




EXPO TEES 2022

ExpoTees London 2022

Showcasing the next generation of digital expertise

School of Computing, Engineering & Digital Technologies

tees.ac.uk/expotees

Teesside University

Welcome

to ExpoTees 2022

I am delighted that ExpoTees 2022 is our 17th annual exhibition of our students' work. Once again we are proud to showcase some truly excellent projects from areas including computer science, data science, cyber security, programming, computer games art, computer games design, visual effects, computer animation and digital arts. I am sure you will agree that this brochure is evidence of the outstanding world-leading work that our students produce – an exemplar to universities worldwide. It is a great credit to our students and the staff who have taught, enthused and supported them during their studies, that our graduates enter employment with the industry-ready skills world-leading organisations demand.

The quality of work is testimony to the resilience and dedication of staff and students who have overcome the challenges of studying during the global pandemic. We are delighted to be able to bring back ExpoTees as a face-to-face event and meet you in person after two years online. I hope that you enjoy your time at our exhibition. Do use it as an opportunity to meet our students and find out more about their wonderful achievements.

Professor Chrisina Jayne

Dean

School of Computing, Engineering & Digital Technologies

Friends of ExpoTees London

We welcome you back to ExpoTees this year with our first physical running of the event since 2019. ExpoTees has always been an event for the students made possible and enhanced by the support of our sponsors and visitors.

Each year, there are many returning faces as well as new local start-ups, new friends, partners and student cohorts to meet.

If you are interested in being part of this fantastic event to support your recruitment in the future, we would love to hear from you:

T: **01642 342608**

E: **scedt-events@tees.ac.uk**

W: **tees.ac.uk/exposeries**

ExpoTees London 2022

It's been almost two years since we were last in the UK's capital city as part of ExpoTees London, so when the decision for Teesside University to 'get back in the room' was announced late 2021, we couldn't wait to re-establish our partnerships with the hosts of the last ExpoTees London event – Framestore.

This London architectural landmark seemed the perfect choice for the 2022 event. The expansive balcony area on the fifth floor overlooking central London is the ideal place for the Covid anxious amongst us to shake off the shackles imposed by the pandemic and to get down to business once again. More importantly for the UK creative community to come together to discuss and plan how to move forward, during what for many, are still unchartered waters.

Building on the inspiring *Morphogenetic* exhibition of Teesside University honorary graduate Andy Lomas back in 2019, this year's ExpoTees London event hopes to stimulate a lively debate as to the direction of travel for the animation and games industry post pandemic. Together with the usual graduate showreel, networking and alumni reunion activity, ExpoTees London will be hosting a panel discussion on virtual production.

With so many studios around the world having to adapt their workflows to meet the challenges presented by the pandemic, real-time computer graphics technologies have in recent months become a very attractive and financially viable way with which to support storytelling techniques. Never have the film, games, animation and VFX industries been more aligned. With the virtual production processes leveraging advances in game-engine technology to create environments that now interact with the live-action, not only does this new way of working allow filmmakers to make real-time decisions on set, it also allows the games artist to contribute to an industry that was not previously an option.

Blocking and framing decisions are today being explored in virtual locations using virtual reality headsets and virtual cameras. Fully immersed actors in virtual sets are being created with state-of-the-art LED volumetric stages.

The importance placed on the term 'virtual production' has either come about as a consequence of us being able to do more from home or alternatively as an inevitable consequence of us all wanting to tell stories in a more efficient, affordable and reliable way.

This together with many other questions that are part of working in the animation, VFX and games industry, we hope to explore at ExpoTees London, and we hope you can make it.

To find out more contact event organiser - Justin Greetham.
Email **j.s.greetham@tees.ac.uk**

Find out more or register to attend this year's ExpoTees London
W: **tees.ac.uk/schools/scedt/expotees/london**

> An exceptionally rare opportunity to meet such talented members of industry in a prestigious setting.
>
> **Christian Maund**
> **2019 ExpoTees exhibitor**
> **BA (Hons) Games Development**

Training is at the core of what we do.

We don't expect everyone to be the finished article and we hope that everyone wants to start a career of lifelong learning, because every show has its challenges and it's only through continual learning that you are able to meet those challenges.

Amy Smith
Head of Talent, Framestore

I came to ExpoTees London to look for animators.

We have a lot of projects coming into the studio and we need more hands on deck. I had great support when I was a student at Teesside University and although I've picked up knowledge along the way, Teesside provided me with the basic foundations.

Jerome Rodgers Blake
Teesside University alumnus, Animator at Creative Assembly Games

International animation conference comes to Teesside

Global experts in animation are due to converge on Teesside University from across the world this summer to share their knowledge.

The 33rd Society for Animation Studies (SAS) Conference will bring together around 200 international delegates, including animation scholars and practitioners, to share and present their research.

Held at a different international location each year, the SAS Conference has only taken place in the UK a handful of times and Teesside University is one of just a few UK universities to have been chosen to host the prestigious event.

The SAS Conference will be hosted from 26 June - 3 July, building on Teesside University's international reputation for animation and further enhancing relationships already cultivated through the University's own Animex event.

Animex, which marked its 21st year in 2020, is an annual celebration of animation, games and visual effects which attracts the cream of the animation and gaming worlds to Teesside. Over the years, Animex has attracted guests such as Nancy Cartwright, the voice of Bart Simpson, and visual effects legend Ray Harryhausen. More recently, Animex has brought to Teesside experts who have worked on a plethora of blockbuster movies and shows from the *Lord of the Rings* trilogy to the *Star Wars* and *Jurassic Park* films, *Toy Story* and *Game of Thrones*. Big games industry names have included *Grand Theft Auto* creators Rockstar Games, to Blizzard Entertainment who are behind *World of Warcraft*, to *Assassin's Creed* creators Ubisoft.

SAS Conference delegates will also be able to enjoy elements of the University's Animex Fringe, including expert talks, screenings, exhibitions and other events as part of the SAS Conference programme. The theme this year for the SAS Conference is 'animation unlocked', which will examine how the pandemic has caused everyone to stop, isolate and innovate, as the world gradually continues to reanimate.

Conference proposals are currently being reviewed from animation scholars across the globe on a variety of subjects, from cultural reflections and identity to philosophy in animation, to exploring innovative practices and experimental approaches.

Katherine O'Connor, Senior Lecturer in Computer Animation in the University's School of Computing, Engineering & Digital Technologies, said: "Hosting this conference will enhance the academic reputation of our already world leading animation and games courses. It's a prestigious international event, hosted each year by a specially selected university, with locations in recent years including America and Singapore. It will bring, pandemic permitting, a number of international animation academics to Teesside from other universities across the globe which will also help to provide a real boost to the local economy.

"We're proud to be teaming up with Animex to incorporate a range of Animex Fringe events into the SAS Conference programme to showcase the calibre and vast range of animation greats we continue to work with."

Professor Chrisina Jayne, Dean of the University's School of Computing, Engineering & Digital Technologies, said: "We are delighted that Teesside University has been selected to host the SAS Conference. Hosting this event will build on the fantastic reputation for animation which the University has already established, not only through its courses, facilities and successful graduates to the international links already created through Animex."

Regional RTS awards success for talented Teesside animators

Talented Teesside University animators have been recognised in a student category of the regional Royal Television Society awards.

The students mingled with professional news teams, production crews and well-known stars from television and film to celebrate the region's media and creative industries at the Royal Television Society (RTS) North East and Borders awards.

A film by Teesside University students called *Sleep Paralysis* won the student animation category of the awards, announced in Gateshead. *Sleep Paralysis*, a short film on the experience of sleep paralysis, was created by Arran Bull, Matt Layfield, Hollis Irving and Remy Turner-Broadhead. The film will now be considered for the national RTS awards, due to take place this summer.

The students all worked on the film while completing their final year of the BA (Hons) 2D Animation and Stop Motion in the University's School of Computing & Digital Technologies. Arran is now completing the MA 2D Animation and Stop Motion and Remy is completing the MA Concept Art.

Arran said: "It's very surreal to win this recognition and it was great to achieve the award for all our hard work. Going to the awards ceremony was a really fun experience, as was accepting the award with my teammates, who are also my friends."

He added: "My degree and currently my MA have helped me learn and refine my skills as an animator, as a director and as a team player. It's also helping me learn about the industry so I can be prepared for when I get a job.

"I'm currently developing an animated TV pilot, as most of the MA modules are working towards that one project at different stages of development and production. This will allow me to graduate with a pilot I can pitch to networks and streaming services."

Arran also worked with Hollis and Matt on a student project during the pandemic to create a music video for Belfast musician Owen Lamont, who approached the University's animation department earlier this year, seeking help to create an animated video to accompany his track *Nobody*.

As the student team started work on the project, they were impacted by the lockdown restrictions caused by the COVID-19 pandemic. The music video has since gone on to gain success with screenings at international festivals.

Two other Teesside University student films were also shortlisted in the animation category of the RTS NETB Awards. They were *Wanted*, an animated Western style film, by Reece Tilley, Harry Willis, Callum Hall, Josh Smith, along with Tethered, a final year project by Matt Layfield.

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Animation & Visual Effects

The following examples of work help to showcase why Teesside University is recognised so highly with regards to its animation and visual effects courses. The projects below are chosen by and fully realised by the students themselves, giving them the freedom to focus on a wide range of skills and helping them to specialise in whichever area they feel most suited to and wish to focus their career ambitions around. This freedom and independence allows them to be prepared to make the jump into their chosen field and industry as effortlessly as possible.

Students from these courses have gone on to work and thrive in such companies as Framestore, Double Negative, Moving Picture Company, Cinesite, Pixar, DreamWorks and Industrial Light & Magic. Others have been successful in their fields while also setting up their own companies and studios both in the North East and throughout the UK. We happily welcome them back to ExpoTees as industry guests and look forward to this current cohort being yet another future generation of industry returning guests in the near future.

Teesside University is ranked in the top 15 list of international animation schools (*Animation Career Review 2021* – tees.ac.uk/source). Our students enjoy using dedicated facilities that are provided for animation and visual effects, with access to a traditional animation studio that combines cutting-edge technology with wet room facilities, as well as access to our world class AVFX studio. We also have a motion capture studio right next door, where our students can find some of the best motion capture equipment available in the UK.

Our animation and visual effects courses:

Undergraduate

- BA (Hons) 2D Animation and Stop Motion
- BA (Hons) Animation
- BA (Hons) Visual Effects

Postgraduate

- MA (Hons) 2D Animation and Stop Motion
- MA (Hons) Animation
- MA Visual Effects

BA (Hons) Computer Character Animation

Dania Poulsen

3D Diorama

My aim in this project was to create a beautifully lit night-time diorama scene with lots of detail. I have combined my passion for 3D modelling and sculpting with my home country, the Faroe Islands, with its small-town culture. The scene consists of a house, pond, waterfall, boat and various other assets. I have taken the project through from concept art and previsualisation to a final turntable render and beauty shots. I used Maya and ZBrush for modelling and textured in Substance Painter. I have learned various new techniques, such as how to keep the model low-poly in Maya while keeping all the details from ZBrush, and how to create stylized textures by developing my own painted texture pattern.

Uma Mannan

Abstract & Reality

My project is inspired by the Christmas advertisements by Christian Dior that are released every year. I have created a sequence which could be a potential promotional video for a business, blog or project. I used Houdini FX to model and animate the flowers and created a variety of particle simulations. These all revolve around the perfume bottle. I have developed a model of a flower which could be customized by a Houdini user to change its shape, size and number of petals. I have constructed it into a Houdini Digital Asset which could be accessible to other users once it has been uploaded. I have worked on Vex coding to randomize the growth of the flower and Vellum framework for the falloff of the flowers. The flowers grow and finally fall off to reveal the brand and the label of the perfume. This project helped me to develop key skills that I would not have learnt before if I had not created this project. I have expanded my knowledge in Houdini to a great extent. I have learnt various techniques which include VEX coding, modelling, animating and rendering within Houdini.

Cameron Robertson

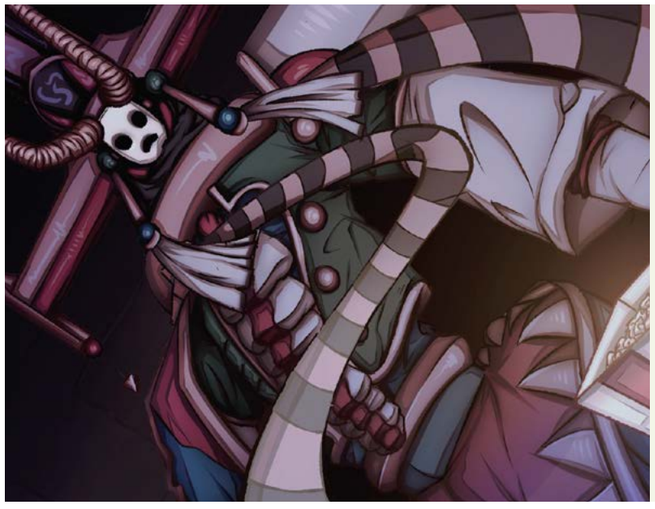
‘Red Reign’ - Short film
Hybrid Virtual Production

I will be exhibiting “Red Reign” - a sequence from a horror/sci-fi short film which explores the use of a hybrid virtual production pipeline (with an entirely CG environment), Houdini FX Simulation as well as CG Body replacement. The clip is short in length but has been taken from a screenplay I’ve been writing for the last two years. Red Reign is a project I’ve been wanting to develop since being at Teesside University, and I believe it is an ideal project to present for ExpoTees as it showcases my CG generalist skills - modelling, texturing, lighting, FX, rendering and compositing, as well as my practical onset producing skills. This project has allowed me to develop skills I wasn’t too proficient in, such as FX and rigging, as well as develop workflows for the new and emerging virtual production technology.

MA 2D Animation and Stop Motion

Arran Bull
Arran Bull Productions

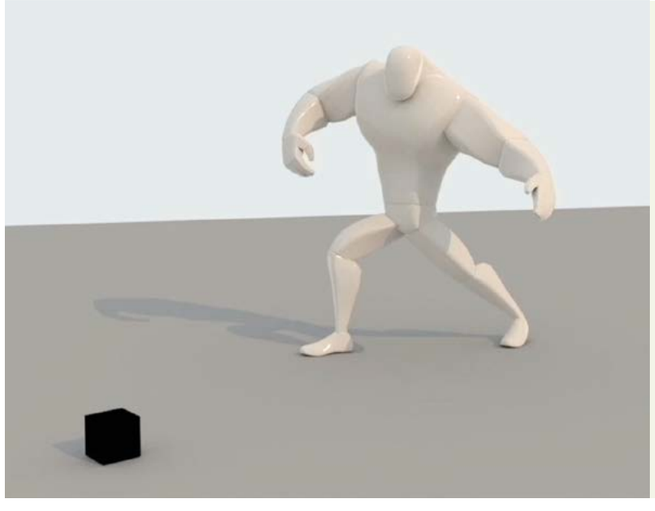
I use the power of 2D animation to express myself with funny and bizarre visuals, as well as engaging and compelling storytelling. Along with my skills in traditional 2D animation, I also love to draw storyboards, characters and production design and edit animatics, to name a portion of my skillset. I also have experience in directing animated projects, in both as a team and with solo projects. In my masters, I am currently developing a TV pilot for a show about an autistic girl.



Mîa Moran
2D Animation Portfolio Showcase - Mia Olivia Moran

I am presenting a showreel of various portfolio pieces I have developed over the semester. This includes a variety of work ranging from 2D animation clips from my final film, pixel art animation pieces, and concept art and preproduction work developed in preparation for my film.

MA Animation



Sireethon Srinuallaong
Character Animation Showreel

My showreel contains various small animation shots that represent my skills in body mechanics, acting, facial animation and dialogue. It shows both stylized and realistic movement. For realistic facial animation, I used the attractive shot from the movie I found to make an amazing animation. To show my ability to animate body mechanic, I included two styles of dancing animation. One of them is heavily based on dancing, another one is dancing while interacting with the moving box.

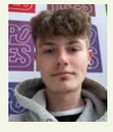
Yusheng Zhuo
Animation Demo Reel

I have created a demo reel of my animation works focusing on strong facial expressions and body languages. This includes a stylised facial animation with lip sync, some realistic animations, two creature animations and a two-man fighting scene. Including two ten-second scenes from the film Shining and the film Hitchcock with two different styles of animation, and the first scene of animation work for my group project. I've done the whole scene through layout, blocking and animation. The animation was done in Maya 2022. I have gained skills in animation principles and techniques to help produce believable motion and personality, reinforced by the study of acting theory that I undertook. Also with my researching of micro-expressions I can enhance facial animations.

MA Visual Effects

John Murphy
Houdini FX Animation

The work I am showing is a collection of VFX shots in which I have tried to recreate and simulate various effects from real-world reference, as well as shots from a War of the Worlds inspired short film that I have been working on for a group project. This includes effects using Pyro, RBD and Particle Systems. The landslide is a piece I am particularly proud of, as it showcases the integration into real footage as well as just the simulation. My focus for this has been to develop my skills and speed in different workflows and styles. I mainly work in Houdini however most of my projects include work from Maya, Substance as well as Nuke.



Reece Tilley
VFX Compositing

The work I am showcasing in this exhibit highlights the key skills of VFX and compositing I have learnt throughout my time at university. I wish to further develop on my skills as a compositor in both my MA project and future projects in industry. I will be demonstrating the integration of 2D and 3D tracked CG elements that I have textured and blended seamlessly with live action footage. As well as fully CG projects with simulations which are mainly pyro and particle effects. I will also be showing off my environment building skills with the use of matte painted backgrounds along with my rotoscoping and understanding of the use of colour grading and lighting all whilst keeping to the professional industry pipelines.

Scholars supported on path to careers in games design

A career in computer games design beckons for the first recipients of a new scholarship created by a leading games development studio in partnership with Teesside University.

The Creative Assembly Legacy Scholarship has been awarded to Daniel Gething and Rebecca Arachchiae, both first year BA (Hons) Computer Games Design students. Daniel and Rebecca will receive mentorship and £9,000 financial support each during their degree.

Daniel, 31, from Horden, County Durham, said: "Gaming provided an escape and became a coping mechanism for me when I was younger, as I suffered from depression for a time. My grandad also really inspired me.

"I lived with my grandparents when I was growing up and my grandad is really interested in computer games, and it's something we still do together. He even went to college to do a computing course when he retired from his job as an electrician."

As a mature student, Daniel had an unconventional route to the degree, having gone from job to job after previously studying sports science course at college and working as an IT apprentice.

He said: "The time is now right. I have the maturity now to completely focus on my studies. I am really looking forward to building relationships with the mentors and having someone to provide guidance and offer a glimpse of working in the industry through the scholarship.

"The games design course at Teesside is perfect for me, as it allows me to focus on the specific areas of the computer games industry that I want to work in."

Rebecca, 18, from Gateshead, also has a passion for games design and applied for the degree to help achieve her ambition to work in the industry.

She said: "I have been interested in games design since I was a teenager. I not only enjoy playing video games, but I have always been fascinated by bringing ideas together to create something amazing.

"I am interested in the different areas of games design, which the course at Teesside covers, and also because of the links the University has to the industry."

She added: "I took part in a games school event when I was a teenager, which provided a good grounding in basic knowledge before I went on to college to study games design.

"The scholarship will definitely help me to pursue my educational and career goals and pursue my passion for games design. I am really interested in creating costumes for games characters also learning how to create assets for games. My ultimate career aim is to work for one of the major well-known games companies."

Siobhan Fenton, Associate Dean (Enterprise and Business Engagement) in the University's School of Computing, Engineering & Digital Technologies, said: "It is fantastic for the University to be able to work alongside Creative Assembly in helping to break down barriers to the games industry and create more opportunities for our students and graduates.

"The Creative Assembly Legacy Scholarship, which has been offered for the first time, will help to make a significant difference to young people's lives. The financial support and mentorship will make a huge difference to them.

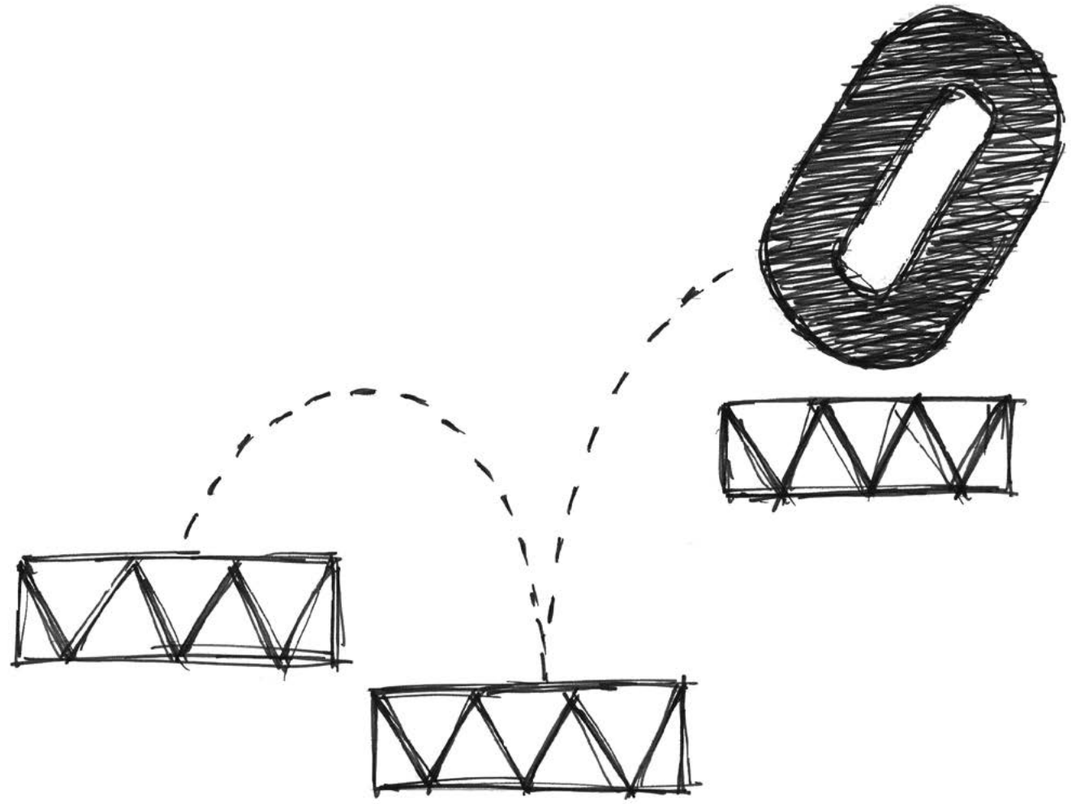
"Daniel and Rebecca are deserving first recipients and we predict great careers for them in the games design industry."

Emma Smith, Head of Talent at Creative Assembly, said: "We are delighted to see the first year of recipients of our scholarship and we hope that this support, alongside mentorship from our experienced developers, will see Daniel and Rebecca go on to have lasting and successful careers.

"The global games industry is growing and within the UK it employs around 27,000 individuals, yet we continue to struggle to find talent with the necessary skills.

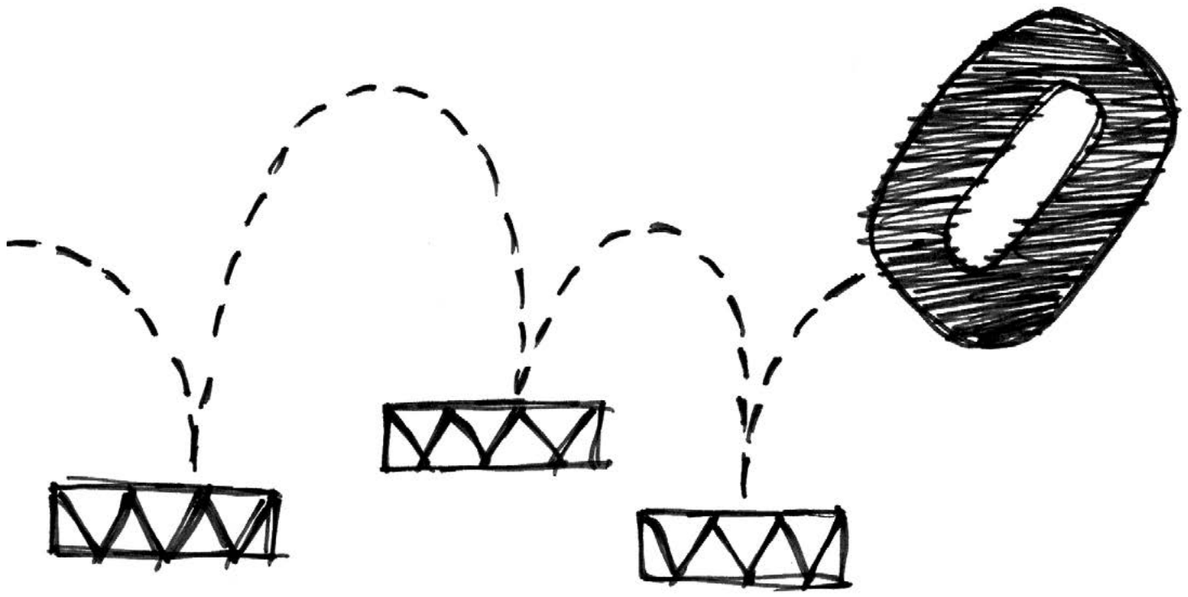
"Through our scholarship we aim to remove some of the existing barriers to education, increase diversity within our rich industry and see more passionate students reach their potential. I can't wait to see what Daniel and Rebecca achieve in the future."

Creative Assembly is involved in shaping the curriculum and degree programmes to ensure students are learning the requisite skills for a successful career in the industry, providing student access to mentors and guest lectures and expanding opportunities for disadvantaged people to work in the games industry.



Games & Concept Art

Games and concept art courses at Teesside University have always enjoyed a sterling reputation and with the continuing growth in the North East of budding new independent studios, games and concept art students have many opportunities to become part of this vibrant industry in the area. Our courses cover all aspects of games development. Our students can choose from courses designed for careers in computer games art, games design, games programming and concept art.



Our students have access to dedicated art, games and programming studios, all providing a fantastic learning experience using state-of-the-art facilities. Students also gain real-world experience of the game development process by working in teams to produce playable game demos within a studio environment. The continued support from local companies and larger more established studios helps provide our students with an even greater opportunity to grow and learn their skillsets alongside experienced veterans of their field.

Our games and concept art courses include:

Undergraduate

- BA (Hons) Concept Art
- BA (Hons) Computer Games Art
- BA (Hons) Computer Games Design
- BSc (Hons) Computer Games Programming
- BSc (Hons) Indie Games Development
- BSc (Hons) Technical Games Programming

Postgraduate

- MComp (Hons) Computer Games Design
- MComp (Hons) Computer Games Programming
- MA 3D Games Art
- MA Concept Art
- MA Games Design

BA (Hons) Concept Art

Alex Jones
Concept Art

For this concept art project, I had chosen to go forward with all the skills that I had learnt previously within the last semester, these skills included learning blenders fundamentals to create a finished piece of art. For this semester I wanted to expand my learning into blender, advancing my skills into other areas whether this be character, prop or environment pieces. Throughout this I took the skills I'd learnt prior and instead had applied these skills towards creating an array of character concepts to fully fledged pieces working in a similar fashion to artists work in which I had aspired to create to the same level of polish and professionalism. My aim was to create a series of cinematic shots that'll present a simple story following a group of explorers on a mission to uncover the secrets left behind by an ancient other-worldly civilisation, these cinematic shots will present the skills I have learned during this semester but also areas I will continue to learn upon in future projects. Similarly, to the previous semester I mainly used Blender to create the finished shots although I planned to explore new ways of concepting ideas making use of other forms of exploration like VR and it's array of programs, all the while keeping the bulk of the pre-production work in photoshop.

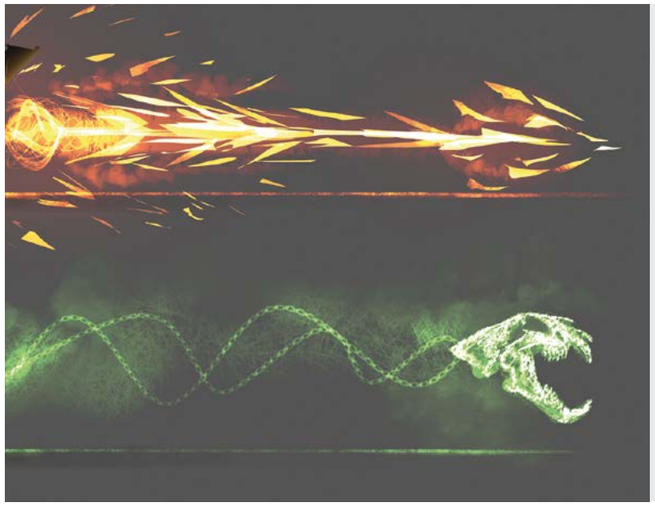
Kantarat Ulhaka
New Pangaea

My project consists of stylized town environments that exist in a fantastical prehistoric setting aimed at the video game industry. Each town has been inspired by different worldwide cultures, such as a tropical floating town inspired by Southeast Asian culture, a classic old English inspired fantasy town, and a town of crafters inspired by Scandinavian culture. I focused on creating believable and functional town environments that can convey their narrative through visual design and showcase the interactions between man and dinosaur in this setting. To create the work, I explored various ideas for each civilization before utilizing Blender to create 3D blockouts. I then used these blockouts as a base to paint the finished concepts in Photoshop.

MA Concept Art

Emily Bland
Concept Art Portfolio

I am a creative designer specialising in concept development for film and television and an experienced visual artist in interior and exterior environments, characters, props and graphics. Studying concept art has helped me to develop high-quality work ready for industry. I have enjoyed visualising a wide range of briefs including a reimagination of Assassin's creed in Morocco, including a character based around traditional berber woman's culture with a hidden blade variation based on their jewellery and a Moroccan street the character can climb. I have also created horror characters based on moths and an ultra-modern lounge and bar for the extremely wealthy. I enjoy working with others, and developing my skills in Photoshop, Blender and Vectorworks. These were invaluable skills to have when working on ITV's No Return as an assistant art director. After finishing university I am hoping to find a role within visual development or concept art.



Liam Davey
Concept Artist

I am a conceptual artist with extensive experience in character, creature, weapon and in-game asset design. Throughout my time in university I have advanced my understanding of the fundamentals of art and design to a professional level. I am very dedicated to finishing a project whenever I start one and love to work within a team. I am extremely capable when it comes to designing for games. The work I have chosen to exhibit is a selection of my concept designs mostly inspired by, and emulating the designs produced from Creative Assembly.

Sam Webster
Concept Artist

Creative problem solving through design has always been a passion for me. Concept art gives me the perfect opportunity to make those passions into a career. I am hard working, a team player and have confident communication skills. I am keen to learn and ready to adapt to meet the requirement of any project I am a part of. During my time at university I helped found the Digital Art Society. I facilitated presentations from industry professionals, ran critique groups and organised reference gathering trips. I was both a course and School representative, leading a team to help improve the learning experiences of students and supporting effective communication and course improvement with tutors and the Dean. I have a first class degree (with honours) in concept art from Teesside University, this has helped me become a well-rounded and efficient artist with a hardworking and driven mindset. During my course I learnt how to use Photoshop, ZBrush, Blender, Maya, Substance Painter and Daz.

BA (Hons) Computer Games Art

Aya Al-Bayati
Haunted Victorian Library

This project is set in a Victorian manor, mainly focusing on the library area. Elements of horror are incorporated in the overall atmosphere by using lighting. The art style is realistic focusing on the architecture of the manor. This project was chosen because over the past few years I discovered that I enjoyed working on interior environments. Secondly, I have been inspired by Resident Evil Village level of quality, and choosing to do a Victorian manor environment incorporates well with the theme of horror, which allowed me to develop my researching, modelling, sculpting, material creating and lighting skills further.

Radomír Fifik
Reimagining of Tonya - From mobile to Unreal Engine 5

For this project I aimed to recreate a character called Tonya from a mobile game Hundred Souls and present it in Unreal Engine 5. My main focus is on creating the character as realistic as possible by using some of the new and more advanced workflows in order to achieve the highest fidelity.

Damian Kalinski
The Last Wish

Highly inspired by the game “Assassin Creed Valhalla.”

For my final year project I decided to create a realistic Viking 3D character based on a concept art provided by an artist whose pseudonym on Artstation is “AK.”

As a huge fan of all sorts of mythology and folklore, my main ambition was to challenge myself to create a character that would look very close to the base concept art keeping the feel of Nordic English vibe as well as try to achieve or at least get close the industry standard quality.

Francisco Mendes
岳菱歌: The Concubine

For my games art project, I will aim to create a 3D environment with the addition of a playable character within the newly updated game engine, Unreal Engine 5. To illustrate my artistical skill and ambition, I will be showcasing photorealistic materials and lighting in addition to fully optimised 3D assets/scans. Although the scope is fairly immense for a single artist, the aim for this project is to focus on my overall quality and efficiency as an environment artist. Furthermore, optimisation and techniques within the industry-standard pipeline shall also be considered. The chosen theme of this project is Imperial China during the Tang Dynasty (唐朝). The golden age of Imperial China due to its reform and cultural advancements which lay the foundations for policies which is still observed in China today. From the architectural beauty to the breath-taking mountains - I decided on this theme as I want to bring immersion to one of most critical parts of history in China since it has not been portrayed correctly in western media.

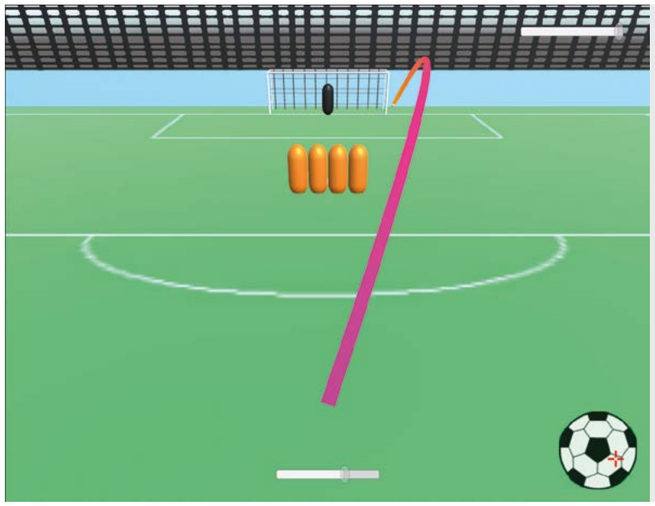
BA (Hons) Computer Games Design

Harry Beale
Platform Pursuit

The work I have chosen is from my final year project, Platform pursuit. It's a third-person platforming game based in a simulated environment to test your skills with a new mechanised movement system to shape the future of space travel. The main goal is to use the movement system to navigate through each environment as fast as you can with the altered conditions of each map. With each map being slightly altered for a different experience with altered gravity levels, slightly different level mechanics and external environment.

The main skill I am aiming to develop during the development of this project is my User Experience and User Interface design as that's my focus for the industry, such as camera movement, making it look for industry professional, diegetic UI as well as animated. I plan to make a game that is the most accessible as I can to a wider audience, by implementing colour blind features, as well as custom key, binds for people who struggle with the controls of the game with subtitles for people who are deaf.

BSc (Hons) Computer Games Programming



Naseem Haque
Bend It Like Magnus: Free Kick Simulation Using the Magnus Effect

My project is a free kick simulator where the flight of the ball is influenced by the Magnus force in a real-time environment. The Magnus force is a lift force that affects the trajectory of a spinning ball and allows footballers to curve their shots in the air. My goal for this project was to implement a realistic physics simulation to demonstrate the Magnus effect in the context of a football game. Players are able to aim their shot and choose exactly where they want to connect with the ball when they take their strike, giving them control over the rotation rate of the ball. I developed my project in C# using Unity.

Rodrigo Roldan-Romero
Real-time Fluid Simulation in UE4 using PCISPH and SPH methods

This project investigates the implementation and optimisation of fluid simulations in Unreal Engine using the PCISPH and SPH method for films and games. These methods are governed by the Navier-Stokes equation. The solver simulates viscous and non-viscous fluids and makes them visually realistic. The fluid solver is entirely written in C++.
For optimisation, parallel programming methods such as threads have been used. For collision detection, the SPH algorithm deals with particle-to-particle collision. For particle to non-particle collision, a separate collision detection algorithm has been implemented. For the neighbour search stage, spatial hashing algorithm has been used.

Keywords:

PCISPH - Predictive-Corrective Incompressible Smoothed Particle Hydrodynamics.

SPH - Smoothed Particle Hydrodynamics.

MA 3D Games Art

Huan Chen
Alien battlefield

Alien battlefield is a next-generation game-ready environment piece largely inspired by Alien: Isolation, Halo Infinite and Star citizen. This scene is a large sci-fi spacecraft, including a corridor and control room. My project showcases my abilities as a 3D artist, incorporating organic and hard surface modelling, technical art, animation, 3D optimization and a strong understanding of lighting, material creation, and composition. I am focused on core optimization techniques such as asset reuse, texture and asset tilling, weighted normal, advanced instanced materials, decals etc. I have created a series of optimized modular assets both structural and set dressing based that are efficient in their utilization of polygons, texture, materials and rendering in the Unreal 4 engine. I used 3DS Max, Substance Designer, Substance Painter, Quixel Mixer, Photoshop, UE4, Marvelous Designer and more.

Brittany Mcassey
Oni Hunter

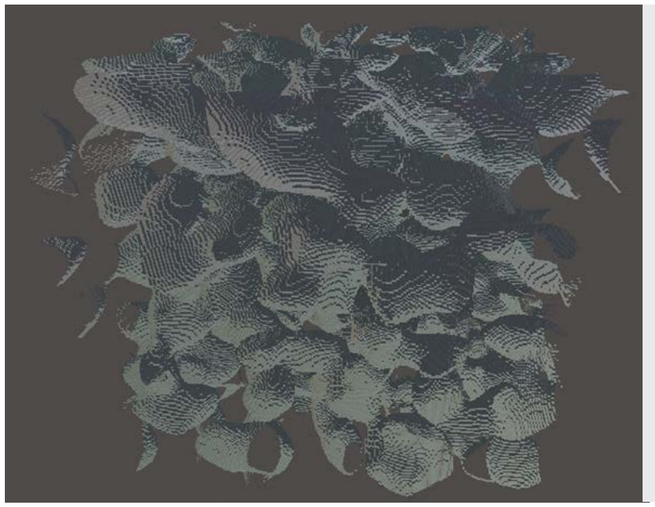
My project is a real time character, based on an illustration by the artist JunYeong Shin. I took this flat illustration and used it as an inspiration for transforming the character into 3D, so that I could showcase my skills in organic sculpting, some hard surface for her armour pieces and then finally texturing across the various materials her outfit is comprised of. ZBrush was used for the sculpting of mostly the whole character, including her outfit, utilising both the base sculpting tools and ZModeler for the more hard surface elements. For the retopology and the UVs I used Maya and for texturing her and the outfit Substance Painter was the program of choice, within which I hand painted the more complex patterns on some of her clothing and then built the materials over those. The model was then setup and rendered within Marmoset Toolbag.

MA Games Design

Storm Karlsen
Gamefeel Exploration

Gamefeel is a difficult, yet incredibly important, aspect to define with each game that is created. I have developed a grappling game with heavy emphasis on Gamefeel whilst traversing.

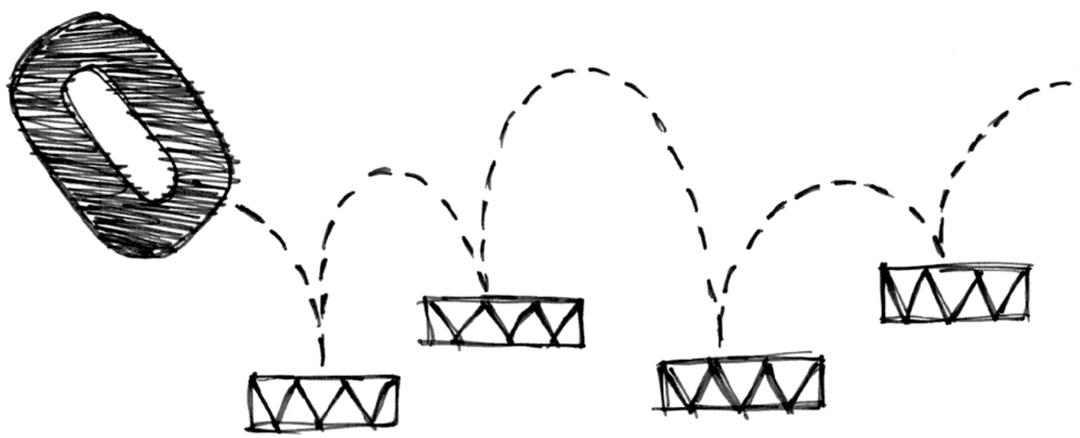
MComp (Hons) Computer Games Programming



Alan Bednarski

Voxel procedural cave generation system

This piece of work was made in Unity and it's a system that can procedurally generate a cave system using voxels with a playable prototype of a game to showcase to use of the systems in games. The skills I have developed while making this project have been mainly to do with how to make a noise algorithm such as Perlin, Simplex noise and some others. The other skill I developed was a better understanding of how to make a larger system more maintainable and scalable, as well as modular enough to be used in multiple cases mostly related to using this system in games.



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For any questions about ExpoTees London contact Justin Greetham
T: **01642 342692**
E: **j.s.greetham@tees.ac.uk**

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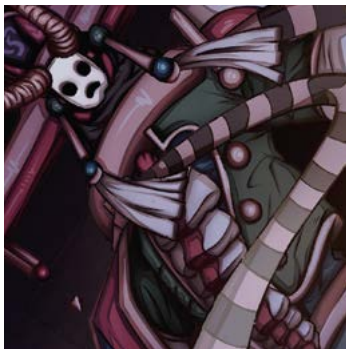



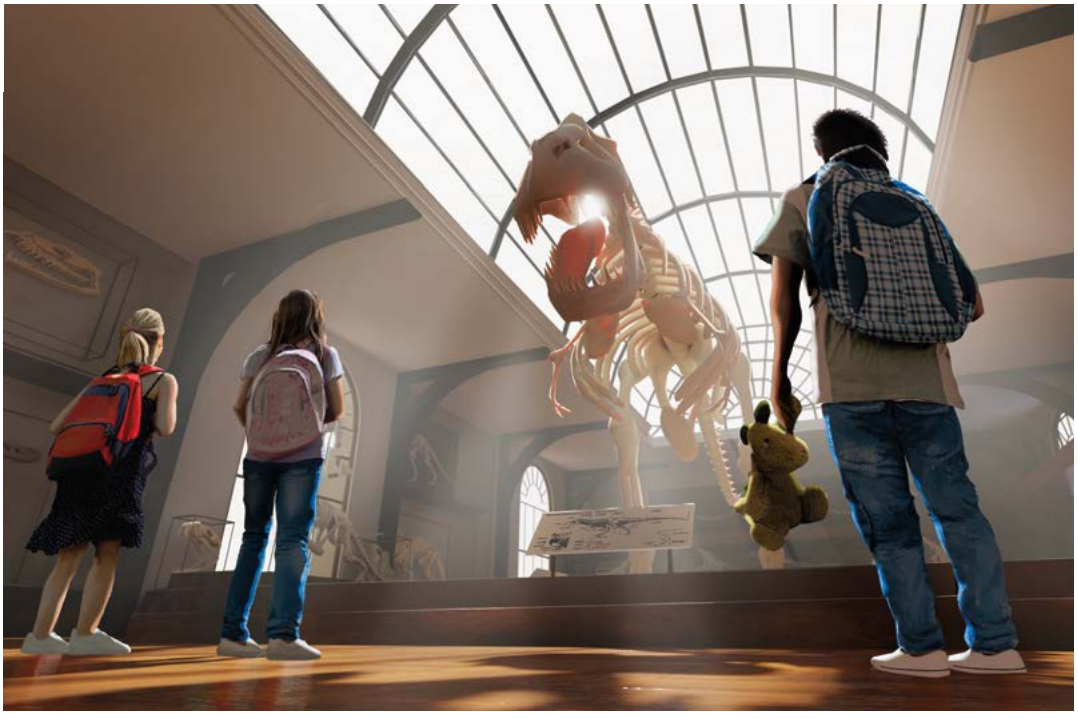


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Teesside University
Middlesbrough
Tees Valley T: +44 (0) 1642 218121
TS1 3BX UK **tees.ac.uk**

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