desk System for an IT Support
IT HelpDesk System aimed for a Service Desk team to utilise within everyday tasks.

Samuel Croot
samuelcroot@outlook.com

BSc (Hons) Computer Networks and Security

Does the Latest Wireless Standard Improve or Hinder VoIP?
Today's employee is ever more dependent on wireless communication, field workers reporting back to head office depend on this technology. The aim for this project to see if the latest wireless standard defined by the IEEE does improve the quality of VoIP applications or is the increased bandwidth redundant.

Darren Danks
danks.darren@outlook.com

BSc (Hons) Computing Science

BI Solutions for Operational and Strategic Management
Implementation of Business Intelligence solutions to provide insight to corporate data through multidimensional analysis and data visualisation. Realised through real world client business requirements, modelling and development of a Data Mart and querying using the industry standard MDX language.

Bradley Hunt
brad93hunt@hotmail.co.uk

BSc (Hons) Computer Networks and Security

The Study of Performance Effects with a VoIP Implementation
This project investigates the performance effects that a VoIP implementation will have upon a WAN network. It will outline the issues that this technology causes upon the performance of modern networks, and provides suitable solutions to the described problems.

Gurur Ibanoglu
gurur191@gmail.com

BSc (Hons) Computing Science

Geolocation Based Web and Mobile Application
This is an experimental computing science project, and one of the main goals being to create a web app which displays offers related to Geo-location.

Thomas Jackson

BSc (Hons) Computing Science

IOS Recipe Application with Barcode Search Functionality
The goal of this project is to create an IOS application for the Iphone and Ipad with specific features for each, which will allow the user to search for recipes by scanning the barcode of a food item, or several food items along with the other expected features from a mobile recipe application.

Chimaroke Kalunta
me@chimkalunta.com

BSc (Hons) Applied Computing

Twitter Analytics: Handling Unstructured Data with MongoDb
In recent years, organisations have shown an increased interest in insight that can be gained from big data. Much of this data is, however, unstructured. This work offers an approach for analysing and handling unstructured data from the Social Networking Site, Twitter, with the popular NoSql database, MongoDb.

Marcus Smith
smithm1@hotmail.co.uk

BSc (Hons) Computing Science

Biometric Recognition System for a Dog Kennel
The software I am creating is a biometric gait recognition system that analyses and verifies the way that dogs walk, to uniquely identify them. The data will be entered into a database where a template for each dog is created. Each dog will be compared against each template to find a successful or unsuccessful match.

Dean Wright
deanwrong@gmail.com

BSc (Hons) Computer Networks and Security

IP CCTV Networks: Security and Network Performance
The aim of this project is to investigate the impact of securing IP CCTV networks on their performance. Different security methods will be combined with IP CCTV networks and the performance of such networks will be evaluated, to assure the use of such video footage for potential post incident analysis.

Bence Zorenyi
bencezorenyi@gmail.com

BSc (Hons) Business Information Technology

Decision Support System for the Students' Union Shop
Microsoft Excel will be utilised to produce a decision support system for the Students' Union Shop that will perform forecasting to predict future demand and revenue. Furthermore, it will contain recommendation messages about what needs to be done in certain situations eg. if demand is increasing for a product.

Film

STAFFORD 15 MAY

Alexander Gilbert

BSc (Hons) Television Production Technology

Where Demons Hide
A feature length film, written, directed and edited by Alex Gilbert (myself). The film was made on a micro budget for less than £2000 aiming to create a cinematic feel of that in Hollywood films.

Benjamin Gray
https://g004767b.wordpress.com/

BSc (Hons) Film Production with Music Technology

Creation of Sound Effects for Sci-Fi
The results of "An Investigation into the Creation and Manipulation of Sound Effects and Foley in Science Fiction" using the short sci-fi film "Tears of Steel". All sound effects, Foley and ADR were replaced throughout the entirety of the portfolio: https://bengrayfyp.wordpress.com/.

Adam Harding

BSc (Hons) Digital Film and Post Production Technology

Interactive, Immersive, Virtual Reality Cinema
Applying psychological and technical study into the suspension of disbelief, this piece uses new technologies to create an utterly immersive film experience. Smoothly interactive, a viewer can focus their vision upon characters on-screen, and listen to their thoughts in real-time.

Joshua Hughes

BSc (Hons) Film Production Technology

Exploring Narrative Storytelling in a Short Film
I will explore narrative storytelling in a short film, and focus on man's troubles with schrizophrenia.

Benjamin Hume
benhumefilmschool.wordpress.com

BSc (Hons) Film Production Technology

A Technical Investigation into Visual Expression
A technical investigation into the ways in which visual content can be used to express ideas, themes, character and mood within film. A range of short films have been created to accompany this exploration of the image, and within these shorts, different aspects of visual expression are experimented with and showcased.

Rachael Humphrey

BSc (Hons) Film Production Technology

Investigating the Editing of an Action Sequence
The project investigated the editing of an action sequence and how it is characterised by pace, motion and camera placement. This involved researching and testing editing theories and techniques for an action sequence, and how the edit can transform the way the audience interprets the on-screen action.

Oliver Jones

BSc (Hons) Digital Film and Post Production Technology

An Investigation into the Post Production of Action Sports
This research paper will be focus on the subject area of post-production within the parameters of action sports. It will focus on the editing that goes into creating engaging audio and visual sequences for the focus sport.

Film
STAFFORD

Alexander Jordan
www.angelictvpilot.com

BSc (Hons) Film Production Technology

Angelic: The Angel and the Jerk
Angelic is the pilot episode of a new dramatic comedy about a fallen angel and the man he has to redeem. It is the culmination of a six-year journey for those involved, including two years dedicated solely to the pilot, and will hopefully be the start of a whole new adventure, both for the team, and a new audience.

Simon Picken

BSc (Hons) Film Production with Music Technology

Music Video Directing
An investigation into the sound and image whilst being a music video director. This project consists of directing two music videos "You're Not Alone" from CMA and "Mountain Republic" from Sean Mackey. It entails producing their songs, taking inspiration from photography techniques into filmmaking.

Elizabeth Rice

BSc (Hons) Television Production Technology

Marketing within the TV Industry
How the TV industry is changing due to advancements in technology, how this is changing the way in which consumers watch TV and how this is creating new marketing opportunities.

Amy Sharman

BSc (Hons) Film Production Technology

The Fall of Raida
Sci-Fi short film. A young Queen flees from her home with her loyal bodyguards, while being hunted down by an invading army and their fierce warrior Queen.

Louise Sherwin
https://vimeo.com/user10342557

BSc (Hons) Digital Film and Post Production Technology

Colour - Final Year Project
A compilation of colour grading work carried out in final year as part of the portfolio project module, showcasing different styles and techniques applied using knowledge learnt at Envy Post Production whilst on a placement year and through independent practice and research.

FX

Georgios Arapakis

BSc (Hons) CGI and Digital Effects

CGI and Digital Effects
My final year project will be based on character animation, illustrating facial and body movements and expressions. This will be achieved using Autodesk Maya.

Patrick Bonifacio

BSc (Hons) Games Concept Design

Vehicle design
Creating Vehicles using different software to aid in different production pipelines, including 3D and 2D.

Christopher Caudwell
cjcaudwellvfx.com

BSc (Hons) Digital Film and 3D Animation Technology

Creating a Human Cyborg Hybrid
This project aims to create a character model that has a human upper body and mechanical legs. The main focus of the assignment is on the modelling of the character with a secondary focus on rigging.

Conar Cross
conarcross.com

BSc (Hons) Games Concept Design

Reconceptualisation
A re-imagining of well-known movies and games through concept art, updating them to current trends and themes shown in today's media.

Ashley Davies

BSc (Hons) Digital Film and 3D Animation Technology

Photorealistic Rendering of 3D Visualisation
The aim of this project was to create photo-realistic imagery of a modern living room setting. The room will be based upon real-world scale. There is a mix of both self-made and sourced assets which have then been rendered using V-Ray. The project was completed using 3DS Max, V-Ray, Marvelous Designer and Photoshop.

Katherine Foster

BSc (Hons) Games Concept Design

Winterspell: Designing Concepts for an Original Game
A project centred on developing and designing concepts for characters and environments, focused on the idea for an icy-themed fantasy RPG named "Winterspell".

Alistair Fox

BSc (Hons) Digital Film and 3D Animation Technology

Animating Emotion through Facial Expression and Body Language
This project studied human emotion and the expressions which comprise them. The goal was to create believable character animations. The research into facial expressions and body language was then concentrated into, short 11-second club-style animations, with the focus being on the characters emotion.

Daniel Gilligan

BSc (Hons) CGI and Digital Effects

Space Shuttle Launch with Fluid Simulation
This project explores the use and control of fluid FX in Maya. A combination of fluid simulation, projection mapping, lighting and texturing come together to create a realistic piece of dynamic work, in both a video sequence and still-frame render.

Matthew Gladman

BSc (Hons) CGI and Digital Effects

Reforming Steel - A Digital Recreation
The objective of this practical is to demonstrate my compositing abilities, and improve on them. To get as close to a film standard as possible, I attempted to re-create finished film shots using unfinished raw shots from actual films.

Jasmine Grigg
www.behance.net/JasmineGrigg

BSc (Hons) Digital Film and 3D Animation Technology

Interior Realistic Architectural Visualisation
The aim of this project was to create an accurate representation of a photorealistic interior design. This was achieved by modelling and Lighting the project using Autodesk Maya then rendering in Solid Angles Arnold. This project utilised other programs such as Adobe Photoshop, After Effects and ZBrush.
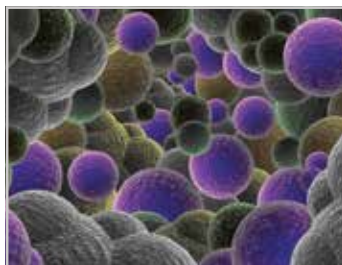

Alexander Lucking

BSc (Hons) Games Concept Design

Exploring Cultural Inspiration in World Design
Production of environment and character concept art, creating a futuristic world which takes inspiration from Feudal Japanese civilisation and cultural aesthetics.

Oliver Lunn

BSc (Hons) CGI and Digital Effects

Intercellular
Immerse yourself in the microscopic phenomena of our world and journey through intercellular forms. Explore an otherworldly environment recreated in 3D.
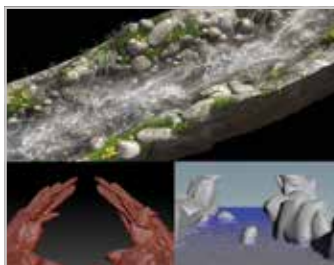

Dexter Marshall

BSc (Hons) Digital Film and 3D Animation Technology

Story Telling Through Animated Facial Expressions
The study and creation of facial expressions for creating a short animation film.

Jacob Matthes
jacobmatthes.com

BSc (Hons) CGI and Digital Effects

Raging River
This project looks at the creation of a river using FLIP fluids within Houdini. Through learning and understanding, the ability to control and manipulate FLIP fluids was achieved. As a result, multiple simulations such as white water, splashes and bubbles are combined to create a raging river.
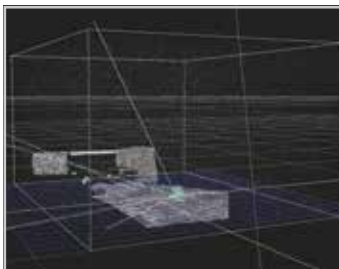

Thomas Mortelette
tmortelette.wordpress.com

BSc (Hons) CGI and Digital Effects

Compositing Portfolio
A portfolio of matchmoving and compositing work including a scene recreating the Normandy beach landings.

FX
STAFFORD

Rebecca Perry
www.beckyperryvfx.com

BSc (Hons) CGI and Digital Effects

Compositing the Elements
A project using various 2D and 3D digital compositing techniques to alter, in a realistic manner, the conditions in which footage appears to have been shot. This was produced predominantly using the compositing software NUKE.

Melissa Rogerson

BSc (Hons) Games Concept Design

Narrative through Environment Design
A series of visual narrative illustrations detailing the events during a viral epidemic.

Michael Stanier
http://www.mstanier.co.uk/

BSc (Hons) CGI and Digital Effects

Human Character Creation
This project focused on the sculpting aspects of creating a human character with accurate human anatomy and a high level of detail. The character was based around a post-apocalyptic survivor and the style of clothing and accessories connects to this genre.


Paul Vickers
www.paulvickersvfx.com

BSc (Hons) Digital Film and 3D Animation Technology

Integrating Motion Graphics into Live Action Footage
The aim of this project was to create a short edited piece comprised of abstract 3D motion graphics, integrated into a series of live action shots. The project is based on and inspired by television channel idents and commercials.
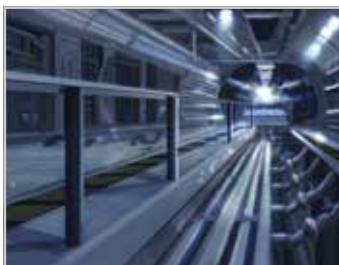
Dale Walters
https://www.artstation.com/artist/DaleWalters

BSc (Hons) Games Concept Design

Entertainment Design
A series of images created for use in different areas entertainment industry including video game, television, film and comics.


Radley Wells

BSc (Hons) CGI and Digital Effects

3D Modelling for VFX
This project involved creating a 3D character, heavily influenced by the film '*Apocalypto*'. This model is mainly made up of organic modelling with specific attention put into creating the anatomy accurately. A lot of detail has been put into the high-poly sculpt to create a realistic character that can be used in film.
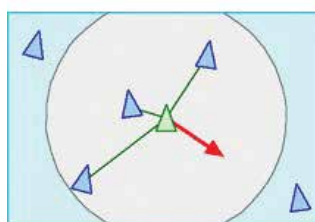
Games Design and Production

STAFFORD 15 MAY
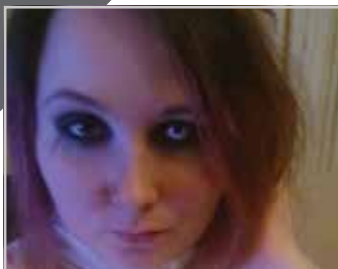
Nicola Bednarz

MEng (Hons) Computer Games Design

Indie Games Development
This project is a culmination of my studies at Staffordshire University, it has a focus on design, narrative, and player experience.

Arran Blomfield

BEng (Hons) Computer Gameplay Design and Production

A Boids system in UE4 blueprint
Using steering forces and Boids behaviours to create artificially flocking bodies within UE4 using only the blueprint visual scripting system. The ultimate aim is to create a lifelike shoal or swarm of ingame creatures.

Thomas Brewster
www.tombrewster.co.uk

BEng (Hons) Computer Gameplay Design and Production

Creating Multiple Single Mechanic Mobile Games
Just how easy is it to create the next "Flappy Bird"? For my project, I have created several single mechanic mobile games, each being made in a relatively short amount of time. The intention is to get them onto the iOS App Store and see how they perform.

Thomas Brittain
teacosytinkers.com

BSc (Hons) Computer Gameplay Design and Production

How to Succeed Before You Begin
Compressed into this approachable "Beginner's Guide to Pre-Production" is the collective wisdom of over sixty postmortems, a dozen books and one unassuming graduate. Though aimed at those just starting out on their game development careers, anyone might find a tasty snack in this smorgasbord of brain food.

Thomas Burke

BEng (Hons) Computer Games Design

Creation of a networked game alongside a tutorial series
I am creating a tutorial series alongside a networked game to allow people without UE4 / Game Creation experience to create a base framework of a simple networked game. This will include various simple mechanics of their choosing as a good baseline to start game creation.

Jamie Butler

MEng (Hons) Computer Games Design

Gameplay Prototypes, Production and Development in UE4
My work involves designing, prototyping and producing gameplay mechanics for a number of genre types. My Masters Portfolio includes: Prototyping characters for MOBA Frameworks, designing Ludonarrative environments, designing a two-state transforming character, and producing a mobile game.

Daniel Cartwright

BSc (Hons) Computer Games Design

ASMR in UE4
An experiment to discover if the ASMR effect can be created in Unreal Engine 4.

Games Design and Production
STAFFORD

Matthew Casey

BEng (Hons) Computer Games Design

Card Game Design and Development
This project is based around the design and development of analogue card games, exploring different mechanics to try and find out what makes them interesting and fun. It includes several prototypes based around experimental ideas in the design field.
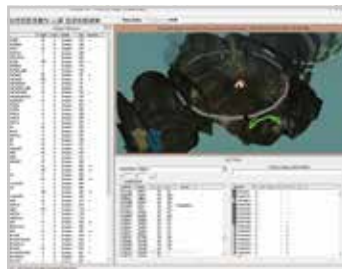
Jacob Chell
jacobchell.carbonmade.com

BSc (Hons) Computer Games Design

A Comparison of Level Editors
This project involved studying different level editors that come shipped with games. I compared them using a custom framework designed to compare level editors of different types and for different genres of game.

Richard Court

BSc (Hons) Computer Gameplay Design and Production

Video gamers preferences on destruction
My work aims to understand destruction that has been used in previous game titles, the interaction, tools and software used. Testers can traverse the small environment, interacting with the eight different destruction techniques. Data gathered from the questionnaire will be analysed and concluded with correlations from the testers highlighted.

James Dean

BSc (Hons) Computer Games Design

Reviving the Dead - Creating a Retro FPS
Demonstrating that 20-year old design practices and ideas are still viable in the modern era, this game revives the style of a retro FPS. This is a small game built within Unreal Engine 4 and revives the interesting level design and brutal action of the past, taking inspiration from classics such as Doom 2.

Robert Gordon

BEng (Hons) Computer Gameplay Design and Production

Innovating Multiplayer with a Risk/Reward System
Revolutionising multiplayer, this system, based on psychological and social studies (including Maslow's hierarchy of needs) aims to enable players' unique motivations and indulge them. It can be applied to most games and various genres alongside scaling to generate more in-game and fiscal value.

Andrew Humpage
sites.google.com/site/andrewhumpagegames

BSc (Hons) Computer Gameplay Design and Production

Gameplay and Narrative balance across Console Gaming History
This research paper explores how the balance between gameplay and narrative has changed over the history of console video games and how that balance has changed alongside the development of console technology, hardware as well as newer and more powerful game engines.

Emran Hussain

BSc (Hons) Games Concept Design

Concept Art Portfolio
The project will look at concept art work for a portfolio catering for the games and films industry. The portfolio could potentiality include character and environment designs while exploring different art styles.

Allan Johnson
www.devorejohnson.co.uk

BSc (Hons) Computer Games Design

The Design, Creation and Analysis of an FPS death match map
A project that looks into the design and creation of an unorthodox first-person shooter level. The level was to be created with a vertical aspect and players being able to move between several different floors. A map will focus on the death-match game mode.

Games Design and Production
STAFFORD

Craig Johnson

BSc (Hons) Computer Gameplay Design and Production

Emotional Attachments in Videogames
Focusing on Lacan's theory of the real, imaginary and symbolic, this project explores how videogames are able to create emotional attachments to the fictional characters within them, even though we are fully aware they do not technically exist in the real world.

Rhys Jones
rhysjonesgamedesign.com

BEng (Hons) Computer Gameplay Design and Production

Dawn: Trading Card Game
Dawn is a paper collectible trading card game centred around space warfare. In these battles, each player takes the role of the admiral of their respective faction, leading a decisive battle from their Dreadnought using immense weaponry and powerful technology to outwit and outmanoeuvre their opponent.
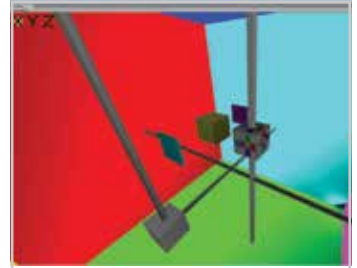

Arran Jordan-Taylor
sites.google.com/site/arranjordantaylor/

BSc (Hons) Computer Gameplay Design and Production

Creating a Tabletop RPG for a Modern Audience
The project involved designing and publishing a tabletop role playing game to appeal to modern gamers. The game aims to be simple for beginners to learn but have depth for experienced players to enjoy.

Alexander Kerr

BSc (Hons) Computer Games Design and Programming

Interactive Music Creation
This is an interactive music creation game where the player can create a piece of music within a 3D environment using the distance between objects to play different notes.

Rory Martin

BSc (Hons) Computer Gameplay Design and Production

UE4 Crafting System
The project is a crafting system in UE4 which is used like a starter pack. The process includes HUD setup, which has a health and inventory system setup.

Rain Mason
rainmason.carbonmade.com

BSc (Hons) Games Concept Design

Historical Conceptual Portraiture and Environmental Design
Combining historical and anthropological research with a conceptual artistic approach, my work is a series of paintings and illustrations that showcase the applications of conceptual art within the game, film and museum industries. My work informs not only historical works, but also forming a basis for works of original fantasy.

Nyall McCurrach

BSc (Hons) Computer Games Design

First Person Pinball - UE4 Blueprint
Merging agile gameplay of modern first person shooters with the core mechanics of a traditional pinball machine to create a unique physics-based game in Unreal Engine 4. The mechanics have been developed in Blueprint.

Nicholas Morrey

BSc (Hons) Computer Games Design

Playable Character within Unreal Engine 4
A playable character created using Unreal Engine 4, using motion-captured animation.
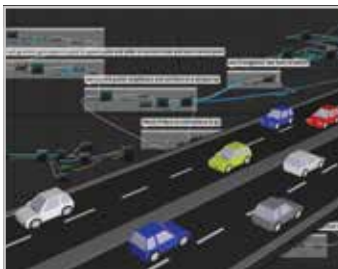
Games Design and Production

STAFFORD

Jonathon Mustapha

BSc (Hons) Games Concept Design

Concept Art and Illustration Showcase
A showcase of entertainment design, production art and Illustration.

Lewis Parkinson

BSc (Hons) Computer Games Design

Dynamic AI Traffic System
A dynamic traffic system in which AI has random spawns and destinations and finds the quickest route. AI also redirects itself if its path is blocked. It also reacts to other AI appropriately, including variations on the AI such as emergency vehicles which have slightly different behaviours.

Pravin Patel
pravpatel.com

BEng (Hons) Computer Gameplay Design and Production

Co-operation via Games Design
Teaching through gameplay is a desirable factor for games and teaching players to work together is the point of my project *Aegis Armada*. Armada is a side scrolling shooter that requires both players to use their own unique abilities in tandem.


Nicholas Pinkney
soundcloud.com/vs_robots

BSc (Hons) Computer Games Design

Computer Games Audio and Music
Vs_Robots is a collection of audio FX and music packs for games to be sold on Game Engine Marketplaces. I have also produced a series of maps collecting the uses of my audio in the Unreal Engine Marketplace. A trailer will promote the packs and my audio design skills.
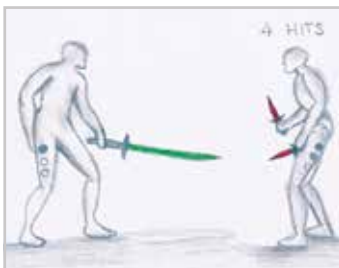
Melissa Prosser
melissaprosser.wix.com/melissaprosser

BSc (Hons) Computer Gameplay Design and Production

UI Focused Games Development
Research into UI focused games and UI focused gameplay elements in different genre games to understand what works, what doesn't, why and in what circumstances to create 2-3 enjoyable UI focused game demos. The games are then given feedback to assess whether players enjoyed the UI focus in the games.

William Reid

BSc (Hons) Computer Games Design

Batman - A Classic Character Redesign
A new look at the classic comic book hero Batman. The character has been redesigned as if he had existed in the medieval era, and then created using 3-D modelling programs for use within the games engine *Unreal Engine 4*.

Amarpreet Sandhu

BEng (Hons) Computer Games Design and Programming

Investigation in Industry Standard Audio
The project will consist of researching and documenting various audio designers' workflows. My project will integrate audio into a UE4 environment. Once completed, I will then be demonstrating the techniques of creating industry standard audio.

Thomas Shinton
tomshinton.wordpress.com

BSc (Hons) Computer Games Design

Seasonal Environments in the Unreal Engine 4
An exploration into persistent environments in the Unreal Engine, dynamically generated weather effects and its application to real environments. Snow and rainfall have been created through a simulated "year". This has altered the terrain and its appearance automatically, fully and dynamically through extensive blueprint architecture.

Games Design and Production
STAFFORD

Matthew Smith
http://mattsmith.4ormat.com/

BSc (Hons) Computer Games Design

How can VBS3 be used to Optimise Military Tactics?
Scenario created using *Virtual Battle Space 3* to optimise military tactics when used in different natural conditions.
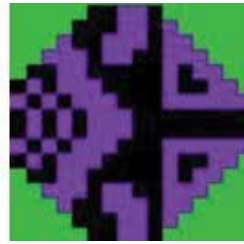

Nick Steer
www.nicksteer.co.uk

BSc (Hons) Computer Games Design

All of Me - Creating a Game with an Underlying Theme
This project is about identifying the use of underlying themes in existing video games and creating a 2D side scrolling game which explores the theme of addiction in a subtle manner inspired by my research.

Nicholas Twigger

BSc (Hons) Computer Gameplay Design and Production

Production Methodologies in Games
A look into production methodologies used in the games industry. There will also be a display of mobile games I have created.

Anshal Waheed

BSc (Hons) Computer Gameplay Design and Production

Why The Video Games Are Based On Cold War?
Many people often wonder "why are video games based on the Cold War?", "why does the game industries make video games about the Cold War?", "why it is so important to make Cold War video games?"

Connor Westrope
cojowe.com

BEng (Hons) Computer Games Design and Programming

Research, Analyse and Create an Independent Video Game
Using the research I did on independently developed games and their developers, I set about creating my own game which is focused on a skill-based combat system with a fantasy style. The game will feature different weapon types, a range of different enemies including bosses and friendly AI to direct the player.

Christopher White
uk.linkedin.com/pub/christopher-white/b0/528/30a/en

BEng (Hons) Computer Games Design

Videogame Narrative Integration
An in-depth study into making narrative within videogames more engaging, enhancing and non-detrimental to the overall gameplay experience.
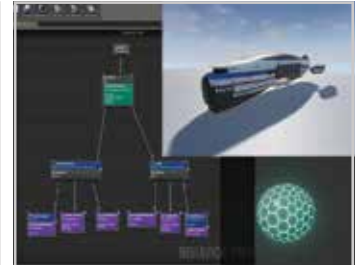

Jacob Whitehouse
www.JacobWhitehouse.com

BEng (Hons) Computer Games Design and Programming

Team based AI Solving Procedurally Generated Puzzles
For my project I will be attempting to use Unreal Engine 4 to create a team of 5 AI which work together in order to solve a series of procedurally generated puzzles.

Matthew Williams

BEng (Hons) Computer Games Design and Programming

AI Space Battle & Space Weapons
AI Space Battle: Showing an AI search and combat scenario in space, using behaviour trees and blueprints, inside UE4 engine. Weapons: Making and showing different space weapons within an AI scenario, showing the difference in stats and styles.

Games Modelling and Animation

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Rashed Al-Metrami
RashedGameDev.Wordpress.com

BSc (Hons) Computer Games Design

Student/Hippie Apartment - Unreal Engine 4
This project involves the creation of an environment inside Unreal Engine 4. I'll be recreating and improving on the environment painted for the game *Hitman: Absolution.* The aim is to make it more immersive and detailed with the aid of PBR materials, advanced lighting and the Unreal particle systems.

Victoria Bailey
www.tictora.com

BSc (Hons) Computer Games Design

Turtle Rig and Animation
An animation showing the journey of a young turtle fighting the elements and the environment around him to get to the love of his life.

Caitlin Baker
http://bakes6.wix.com/caitlynbaker

BSc (Hons) Computer Games Design

Illustrating Expression through Creature Sculpting
This project is primarily based around creating highly detailed creatures and character models in game use. Form and anatomical structure of the human head inspired the creation of 3 monstrous creatures to hauntingly resemble something humanoid.

Aidan Bates

BSc (Hons) Computer Games Design

Hand-to-Hand with Magical Powers Fight Scene
The project is an animated fight scene between 2 characters who use hand-to-hand fighting combined with magical powers that push and damage both them and the environment they are fighting in.

Patrick Boateng
www.artstation.com/artist/boateng

BSc (Hons) Games Technical Art

Creating a 70s/80s style Car
My project involved creating a 70s/80s style vehicle utilising maps and functionality in UE4. I also used morph targets, vertex paints and map alterations in UE4 to create a realistic damage model for the car.

Elliott Chatham
www.elliott-chatham.com

BSc (Hons) Computer Games Design

Investigating PBR Materials in a Sci-Fi Environment
A Sci-Fi game environment presented inside Unreal Engine 4, utilising the latest Physically Based Rendering techniques alongside traditional hard surface modelling to produce a real-time environment.

Mark Circus
www.markcircusportfolio.com

BSc (Hons) Computer Games Design

3D High Detail Sci-Fi Environment
Using the medium of Autodesk 3ds Max, Zbrush and Adobe Photoshop and presented within UE4, this project showcases a high detail environment with fully researched and referenced workflows. It demonstrates a clear understanding of the methodology used in the creation of industry standard environments.

Games Modelling and Animation
STAFFORD

Thomas Clewley

BSc (Hons) Computer Games Design

Modular Design for Inorganic Characters
Development of modular design for inorganic characters, this project shows the creation of a game-ready *Warhammer 40K* Dreadnought allowing for customisation to be present in a real-time render using physically based rendering.

Simon Collier
https://simoncollierart. wordpress.com/

BSc (Hons) Computer Games Design

Sci-Fi Facility
This will be a Sci-Fi environment, created using a variety of methods in games asset production, to achieve an industry standard modular environment.

Ross Downie

BEng (Hons) Games Technical Art

Bioshock Environment
A small office set in the underwater world of Rapture in the *Bio Shock* universe. Although Rapture has been lost to the ocean after its collapse, small areas still hold life such as this office. The owner clearly has a passion for music which shines through but years of horror and decay share this small space as well

Samuel Freshwater

BEng (Hons) Games Concept Design

Female Protagonist for Production
This project explores industry techniques for creating a highly detailed female protagonist for production. The character will show proper use of design theory, form and function to assist in presenting a product that portrays expression, emotion and setting.

Todd Kevin Gallear
http://toddkg.cgsociety.org

BSc (Hons) Computer Games Design

An Old Western Character presented within Unreal 4 Engine
A character based within an old western time period presented within Unreal 4 Engine created for the purpose of being presented within my portfolio and my final year project.

Philip Gilbert
http://philbert3ddesign. carbonmade.com

BSc (Hons) Computer Games Design

Carbon Freeze
A small environment piece based on the Carbon Freezing chamber from *Star Wars: The Empire Strikes Back*. It uses the latest next generation games engine and shows a series of techniques in a current 3D creation. It will not be playable but will feature some cut scenes in order to show the level areas.

Lloyd Hallam
lloydhallam.wordpress.com

BEng (Hons) Computer Games Design

Blair versus Warrior Bug: Battle for Survival!
Keyframe animation using quick time events. Animation created using 3ds Max and displayed in Unreal Engine 4.

James Hand
Jameshand3d.com

BSc (Hons) Computer Games Design

Survivalist Character Study
The objective was to create two different wasteland survival character models, model one would have a selection of changeable parts. Model two has been created to a set design applicable for standard generation games.

Jonathan Handy

MEng (Hons) Computer Games Design

John Handy - Masters Portfolio
A display of my portfolio work after the masters degree.

Richard Humphries

BSc (Hons) Computer Games Design

Tyrael - From Angel to Biker
This project will focus on the re-design of the Diablo 3 character Tyrael into a biker, using the television program *Sons of Anarchy* as a basis for the re-design.

Farzin Izadyar
www.facebook.com/
Farzin3DArtist?ref=hl

BSc (Hons) Computer Games Design

Advance Modelling Hard Surface and Organic
Producing a high-detail character inspired by Ares from the game, Injustice. The process involved producing high-detail meshes either as characters/organic models in ZBrush or hard-surface models in 3ds Max. Low Poly: Engine-ready hard surfaces and animation friendly characters.

Joshua Johnson

BEng (Hons) Computer Games Design

1800 Steam Train
The project I have been working on for my third year is an 1800 locomotive called the "General". The aim of my project is to create the train following the current industry standard workflow for game assets. The workflow utilises multiple tool sets. The final design will be displayed in the Unreal 4 Engine.

Dean Lawrence
www.deano93.portfoliobox.me

BSc (Hons) Games Technical Art

Producing a Game Ready Character
A project looking into developing a game ready character, of an angelic design, for unreal engine 4 using current industry technologies. These technologies include 3ds Max, Zbrush, TopoGun, Photoshop and Substance Painter. Afterwards I will implement the character into UE4.

Christopher Lee
www.ChrisLee3D.com

BSc (Hons) Computer Gameplay Design and Production

Animation Techniques to Portray Emotion with Body Language
This project will be showing off hand animation techniques to portray emotion purely through the use of body language. This will be done by placing the character in a scene and animating the character to react to changes within the environment.

Christopher Lewin
http://chrislewin1.wix.com/
chrislewin

BEng (Hons) Computer Games Design

Tudor Street Environment
An environment featuring wooden Tudor-style town houses on a street corner. Created using the PBR workflow and presented inside Unreal Engine 4.

Harjinder Malal
www.harjindersingh.
portfoliobox.me

BSc (Hons) Computer Games Design

Sculpted Well Diorama
The project showcases environment asset creation using ZBrush which will be rendered in real time using Unreal 4 Engine using advanced lighting and game effects.

Games Modelling and Animation
STAFFORD

Nathan Mills

www.nathanmills.co.uk

BSc (Hons) Computer Games Design

The Elder Dragon Attacks
A Dragon has taken over a built-up city and one man is tasked with exterminating it before it causes any more casualties. Will he succeed… or will the Dragon make a meal out of him and the rest of the city?
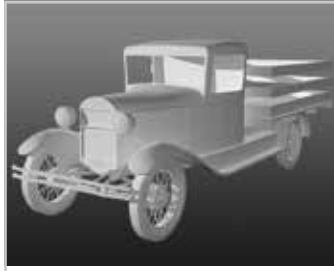

David Morrall

davidmorrall.carbonmade.com

BSc (Hons) Computer Games Design

Sith Character
A character model using a *Star Wars* theme created using high poly sculpting and low retopology to next-gen specifications. Textured and rigged, presented in UE4.

Samuel Mortimore

sam-mortimore.tumblr.com

BSc (Hons) Computer Games Design

Prohibition-era Environment Featuring Next-gen Techniques
A small-scale environment showcasing the life of corruption and temptation led by many prohibition agents during the 1920's and 1930's, produced using next generation software packages and techniques.

Kafele Palmer-Hunt

MEng (Hons) Computer Games Design

Game Art and Design Showcase
An idiosyncratic showcase of outstanding visual game art prepared to the current industry-standard. It is often said that a portfolio is an artist's greatest asset, as well as the ability to present work in the best way possible.

Sean Peers

BSc (Hons) Computer Games Design

Post-Apocalyptic Vehicle
A post-apocalyptic vehicle created using 3D Studio Max and presented in Unreal Engine 4 to current day industry standards.

Simon Puziak

simonpuziak.carbonmade.com

BSc (Hons) Games Technical Art

Hand Cannon Pirate (3D Character Model Workflow)
My aim is to create a 3D character model of the "Hand Cannon Pirate" concept art that I have produced for this project, along with additional accessories. The character will be textured and presented in a game engine environment.
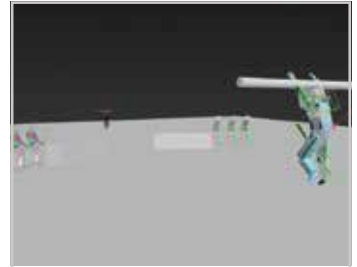

Aran Quillinan

www.aran3d.co.uk

BSc (Hons) Games Technical Art

The Last Stand, Diorama
A diorama. A Battlesuit Commander's last stand against outnumbering enemy forces.

Marcus Rees

BSc (Hons) Computer Games Design

Hand animated fighting and action scene
The Project is an action scene with fight and submissions scenes that are being completed through hand animation in 3D Studio Max using Kat rigs. With there being fight scenes there are also some par-core moves such as swinging and flips.

Games Modelling and Animation
STAFFORD

Jack Sharpe

MEng (Hons) Computer Games Design

Designing a Transformer within UE4
The projects' aim is to produce a fully functioning transformer and present the outcome in Unreal Engine 4. This project uses an NH-90 helicopter as the base for the vehicle mode of the transformer and draws inspiration from the *War for Cybertron and Fall of Cybertron* games for the texturing and character mode.
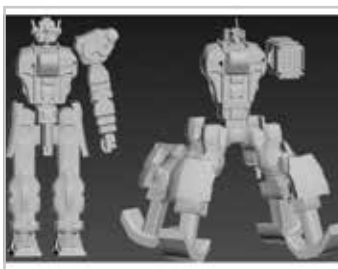
Peter Sindall

BSc (Hons) Computer Games Design

The Creation and Implementation of a Model into UE4
To create high poly hard surface interchangeable Mech in 3ds Max and Zbrush using appropriate methods and techniques. This will then be implemented into the Unreal Engine 4 as a lower poly model to current day industry standards renders for both the high poly and low poly are required for showcase purposes.

Keiran Slater-Cox
http://keiranslater-cox3d-artist.com/

BSc (Hons) Computer Games Design

Wonder Woman Costume
The 'Wonder Woman' model is my interpretation of the iconic characters' features and costume in a Dia de Muertos theme.

Daniel Snowe

BEng (Hons) Computer Games Design

Forest Environment
For my project I have created a realistic organic forest environment comprising of both natural and man-made elements within the Unreal 4 engine.

Krishna Soma
www.krishnasoma.com

BSc (Hons) Games Technical Art

A-10 Thunderbolt II
The aim of this project was to produce an A-10 Thunderbolt II game asset for current generation requirements, using physically based rendering in Unreal Engine 4 to achieve realistic material definition.

James Stevens
www.jamesmaxwellstevens.co.uk

BEng (Hons) Computer Games Design

Project Droid
The aim of the project was to create a realistic mechanical droid for cinematic game use. The project followed the full pipeline of creating a character from start to finish with the character have functioning mechanical parts and taking inspiration from Aaron Beck.

Matthew Tonks

BSc (Hons) Computer Games Design

3D Character Creation
Creation of a 3D character for use within Unreal Engine 4 from scratch starting with a high poly sculpt, low poly retop, texture creation and implementation within the engine.

Tristan Wade

BSc (Hons) Computer Games Design

Creation of Next Gen Character
This project follows the creation of a next gen character for an FPS game and some additional assets, the project will be completed using Autodesk, 3ds Max and ZBrush and will follow the complications that I faced and the learning process' I had to overcome.

Games Modelling and Animation
STAFFORD

Michael Whiteley
alligatorskies.artstation.com

BSc (Hons) Computer Games Design

De Havilland Mosquito
Recreating one of the classic aircraft from WWII and British aviation history. Brought into life in Unreal 4 in a flight simulation. Using an industry pipeline to come up with an efficient, but detailed representation of the aircraft. As well as pieces from other projects such as animation and hard surface.
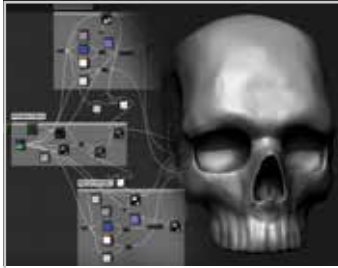
Adrian Williams
www.artstation.com/artist/ adriandonaldwilliams

BSc (Hons) Computer Games Design

Next Generation 3D Character Creation
To use current industry techniques to create game ready characters within Unreal 4. These will be sculpted within ZBrush and then rendered with use of advanced shaders and current industry techniques.
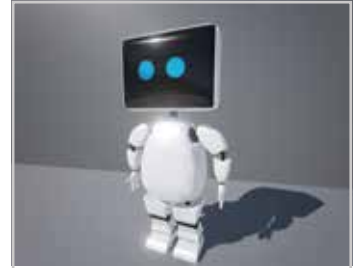

Thomas Woodworth

BSc (Hons) Computer Games Design

Galleon Pirate Ship Environment
High detail galleon pirate ship top deck environment and ship exterior, presented in UE4.

Andrew Young

BSc (Hons) Computer Games Design

Creating and Animating a Game Character for Cinematic Use
The project involves creating an industry standard game character for use in an opening cinematic, from modelling, to texturing, rigging and finally animating within an original UE4 environment.

Aleksejs Zemskovs
www.alexzemdesign.com

BSc (Hons) Computer Games Design

Production of "Futuristic Cathedral" in Unreal Engine 4
The project consists of analysing different real-life architecture designs, and utilising only the best selected elements to create a unique futuristic environment in "Unreal Engine 4", where modern modelling and texturing techniques have to be used to achieve best visual results.
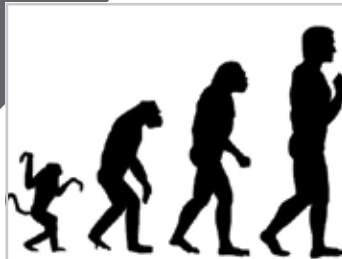
Games Programming

STAFFORD 15 MAY

John Blanchard
jdxb@hotmail.co.uk

BSc (Hons) Computer Games Programming

Measuring Proximity on Mobile Devices
A game of evolution which is based on the technology of measuring the distance between participating devices.

Jury Bondar
jurybr@hotmail.co.uk

BEng (Hons) Computer Games Programming

Simulating Cloth Physics
This project shows information about how to create simulating cloth software, which will be as realistic as possible. Also will overview the techniques and methods which were used to create cloth simulation. Final outcome will be cloth simulation software which will developed base on researched information.
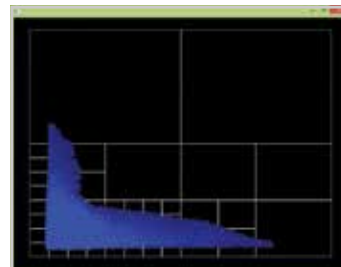

Tom Bonner
tom@glitchedsoftware.com
glitchedsoftware.com

BEng (Hons) Computer Games Programming

vFluid: Solids and fluid in a single engine
To create an engine that allows both solids and liquids to update and render within the same environment within preferably the same algorithm. I plan to do this by creating fluids with a high enough viscoplasticity to maintain their shape until under high pressure or temperature difference.
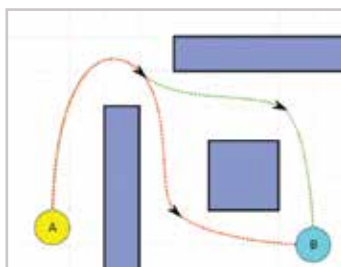
Jack Bookham
jackbookham@gmail.com

BSc (Hons) Computer Games Programming

AI Pathfinding within Moving Crowds
There are many ways of implementing AI pathfinding in games. My project investigates some of these different methods and then applies a solution to the problem of agents moving within a crowd.
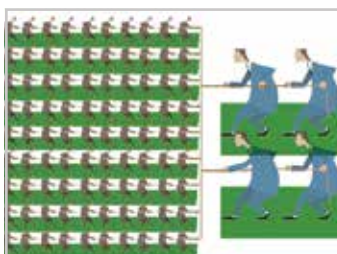

Connor Conway
connor_conway1@outlook.com
www.connorconway.com

BSc (Hons) Computer Games Programming

Effective Procedural Map Generation
A variety of different procedural generation algorithms will be compared and contrasted to find the most effective algorithm for the use in question: Generating 2-Dimensional maps (dungeons) for an RPG game.

Sam Cooper
samcooper789@gmail.com

BSc (Hons) Computer Games Programming

Is GPGPU within Computer Games Effective?
Gamers are always looking for the best performance they can get out of their gaming platform. Can GPGPU programming be utilised within the area of computer games development to exploit the hardware of a modern PC to its maximum potentiality and increase in game performance? This study aims to answer that question.


Joao Duarte
duarte.07.joao@gmail.com

BSc (Hons) Computer Games Programming

Physics Deconstructed
This project is an analysis of current physics techniques, with an emphasis on providing an out-of-the-box solution that requires minimal knowledge on the field of Physics Programming to be used effectively. Together with the research, a piece of software demonstrating these principles in practice is shown as well.

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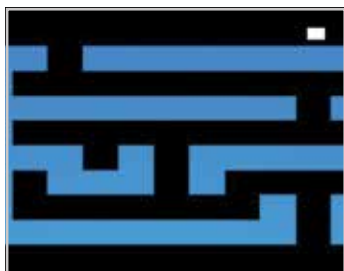
Thomas Dudley
tom.dudley5@gmail.com

BEng (Hons) Computer Games Programming

AI Navigation in a Large Environment
This project is being developed to produce an Artificial Intelligence agent that can navigate a large environment within a short amount of time and at a very low cost.

Christopher Duller
c_duller@hotmail.com

BSc (Hons) Computer Games Programming

Reducing CPU Core Load in a Soft Body Physics Simulation
Concurrency in games is almost necessary now, with advancing hardware a lot of computing potential is left untouched by many sequential programs. This project will evaluate the use of modern concurrency methods in a soft body physics simulation and build an artefact that clearly demonstrates the impact of their use.
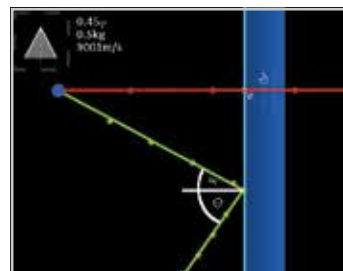

James Eaton
james@nxttm.co.uk
nxttm.co.uk

BSc (Hons) Multiplayer Online Games Programming

Mechanical Combat - The Online Robot Battle Game!
Mechanical Combat is a multiplayer online game where players battle each other with robots.

Kyle Edwards
kyledw92@gmail.com
lazr.pw

BSc (Hons) Computer Games Programming

Collision Response of Projectiles with Surface Materials
This project looks at the collision response of fast moving projectiles--including ricochet and penetration--with regards to the material properties of the projectile and the surface being hit/penetrated.
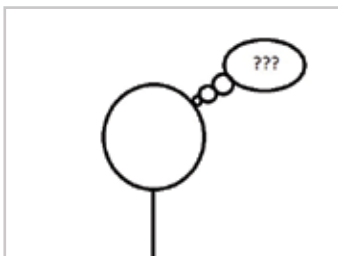

Paul Everitt
pdeveritt@hotmail.co.uk

BSc (Hons) Computer Games Programming

Moods for AI
People react differently to different events. Why shouldn't AI be the same? Fuzzy state machines help this slightly, but results still fall into a predictive area. Asking the same person a question can result in many different answers, so what changes, their mood.
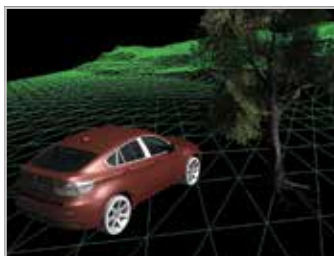

Joseph Fieldhouse
joe.fieldhouse1@gmail.com

BSc (Hons) Computer Games Programming

Decision Making Engine for Games
A Games Engine which allows artificial intelligent agents to make decisions on how to reach various target goals.

William Gilmour
wgilmour@hotmail.co.uk
http://34will.co.uk/fyp

BSc (Hons) Computer Games Programming

Generating Virtual Test Environments for Self-Driving Cars
With the world moving more and more towards automation of simple tasks, self-driving cars will very quickly become a common sight on our roads. However, the driving software cannot easily be tested in real life, so this project aims to generate virtual environments to test that software.

Matthew Goodall
mgoodall00138@gmail.com

BEng (Hons) Computer Games Design

Level of Detail AI System
Using a clone of Space Invaders, state behaviours of agents are programmed into a hierarchical Finite State Machine. State transitions occur, due to resources becoming available, which is based on the frame rate of the system. As frame rate changes the agents get "smarter" or "stupider" and the game demonstrates this.
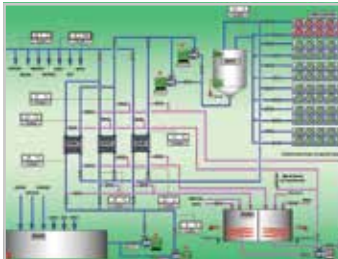
Games Programming
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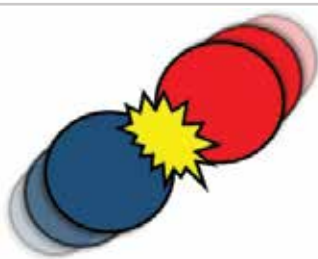
Jack Hames
jackhames0@gmail.com

BSc (Hons) Computer Games Programming

An Optimized 2D Collision System for Games
A 2D collision system which will make use of optimization techniques to help detect and resolve collisions between a mass number of particles.

Kieran Haycock
k.i.e.r.a.n-h@hotmail.co.uk

BSc (Hons) Computer Games Design

3D SCADA Using Game Engine Architecture
The 3D SCADA (Supervisory Control and Data Acquisition) engine is used to provide a visual experience of commercial factories with the use of various game techniques and concepts. The Industries include power, animal feed, food & beverage and many more.

Christopher Hayward
christopher.hayward@hotmail.co.uk
www.chris-hayward.com

BSc (Hons) Multiplayer Online Games Programming

Reducing the Latency Effects in Multiplayer Games
Multiplayer online gaming has become a large aspect of games today. This project investigates how latency issues are being tackled in these games, and demonstrates the problems that they are attempting to solve.

William Hollingsworth
willmjh@gmail.com

BSc (Hons) Computer Games Programming

Soft-body Physics Simulation of Motor Vehicle Collisions
The project simulates real-time soft-body physics of autonomous motor vehicles resulting from collision with other objects, that is, the mesh of the motor vehicle attempts to effectuate realistic shape deformation.
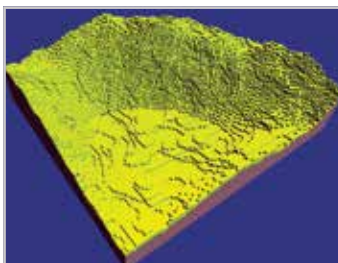

Aaron Hopkinson

BSc (Hons) Computer Games Programming

Distributed Ray Tracing in Real Time
Using GPGPU (General purpose programming of Graphics Processing Units) to test the feasibility of the implementation of ray tracing in place of current rendering techniques to increase the realism of lighting within real time applications/games.
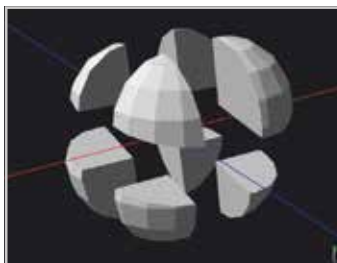

Tai Kelly-Evans
taikellyevans@yahoo.co.uk

BSc (Hons) Computer Games Design

Procedural Infinite Terrain Generator
Software that can randomly generate and modify procedural terrain infinitely within a world, the parameters of which can be altered by the user. Written in C#.

William Kirkby
will@kirk.by
will.kirk.by

BSc (Hons) Computer Games Programming

Real-time Dynamic Mesh Slicing and Geometry Reconstruction
Aiming to achieve greater realism and interactivity, this system allows players to slice objects in realtime, creating new geometry as necessary to display the insides of those objects.

Chris Latham
BackwardSpy@gmail.com
http://backwardspy.github.io

BSc (Hons) Computer Games Programming

Preventing Cheating in a Peer-to-Peer Networked Game
Cheating in games is simple. Preventing people from cheating a game is almost as easy. That is unless you are using a Peer-to-Peer network architecture in which case it becomes problematic.
I present a solution to this problem, using an automated 'voting' system to exclude exploitative data sent from a cheating client.

Games Programming
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Philip Lewis
philip.lewis1993@gmail.com

BSc (Hons) Computer Games Programming

Adapting Agents in an Editable Environment
The adapting agents in an editable environment project seeks to simulate life using virtual agents. These virtual agents will need to seek out resources to survive within their user modified environment while also interacting with other agents. This project explores how these goals can be met using AI techniques.


Mathew Lord
mattlord@oultook.com

BSc (Hons) Computer Games Programming

Memory Management for Games Engines
This project explores methods for managing heap memory to provide methods to allocate memory that are more appropriate and faster for game development. The project also explores ways to provide useful debugging information to developers to help spot leaks, overruns and dangling pointers.
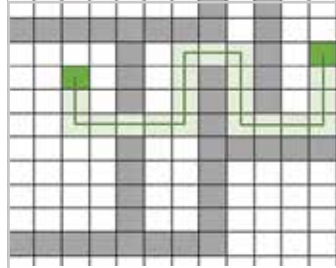
Kathryn Lowen
kathrynajlowen@gmail.com
kathrynlowen.co.uk

BSc (Hons) Computer Games Programming

Tactical Pathfinding
A pathfinding AI agent that uses tactical thinking and strategy when choosing the best path to take from one point to another. The agent will also avoid enemies and stay out of their line of fire.
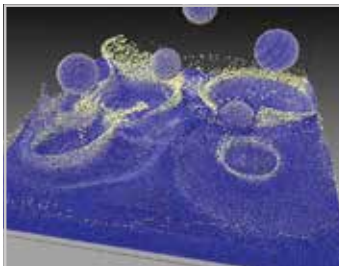

Derek Morrey
dmorrey@sky.com
www.spellcoder.co.uk

BSc (Hons) Computer Games Programming

Enhancing Location based Gaming Using Mobile Technology
Using Bluetooth signal to determine the position in real time.

Darren Murby
dmurby@hotmail.com

BEng (Hons) Computer Games Programming

Real-Time Fluid Simulation
Simulation of fluid in real-time using Smoothed Particle Hydrodynamics, a more recent technique that moves away from classical Computational Fluid Dynamics and creates opportunities for greater use of realistic fluids in games and graphics application.

Joseph Nicholas
Joe@jnicholas.co.uk
jnicholas.co.uk

BSc (Hons) Computer Games Programming

Simulation of Weather Systems
This project aims to allow for more realism in game environments by providing weather-dependent visual characteristics using optimised rendering techniques to reduce the impact on performance. Rain, snow, clouds and electrical storms are simulated using efficient algorithms that produce high quality results at low cost.

Alexandru Prislopeanu
alex_prislopeanu@yahoo.com
alexaroth-dev.blogspot.com

BSc (Hons) Computer Games Programming

Can Lag Be Fixed in Online Games?
Multiplayer games have evolved tremendously in recent years, however some issues has persisted throughout releases. Poor network conditions or simply the distance between players have been causing issues even to games made by the biggest of publishers. Lag, rubber-banding, corner deaths . . . can we "fix" them?

Matthew Russell
Mattruss2k13@gmail.com

BSc (Hons) Computer Games Programming

Neural Networked Pathfinding
Artificial neural networks attempt to mimic the ability to learn by copying the structure of an animal's brain. The aim is to get 'imperfect' pathfinding, an AI that makes different decisions to its predecessor. This can be used to make varied difficulty levels or give variation to multiple units in a scene.

Games Programming
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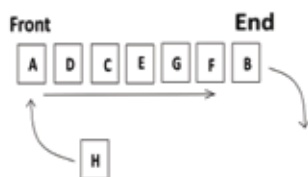
James Rylett
j.rylett2304@google.com

BSc (Hons) Computing Science

Investigation into Benefits of Using Caching in Game Engines
Investigation into the potential benefits of using caching within a game engine when performing various calculations. Analysis of various techniques to determine an optimal technique.

Karolis Saulys
karolis.saulys@gmail.com

BSc (Hons) Multiplayer Online Games Programming

Optimal Mass Multiplayer Online Game Server
The aim of the project is to research and adapt appropriate optimization techniques for a single MMO Game Server machine to support a high number of connected players in a simplistic 2D Role Play style game world.

Grant Siddall
grant.siddall@yahoo.co.uk

BSc (Hons) Computer Games Programming

Android Game to Use as a Teaching Aid for Year 7 Pupils
Android game to help pupils in year 7 learn written English in the form of a game, 3 mini-games teach key areas of study, teachers/parents will be able to monitor the progress of their pupils/children with a companion app which collects data from the game to show teachers/parents where pupils/children are struggling.

Benjamin Silverwood
bensilverwood@hotmail.co.uk

BSc (Hons) Computer Games Programming

Physics Based Fluid Simulation for Computer Games
An investigation into the level of realism currently achievable for fluid simulations in computer games, with a particular emphasis on physically accurate liquid simulation.

James Simpson
medal181@hotmail.com

BSc (Hons) Multiplayer Online Games Programming

Dynamically Balancing Multiplayer Online Games
An exploration of what game balance actually means, how fairness is a key component for games design and exploring techniques and implementing new techniques to accommodate an era of games where balance is a lesser issue between players and the game itself.

Timothy Stoddard
tmstoddard@gmail.com
gamepopper.co.uk

BSc (Hons) Computer Games Programming

Procedural Content Level Generator Library and Editor
A level editor and library specifically for game developers and designers to procedurally generate playable 2D levels, with multiple options to control how the levels are generated and the parameters to adjust the level output, and export them to a file that can be used to set up the level generation class in game.

Eric Sutherland
esutherland04@hotmail.com

BSc (Hons) Computer Games Programming

Simulating Wildlife using A.I. Techniques
Multiple independent groups using various movement behaviours to work together to hunt each other and avoid being hunted themselves. Learning from past experiences to evolve and alter their decisions.

Tristan Teasdale
tris_t@hotmail.co.uk

BSc (Hons) Computer Games Programming

Fractal Generation using General Purpose GPU Computing
A computer's graphics card, and the Graphical Processing Unit (GPU) within it, are very powerful pieces of hardware. The aim of my project is to apply that power to the problem of Terrain Generation and other Fractal problems to produce more complex results faster than traditional techniques may be capable of.
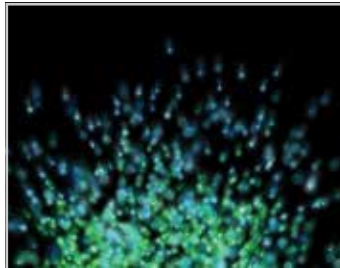
William Thomas
technimanx@google.com

BSc (Hons) Computer Games Programming

Procedurally Generating Solar Systems
An investigation into the efficiency of real-time level-of-detail algorithms on large-scale terrains. Exampled by a real-time simulation of procedurally generated planets and solar systems.
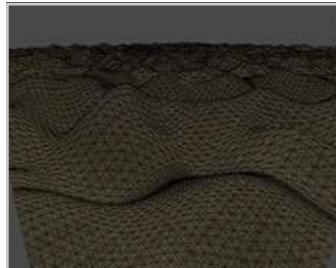

Jack Watling
jackwatling@gmail.com
www.jackwatling.co.uk

BSc (Hons) Computer Games Programming

General-purpose Computing Using Shaders
A performance comparison between a simulation executed on the CPU and one executed on the GPU.

Niall Wayne
niall.wayne@gmail.com

BSc (Hons) Computer Games Programming

Procedural Map Generation in Games
Generating random terrain in the form of a three dimensional game to create an effectively infinite sized terrain. Using a noise generation algorithm it dynamically creates noise maps in order to have the capability to create on-the-fly content.

Christopher Westwood
chriswestwood1@blueyonder.co.uk

BEng (Hons) Computer Games Programming

A Procedural Story Generation Engine
Procedural generation adds randomness to gameplay adding more variety. I have created an engine that uses this technique to generate different stories. By creating the characters, setting, and the plot it uses a new tale each time you play keeping each play-through fresh and new so you would never get bored again.


Andrew White
andyw1992@hotmail.com

BSc (Hons) Computer Games Programming

Realistic Archery Simulation Game
Archery requires expensive equipment, lots of space and tight safety rules, making it a difficult sport in which for people to participate. My project shows how, with the use of motion controller peripherals, I have created a simulation game for users to practise archery in their own home.
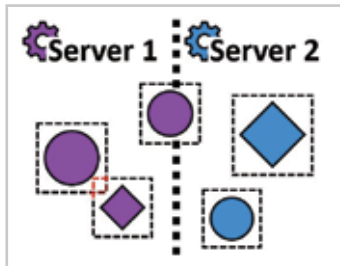
Joshua White
joshuawhite9@google.com

BSc (Hons) Multiplayer Online Games Programming

Multiplayer Game Engine
A multiplayer game engine, which uses elements of grid computing, to allow process sharing within simulations across multiple devices on a network. This project will attempt to tackle the main issues of sharing processes in real-time simulations and aims to open a path for more complex multiplayer simulations.

Thomas Williams
thomas7.williams@hotmail.com

BSc (Hons) Computer Games Programming

Scanned Data in Virtual Reality
Automated driving systems are becoming a more popular area of research and the technology is at a tipping point. The main aim of this project is to test automated driving systems, through use of virtual reality (VR) to localise the user to different driving environments.

Adam Wolf
adam-wolf@hotmail.co.uk

BEng (Hons) Software Engineering

Video Game with Modular Game Systems using Unreal Engine 4
Role playing video game prototype with focus on system modularity. The entire project is designed so that various parts are interchangeable to allow reuse and modification to achieve features present across many video game genres, The project is designed around top-of-the-line game engine, Unreal Engine 4.
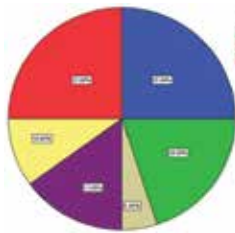
Mathematics and Applied Statistics

STAFFORD 15 MAY

James Fairgrieve
j.fairgrieve@live.co.uk
http://t.co/XgrFuSACw2

BSc (Hons) Mathematics and Statistics

Analysis of Amount, Equity and Adequacy of Student Funding
University students in the UK were surveyed on their financial income from all sources, including: Student Finance, employment, parental income and any other sources of income. SPSS was then used to model the data retrieved to provide an analysis of the amount, equity and adequacy of student funding.

Daniels Grasmanis

BSc (Hons) Mathematics and Statistics

An Investigation into the Video Game Type Preferences
An investigation into the relationship between gamer habits and preferred game genre implemented personality check. This project aims to seek video game users possible personality traces, based on participants completion of questionnaire in Stafford-shire county, to their answers about their video-game experience.

Jonathan Grimley
jonathangrimley@hotmail.com

BSc (Hons) Mathematics and Statistics

Simulation of Texas Hold'em Poker to Analyse a Strategys
There are Texas Hold'em players who use 'outs' to calculate probabilities that they will complete their hand. A simulation of a game of Texas Hold'em Poker has been used to produce data, using hypothesis testing to assess the strategy.

Jordan Harrison

BSc (Hons) Mathematics and Statistics

Changing Attitudes towards Video Games
An investigation into the attitudes of university students towards video games, their causes and how these attitudes have changed over time.


Alun Holmes

BSc (Hons) Mathematics and Statistics

The Crystal Ball: Modelling and Predicting UK Interest Rates
The Bank of England manages inflation in the UK economy towards their 2% target by using interest rates. This study examines key economic data to produce a model to predict interest rates by understanding relationships present in the data (multiple regression) and how rates behave over time (time series modelling).
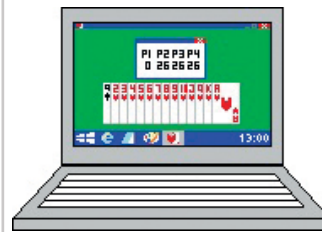
Thomas Russell

BSc (Hons) Mathematics and Statisticsn

Statistical Probability of a Winning Hand in Hearts
This project examines the probability of winning at the card game 'Hearts' and whether the implementation of strategies increases one's chances of winning. The game is simulated in Microsoft Excel by writing macros that change the spread-sheet's layout to mimic the game being played.

Naresh Sahota

BSc (Hons) Mathematics and Statistics

Investigating What Steps Students Take to Ensure Good Health
This project is to investigate what steps students take in the midlands region, to ensure good health. This will include looking at three main factors such as Diet, Exercise and General lifestyle.

Mathematics and Applied Statistics
STAFFORD

Hannah Tomsett
hannah.tomsett@live.co.uk

BSc (Hons) Mathematics and Statistics

An Investigation into Attitude towards Women within Sport
This project investigates how the students of Staffordshire University view women within sports. By using suitable attitude scaling methods, students' opinions are scored. this project then tries to see whether attitude can be predicted or modelled, using statistical modelling approaches.

Lauren Wroe
lauren_wroe@yahoo.com

BSc (Hons) Mathematics and Statistics

Analysing Trends of Bank Interest Rates
Using Mortgage, Savings and Loan interest rate data to model them using a time series forecasting within Statistical packages, and then forecasting for future rates. Analysing the trends within the data series.

academia
for education

Michael Bayliss

BSc (Hons) Music Technology

Production Techniques used During Recording an EP
Investigating the use of a number of different microphone placements to capture the best sound of a drum kit. Each microphone placement will be researched and chosen specifically to benefit each track.

Charles Boswell

BSc (Hons) Music Technology

Audio for Texture Packs in Minecraft
The most popular texture packs for the video game *Minecraft* have been downloaded by over two million players. It is a surprise that almost all of them use the soundtrack of the original game; this project investigates why.


Kayleah Buckley
www.ohkaymusic.com

BSc (Hons) Music Technology with Management

The Impact of Social Media on an Unsigned Artist
The project explores the utilisation of social media and how the implementation of digital marketing strategies can develop a social media campaign to impact an unsigned singer songwriter; focusing on radically increasing online presence, artist popularity and audience engagement.
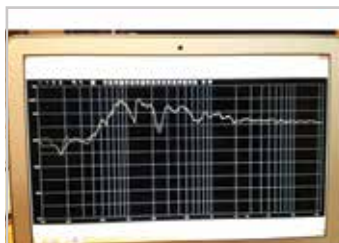
Joshua Cooper

BSc (Hons) Music Technology

An Investigation into Production across 3 Technological Eras
A look at production techniques used in the music industry from 1960 to the present day, and how they are received by both trained and casual listeners.

Jay Harrison

BSc (Hons) Creative Music Technology

The Production of a Bespoke Autonomous Lithophone
The construction of, and investigation into the design and subsequent artistic applications of a bespoke autonomous Lithophone. Similar in principle to a Xylophone, a Lithophone differs in that it uses stone bars. This project details the production of a 2 octave Lithophone and a self-playing electromechanical system.

Joseph Heys

BSc (Hons) Music Technology

Investigation of Studio Acoustic Design
An investigation into studio design with an emphasis on the effect that budget has on the quality of control rooms. The project involves the measurement and evaluation of several studios at differing production costs as well as the production of designs for theoretical studios at differing production costs.

Benjamin Hobson

BSc (Hons) Music Technology

An Investigation into Sound Design in Fantasy
The purpose of this investigation is to discover the techniques and processes needed to create the sound track for a 10-minute clip from the fantasy film *The Hobbit: The Desolation of Smaug* (2013).

Daniel Hull
vimeo.com/danhullsd

BSc (Hons) Creative Music Technology

'Life is Beautiful' - Sound Design for Animated Film
The role of the sound designer is to help tell the story of the picture using sound, music, acoustics, psychology and drama as the principle components. Life is Beautiful tells the story of Anton, a man who is 'done' with life but life may not necessarily be 'done' with Anton.

Thomas Jaggard
http://uk.linkedin.com/pub/tom-jaggard/52/608/123
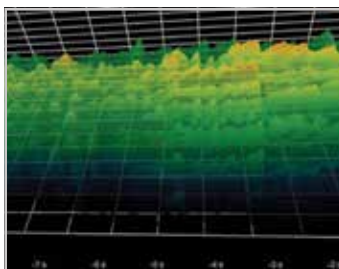
BSc (Hons) Music Technology

Research into Synthesised Sound Effects and Foley
Throughout the year, I slowly researched, designed and built (coded) a digital audio synthesiser designed to replicate life-like natural sounds such as rain, wind, lava, fire to work at a high degree of manipulation and usability.

Conor Kelly

BSc (Hons) Music Technology

Sound Design for Science Fiction
This project shows the use of sound creation, synchronisation and recording of audio within a ten-minute scene from Ridley Scotts' 2012 film *Prometheus.*

Daniel Learmonth

BSc (Hons) Music Technology

Recording, Mixing and Mastering an EP Effectively
To investigate how to quickly and effectively record, mix and master an EP by using techniques that differ from one another. The quality of these techniques will be then be compared when done to a professional level.

David Longden

BSc (Hons) Music Technology

The Power of Modern DAWs
An investigation into whether or not specially treated recording spaces are still needed as much as they used to be for recordings, given the abilities of modern DAWs.


Jessica Lovick-Earle
http://lovickearle.wix.com/kinectingpeople

BSc (Hons) Creative Music Technology

KinectingPeepl
Dance has always followed the music, what if it was the other way around? Technology is also evolving, and with it, the ways of performing, playing and dancing with instruments are adapting and evolving too. This project investigates different relationships between dance and sound to bring alive interactivity in performance.
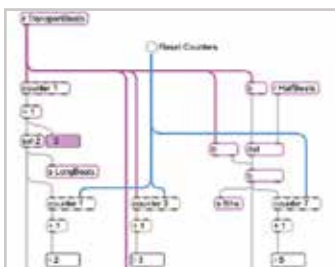
Laurie MacKinnon

BSc (Hons) Music Technology

An Interactive Generative Music System
An interactive generative music system has been created that uses varying input from the user to guide the output of musical content.

Adam Murray
admurrayaudio.wordpress.com

BSc (Hons) Music Technology

Sound Design for Animated Film
What is 'good' sound design? Why do we enjoy this experience of sound in film? Through a series of research projects into sound qualities, physics of sound and audio restoration, I set out to create effective sound design specifically for animated film.

Drew Smith

www.drewwaylon.wix.com/portfolio

BSc (Hons) Music Technology with Management

Documentary of an Established UK Country and Blues Musician
Production of a 20-minute music documentary; of a country rock and blues musician. Exploration into multi-track recording techniques with a live band; filming performances, recording and filming interviews, collating and restoring historical footage of band members, editing/synchronising film and sound.

Mohamed Abdullahi

BEng (Hons) Network Computing

Comparison Analysis of Encryption Algorithm on IPsec VPN
In today's world the internet is commonly used by millions for information exchange. Privacy has become an important issue and secure communication is becoming pivotal in every network. For this reason, VPNs has become an essential element in information system by providing access to information with confidentiality.

Mohsin Ahmed
ahmedmohsin@hotmail.co.uk

BSc (Hons) Forensic Computing

Modernising Justice: A Video Forensic Framework
The automation of CCTV/ video forensic analytical system for the benefit of criminal prosecution personnel such as the police, forensic, judicial staff. Using a SCARF model that establishes modern solutions that are Simple Clear Accurate Reliable and Fast for video forensic results for judicial system.

Waqas Ahmed
waqasahmed_939@hotmail.co.uk

BSc (Hons) Network Computing

Voice Over IP - A Network Performance Study
Looking at VoIP implementations, and the affect that it has on network performance. The project looks at things such as the amount of packets dropped, and how reliable VoIP is, and can be.

Bradley Ashman
bradashman1992@hotmail.co.uk

BSc (Hons) Digital Forensics

Encryption and Deletion Methods to Prevent Recovery of File
This project is an investigation into how someone with an acute knowledge of forensic tools can access personal data that remains on storage media that has been used and resold, the methods of encryption/deletion that are freely available to users to prevent this from happening are also looked at and reviewed.

Matthew Baines
mattybaines@hotmail.co.uk

BSc (Hons) Digital Forensics

Securely Wiping Data from a Storage Device
Creating a tool that can securely wipe data from a storage device, so that it cannot be recovered using forensic recovery software.
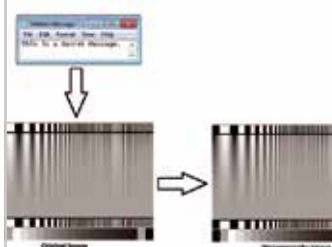
Jessica Banks

BSc (Hons) Digital Forensics

Distortion of Images Through Steganography
An investigation into how much information can be hidden within an image using Steganography before the image becomes distorted and unreadable on a computer (both desktop and laptop).

Samantha Batchelor-Manning
s.batchelor-manning@hotmail.com

BSc (Hons) Forensic Computing

Forensic Acquisition focusing on Microsoft SQL Server 2008
Framework for investigators carrying out an acquisition on Microsoft SQL Server 2008.

Thomas Bates
tombates00@gmail.com

BSc (Hons) Computer Networks and Security

Centralised Management of Multiple Autonomous Access Points
A centralised web interface to manage and monitor multiple autonomous APs running a third party firmware.

George Bourner

BSc (Hons) Network Computing
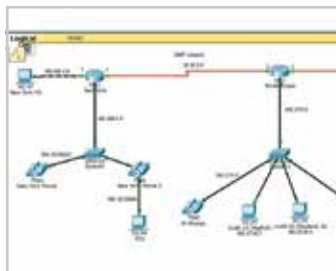
IP Address Management within Enterprise Grade Networks
An Investigation into IP Address Management Tools When Used Within Enterprise Grade Networks.

Jose Bravo Pimenta

BSc (Hons) Network Computing

IPv4 Vs IPv6 Comparison
This project aims to compare network performance when using IPv4 and IPv6, paying special attention when sending data across to another network. It will also include VoIP performance when making a phone call on IPv4 and IPv6 as well as Features and technology available to transit to help organisation transit to IPv6.

Stephen Cahill
steve1601@live.co.uk

BSc (Hons) Computer Networks and Security

Comparison of Virtual Switching to Conventional Switching
This project aims to look at the performance impact of utilising a virtual environment in a high load scenario when compared with a traditional switching environment. The results will reflect the systems currently used in industry and highlight decision points that should be considered when changing to virtualisation.


Mark Carpenter
mcarpenter013@gmail.com

BSc (Hons) Digital Forensics

Evaluation of Covert Device Acquisition Using Bluetooth
This project looks into the possibility of carrying out a covert device acquisition, without the user's knowledge, using Bluetooth. The project also aims to provide a small program, to automate key recovery and initiate a covert connection, which can then be used to obtain a forensic image of the device concerned.
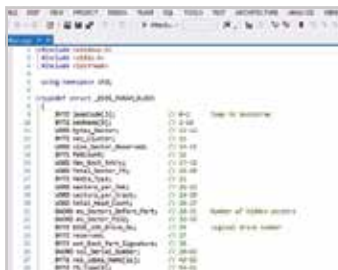
Chi Jun Cheng
matcjcheng@gmail.com

BSc (Hons) Forensic Computing

SD Card Data Recovery and the Effects of Data Erasing
Design and implementation of an SD card data recovery software to retrieve lost and deleted photo images. A review of data erasure software and the effects they have to prevent data recovery.
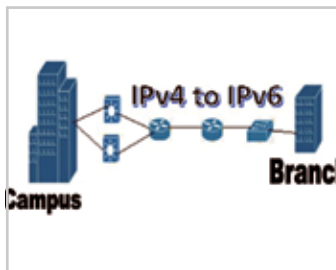
Mamadou Diallo
oury_m@hotmail.co.uk

BEng (Hons) Network Computing

Upgrading Campus and Branch Networks to IPv6
IPv6 is expected to replace IPv4 as the Internet Protocol in future. This project focuses on the Transitions technique for upgrading Campus and Branch networks to IPv6 with minimum service disruption to existing IPv4 networks and also highlights the advantages and disadvantages of IPv6 over IPv4.

Daniel Duffy
danielduffy91@hotmail.com

BSc (Hons) Digital Forensics

Wearable Devices: Fashion Trend or Privacy Nightmare?
As technology rapidly grows, global privacy law has tried to keep up to protect a user's right to privacy. With wearable devices becoming commonplace, they present a threat to this right. This study determines what can be forensically extracted from a wearable device and how that data could impact a user's privacy.

Networks, Security and Forensic Computing
STAFFORD

Joseph Edwards

BSc (Hons) Computer Networks and Security

Investigating Quality of Service Mechanisms
The aim of the project is to understand and implement quality of service mechanisms within a business environment. This will include information of networks used within a business environment and also and explanation of quality of service mechanisms and structures which used when QoS is implemented.

Bayah Gatluak
bayahgatluak@gmail.com

BEng (Hons) Computer Networks and Security

IoT:A Comparative Study of Different Encryption Techniques
The aim of this project is to carry out a comparative study of different encryption algorithms and techniques that are suitable for low power or processing devices.

Dakouri Gazo
raphaelgazo@hotmail.co.uk

BSc (Hons) Computer Networks and Security

Corporate Network Performance Modelled with OPNET
The idea of the project is to design a corporate network and security proposal, model the network with OPNET for a performance analysis. The project aim is:
• To study the design methodology and network requirements
• To determine the impact of the security features such as firewall and VPN on the network performance.


William Golledge
wiggiumg@gmail.com

BSc (Hons) Digital Forensics

A Forensic Tool to Discover Hidden Files in NTFS
The aim of this project is to create a tool which can analyse a set of directories inside windows NTFS for hidden data. The goal of the tool is to be able to analyse files for alternate data streams, steganography and file slack. Suspicious files found to be containing hidden data will then be returned to the user.
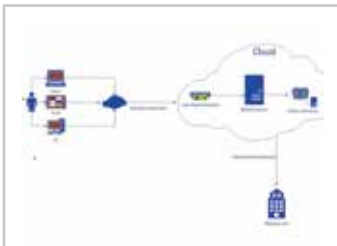
Jeremy Haggart
jeremyehaggart@gmail.com
www.jeremyhaggart.co.uk

BSc (Hons) Computer Science

Performance Analysis of Authentication Methods using NPAS
The project reviews how organisations traditionally use remote access and the technologies behind this. The project looks at how Security as a Service can be used to authenticate and manage remote access to networks, using various authentication methods.

Parminder Singh Hayer
parminder_hayer@hotmail.com

BSc (Hons) Network Computing

Converged Networks from IPv4 to IPv6 with Quality of Service
In today's fast paced world, the number of Internet users is increasing day by day which eventually will exhaust IPv4 and the demand for IPv6 will be at an all time high. Companies around the world have also started to implement converged networks and to receive the best service, Quality of Service is required.

Daniel Heywood
danielheywood@hotmail.co.uk

BSc (Hons) Digital Forensics

Online Anonymity and its effect on Criminal Investigation
Remaining anonymous online: Realistic possibility or unattainable goal? Can a criminal truly hide their online identity from an investigator? A methodology will be produced for investigating a criminal hiding their activity using The Onion Router. Other topics covered include mass-surveillance and cyber-profiling.

Wanda Kisala
princewmk@outlook.com

BSc (Hons) Network Computing

Analysis of Voice and Video Traffic using QoS
The project Title will be "Analysis of voice and video traffic using QoS and live equipment to minimise network packet delay and loss" self explanatory in term of using the QoS technics to establish the best minimal and secure way to send packets over the internet by minimising packet loss and delay.

Networks, Security and Forensic Computing
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Tamara Mason
tamz_m@hotmail.co.uk

BSc (Hons) Digital Forensics

Can Cloud Document Management Incriminate the Innocent?
When people share files, using cloud storage systems, any updates to the documents are synced automatically. If incriminating evidence was to be placed into the shared files and the creator of the original files hard drive was ceased, will the metadata of the files show that the person is innocent?

Kyle Pover
kyle.pover@gmail.com

BSc (Hons) Digital Forensics

Analysis and Detection of Anti-Forensic Software
Today it is common for the evidence extracted from digital devices to make or break an investigation. As a result cyber criminals often employ anti-forensic tools to remove or hide incriminating data. In this project a tool has been developed to detect the presence of these tools on a hard drive image.

Thomas Sothcott
tsothcott@sky.com

BSc (Hons) Digital Forensics

A Tool to Forensically Examine Android Devices
This project is based around the Android operating system and associated devices. It will provide a robust, bespoke tool which can be used in a digital investigation to extract critical evidence from an Android device, including, but not limited to, text messages, call logs and Facebook conversations.
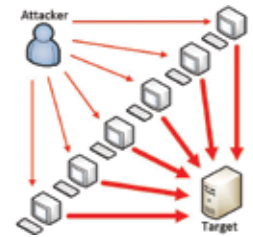
Matthew Watkins
mattwatkins93@gmail.com

BSc (Hons) Computer Networks and Security

An Investigation into the Evolution of DDoS attacks
This project aims to investigate the different DDoS attack vectors attackers can use to attack the availability of services, and the mitigation/prevention techniques that can be used as a defence. Testing will be performed, alongside a timeline to summarise findings and a recommended framework for protection developed.

Web and Multi-media

Samuel Bennett
bennettsst@gmail.com
www.sam-benne.co.uk

BSc (Hons) Web Development

Privacy with Cloud Based Systems
Looking at privacy of data in cloud based systems. This will be looked and implemented in a cloud based system that is designed to help people manage their hotels and restaurants. Through the usage of an Admin Portal and API.

Adam Brittan
adambrittan50@gmail.com

BSc (Hons) Web Design

A Bespoke Web Presence for a University Music Society
My project is to create a university music society website that works to support the students in the organisation of the society itself and of any bands they may create or already be in. It also allows them to progress with their bands success by offering event organizers to join the site and potentially hire them.

Conor Crutchley
conorc1993@hotmail.co.uk

BSc (Hons) Multimedia Computing

Online Karate Based Comic Book
A website that teaches karate students how to do basic katas, and also teaches the application of the moves for each kata. The website displays the katas and their applications through animations and comic books to grasp the attention and entertain a young adult audience,

Jonathan Defelice
jonnywithnoh@gmail.com
http://jdefelice.com

BSc (Hons) Web Design

Online Recipe Sharing Web Application
A web based application looking at the user experience of the cooking process with online recipes. Looking at the whole food preparation process from searching, shopping, cooking and sharing recipes. The application is designed to work on mobile, tablet and desktop computers.

Thomas Dwyer
federat10n@hotmail.co.uk

BSc (Hons) Web Design

Improving the User-experience of Cue Sports
An application which takes a look at the before and after potential problems of playing Cue Sports and attempts to resolve them using web technologies. Find, play and analyse your games to watch your improvement over time.

Katie Edwards
kt_ed@hotmail.co.uk

BSc (Hons) Web Development

Interactive Storybook Using New Technologies
An interactive storybook using new technologies with gamification aspects aimed at children aged between five and eight.

Keri Grant
kerigrant7@yahoo.co.uk

BSc (Hons) Business Information Technology

Content Strategy
Content strategy brings the focus back to website content, which is often an afterthought today. The author will investigate content strategy methods then implement her own methodology on a select client company who will be redeveloping their website.

Web and Multi-media
STAFFORD

Ben Griffiths

BSc (Hons) Web Design

House Moving Application Showing Each Step in a Chain
I have built an application which shows each step in a house moving chain and how far along the chain they are. It shows when the chain is broken and is designed for users to cut costs for a solicitor.

Francesca Haines
hainesfrancesca@gmail.com
www.franhaines.co.uk

BSc (Hons) Web Design

Improving User Experience in Marketing Websites
Analysing how the successful marketing companies utilise the latest advances in web technology to enhance the website to its best possible potential for the user and their overall experience. Findings shall be showcased through the case study of a kayaking hire website.

Stephanie Hartley
steph@stephaniehartley.co.uk
www.stephaniehartley.co.uk

BSc (Hons) Web Development

Contemporary Dance Teacher Web Application
A web application that teaches contemporary dance to people of all skill levels using interactive videos, animation and E-learning techniques. Intended to encourage and inspire all levels and abilities to promote the further progression with dance.

Kenny Heard
kennyheard@me.com
http://kennyheard.com/

BSc (Hons) Web Design

Space! A Social Platform Created to Showcase Design Theory
At its core, the project's purpose is to demonstrate solid design methods and theories that have been researched and tested over the years, and showcased using an original concept titled 'Space'. Space serves to provide the academic community with the perfect solution to organisation, communication, and review.

Thomas Helps
tom_helps@hotmail.com

BSc (Hons) Web Design

A System to Provide Users with Plane Spotting Information
With advances in technology over the last decade, users are now able to access information from across the World. This project aims to eliminate the time consuming hassle of sourcing and accessing information relating to plane spotting by presenting the relevant information in a single user friendly environment.

Mark Holloway
mholloway4@outlook.com
www.mh-webdesign.co.uk

BSc (Hons) Web Design

Design of a Sports Social Media
A social network for sports fans. Fans can track live scores, follow different sport events, integrate with their own social media accounts.

Christopher Horton
www.christopher-horton.co.uk

BSc (Hons) Computing Science

Mobile Club Management Application with Fan Interaction
This application helps with the management of clubs aiding in controlling finances, squad decisions and statistics. Along with this players of the club can view statistics, results and pay fines/subs. The second area of the application is to allow for fans to view statistics, scores and have their say to club managers.

Elliot Irwin
elliot@eirwin.co.uk
http://www.elliotirw.in

BSc (Hons) Web Programming

CriticalPath Analysis based Project Planning, Time Management
My project users the latest web technologies and the project planning technique of critical path analysis to facilitate a smoother and more cohesive workflow through a user's projects, also facilitation time keeping and time management functions that enable the user to keep track of time spent on different project areas.

Web and Multi-media
STAFFORD

Matthew Kemp
matt@kempmail.co.uk
mattkemp.info

BSc (Hons) Web Development

Leaderboard API with Social Platform for HTML5 Games
With the increase of HTML5 games, developers are looking for an easy and efficient solution to include a leaderboard mechanic in their games without the necessity of setting up their own service. 'The GRID' answers this need whilst also providing players with more social and competitive atmosphere via a web platform.

James King
James@Jamesking56.co.uk
www.Jamesking56.co.uk

BSc (Hons) Web Programming

How Technology Can Aid Road Safety
Road Safety in the United Kingdom (UK) has been a problem for many years and has caused many changes to the UK's traffic infrastructure. This system can aid the driver in knowing their weak spots whilst driving to improve safety by giving the driver their information back.

Martin Lenord

BSc (Hons) Web Programming

Social Spam Detection Service
This project is a service aiming to use elements of user behaviour when interacting with a social network to determine the validity of a user's interactions in an attempt to prevent spam.

Peter Lloyd
hello@peterplloyd.co.uk
peterplloyd.co.uk

BSc (Hons) Web Design

Staffordshire Police Website Redesign
To engage with the public, the local police are making greater use of the internet. The Staffordshire Police website has many useful features but fails to deliver them in a user-friendly and engaging way. A redesign of the site will add more functionality and increase engagement of the local community.

Jake Mallin
jake.mallin@gmail.com

BSc (Hons) Web Design

Design a Concept for a Football League Management Website
A concept, web-based platform for a League Management Website where users can see up to date information about a league including fixtures, results, players registered, league tables and club information. The website will be responsive and feature some of the most recent and up-to-date web trends.

Matthew Meadows
matt_meadows@live.co.uk
matt-meadows.co.uk

BSc (Hons) Web Development

Trail Route Surveying with Hazard Perception Integration
A user-centred approach to developing a mobile application for users of public pathways for trails, surveying or casual walks to track their route and share to others. This application sets itself apart through the use added benefit of on-route hazard alerts submitted by the community.

Gregory Ottley
greg.ottley@outlook.com

BSc (Hons) Web Development

ICT Service Desk Web Application
My project is an ICT Service Desk system that will be used by the ICT Staff and users. It will contain information about the computer being used, the username of the person currently logged in, and will be used to log issues with the support team so that they can take a look at the problems.

Hitesh Patel
hitesh-patel@outlook.com
hitesh-patel.co.uk

BSc (Hons) Multimedia Computing

The Development of a Prototype Online Drum Machine
This project aims to create an online web drum machine using the Web Audio API and subsequent web technologies. With features such as volume control and reverb effects, it will provide the functionality of a virtual software instrument.

Web and Multi-media

STAFFORD

Jordan Peck

jordan3949@gmail.com

BSc (Hons) Web Development

An App to Monitor an Individual's Nutrition when Cycling

Based on nutrition and water intake the application addresses when the user should be considering refuelling, whether it be an energy bar or fluids. The application measures the progress of the rider, to then remind them at certain parts of their session that they should consider refuelling to maintain performance.

Oliver Reardon

ojreardon@gmail.com
ojdon.github.io

BSc (Hons) Web Development

Convergence Web-based Gaming

Convergence Web-Based Gaming aims to bring a platform for games that allows users to play on any modern device. Start a game on your smartphone and tablet while you are out and about, save your progress and continue from exactly where you left off, once you return home, on your desktop or laptop computer!

Peter Rhodes

P_rhodes@hotmail.co.uk
http://uk.linkedin.com/in/rhodespeter

BSc (Hons) Multimedia Computing

Staffordshire University Interactive Prospectus

This project is a concept that transforms a basic University paper based prospectus into a vastly interactive experience with rich multimedia content. This is achieved through the use of various re-directional methods that take advantage of the technology already available today.

Jake Sell

jakesell123@gmail.com
http://21d.co

BSc (Hons) Web Design

Teaching Children How To Code

My project is a website which will enable young children to learn the basics of coding. It is full of interactivity, games and media, so it should be fun to use while teaching them at a vital age.

Ibukunoluwa Sobola

ibksob@hotmail.com

BSc (Hons) Multimedia Computing

The Influence of Media in the Nigerian Culture

Creating an Interactive online Brochure on How to start on a business in Nigeria.

Alister Stevens

alisterstevens@google.com

BSc (Hons) Web Development

Optimisations for HTML5 Canvas Games

With a variety of devices (mobiles, tablets and PC) on the modern market, it is important to ensure that a HTML5 web game runs smoothly on all devices in order to give a great user experience. This project finds and demonstrates the performance impact of optimisations which can be achieved for HTML5 Canvas Games.

Simon Wheelwright

mister_simon@hotmail.co.uk

BSc (Hons) Web Development

Multi-Forge: Server Framework for HTML5 Games

A tool to provide a customised multiplayer server framework for HTML5 game developers. With a focus on ease-of-use, this project aims to guide the developer through setting up and customising a server to fit their HTML5 game's needs.

James Wilkins

james@jameswilkinsdesign.co.uk
www.jameswilkinsdesign.co.uk

BSc (Hons) Multimedia Computing

The Use of Interactive Web Multimedia for Marketing

The exploration of digital marketing techniques and the creation of an online marketing solution for a board game. This solution will take the form of an interactive trailer and will be comprise of 3D animation and live action footage.

Web and Multi-media
STAFFORD

Michelle Woodlock

BSc (Hons) Web Development

Reading with Pirates
Being an enthusiastic and independent reader has been shown to benefit children in many ways and is now part of the National Curriculum for English in primary schools. Reading with Pirates provides a fun way to engage with books and encourages children to keep reading outside of school.

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