



Lauren Stacey Ferro

WORK EXPERIENCE

[2022 – Current] **Research and Developer ERASMUS+**

Sapienza, University of Rome

City: Rome

Country: Italy

Main activities and responsibilities:

Graphic and system development of applications and virtual environments at the Department of History, Design and Restoration of Architecture of the University of Rome "La Sapienza". Research activity to be carried out as part of an ERASUMS+ project: The project consists of a hybrid informal learning experience that connects students studying in a physical informal learning space (which students usually attend) with those who are at a distance (e.g., online). The online version of the informal learning experience allows those at a distance to see who is present in the physical space and enables them to discuss topics, share information, and collaborate on their academic studies without being physically present (e.g., via text, voice, video). The overall experience aims to connect students regardless of the limitations that may prevent them from travelling or being present with fellow students.

[2022] **Content Developer**

Sapienza University of Rome

City: Rome

Country: Italy

Main activities and responsibilities:

I was involved in the ROSITA project. This was an educational and outreach program for robotic space exploration in collaboration between The Italian Space Agency (ASI) and Dipartimento di Ingegneria Informatica Automatica e Gestionale "Antonio Ruberti" (DIAG) Sapienza, University of Rome.

- Analysis and design of educational activities for robotics and space exploration
- Logo design, iteration and implementation in printed and digital material.
- Materials for print and online use (flyers, banners, template document templates).

[2017 – Current] **Adjunct Professor**

Sapienza, University of Rome

City: Rome

Country: Italy

Main activities and responsibilities:

I am responsible for delivering a 12-week course to master students about the design and development of interactive experiences in the Faculty of Architecture at Sapienza University of Rome.

During this course, I have been responsible for:

- Facilitating teaching and learning in an English master's program (12-week course) that uses the Unreal Engine

- Developing curriculum content and distributing it online via Google Classroom includes additional supporting material to the coursework (e.g., links, videos, tutorials, etc.).
- Continuous assessment of students through a variety of tools (Unreal Engine, Quixel Mixer, and Quixel Bridge) such as exams, and documentation creation.
- I supervised an average of 2 master theses per year between two different departments.
- Creating online tutorials based on class material (see below).
- Assisting students during additional support classes prior to the exam.

In addition to the duties related to teaching, I have also been a part of several graduating commissions where my role was to determine (with other colleagues) the final results of students' work.

[2020 – 2021] **Professor of Game Design**

VIGAMUS Academy

City: Rome

Country: Italy

Main activities and responsibilities:

Two (200-hour) courses in Game Design that covered the following topics:

- History of Game Design
- Game Elements and Mechanics
- UI/UX Design
- Narrative Design
- Level Design (in Unreal Engine)
- Lighting
- Audio Design
- Materials (in Unreal and Quixel Mixer)

[2016] **Gamification consultant, game and UI designer**

Sapienza University of Rome

Main activities and responsibilities:

I consulted on a doctoral project titled “GEA 2: A New Earth” to teach high school students physics-related concepts.

I was responsible for the design and creation of:

- Gamified components (points, badge systems)
- Level design (Unity 3D)
- Creation, texturing, and implementation of (3D) Game assets (Autodesk Maya)
- User Interface design and implementation (Adobe Illustrator/Photoshop).

[2016] **English Teacher**

Darby School of Languages (Italy)

City: Rome

Country: Italy

Main activities and responsibilities:

PET, Trinity (2-4), Cambridge IGCSE (Intermediate), Cambridge Movers

I developed the following for one semester:

- Lesson plans (for over 9 classes in 7 schools)
- Class content (including presentations)
- Assessments

These English classes prepared students (ages 10–16 years old) for various English exams (all with 100% pass). The lesson content varied across schools depending on their age, final English exam, and school type (scientific, arts, primary).

At the following institutions:

- Istituto Di Istruzione Superiore via Salvini
- Istituto Comprensivo Statale Carlo Alberto dalla Chiesa
- Scuola Media Lupo Alberto
- Istituzionale del Liceo Artistico Statale "Caravaggio"
- Scuola Elementare Geronimo Stilton
- Scuola Media Statale Arturo Toscanini
- Istituto Comprensivo Nando Martellini

[2015 – 2017] **Consultant and Project coordinator**

Victoria Police and RMIT University

City: Melbourne

Country: Italy

Main activities and responsibilities:

This project, titled "Delta Core" consisted of developing an interactive application (prototype) for fingerprint analysis for use within training programs as well as a day-to-day analysis of real case fingerprints.

In this project, I was responsible for:

- Concept and design of the prototype
- Digital design and implementation (of assets) in Unity 3D
- User Interface design (Adobe Illustrator/Photoshop)
- Coding functionality (Unity Game Engine)
- Project and team management

[2015 – 2016] **Web Designer**

School of Media and Communication AND School of Social Context (RMIT University)

City: Melbourne

Country: Australia

Main activities and responsibilities:

This work consisted of developing a new website based on a brief to communicate new and previous information.

My duties consisted of the following:

- Creation of the mock-ups and layout of the new website for the Centre of Game Design Research.
- Creation of a prototype website for the school's new webpage.
- Creating custom CSS.
- Social media management and marketing.
- Logo creation.
- Visual Content and Images (including photography).

www.gamedesignresearch.net

[2015] **Research Assistant**

School of Media and Communication (RMIT University)

City: Melbourne

Country: Australia

Main activities and responsibilities:

During this position, I consulted (on behalf of RMIT University) with UnitingCare (Goulburn North East) Australia to design, develop, and deliver a two-day game jam. The aim of this game jam was to teach children from rural communities of Victoria (Wangaratta) about game design, visual scripting, and content creation Scratch (MIT) <http://scratch.mit.edu/> and Adobe Photoshop.

To fulfil the requirements of this role and complete the necessary tasks I was responsible for the following:

- The design of a 5-week game design course and online forum for children to begin learning the necessary skills for creating games in Scratch. Each week consisted of tutorials, information, activities, and resources that were related to each part of the game design process (concept, asset/environment creation, implementation, testing, iterating, as well as using Scratch).
- Created a game design manual for using Scratch.
- Provide introductory tutorials and offer support for the use of Adobe Photoshop.
- Organise and ran the two-day game jam in Wangaratta.
- Provided technical support during the game jam to participants.
- Developed all graphic/marketing and website content for the event.

[2013 – 2014] **Pro Vice Chancellor Research Assistant**

College of Design and Social Context (RMIT University)

City: Melbourne

Country: Australia

Main activities and responsibilities:

Designed and implemented interactive gamified approaches for personal and professional development.

- Working alongside current employees to develop an early prototype application.
- Organized and ran focus groups, brainstorming sessions.
- Organized user testing.
- Evaluated the final application.

In addition, I was responsible for:

- Development of a gamified program.
- Scripting (in Java) parts of the application in Unity 3D.
- Creation of graphic content (Adobe Illustrator/Photoshop).
- Creation of promotional material (Adobe After Effects).
- Providing presentations and workshops with University staff.

EDUCATION AND TRAINING

[2013 – 2017] **Doctor of Philosophy (Media and Communication)**

Royal Melbourne Institute of Technology

Address: Australia

<https://researchbank.rmit.edu.au/view/rmit:162190>

Main subject / occupational skills covered:

Projekt.ID: investigating how game elements and mechanics can be aligned to players preferences"

This project investigated the relationship between a player's preferences for game design elements and mechanics and how this information could be used during the design of personalised game experiences and during gameplay (e.g., adaptive systems).

During the doctoral degree, I developed and acquired skills to complete my research:

- Critical analysis and review of existing literature surrounding player typologies, modelling, and profiling.
- Methodological and practical expertise, cognitive tools, and knowledge of professional and ethical responsibilities.
- Survey design and development.
- Participant recruitment.
- Extensive knowledge of statistical analysis:
- Stepwise linear regression
- Exploratory Factor Analysis
- Bivariate correlation

- Cronbach alpha
- Workshop development.
- Application development (development of a recommendation tool).

Resulting in:

- Contributing novel research to the field of player typology, profiling, and modelling research within the context of HCI and psychology.
- A framework titled the “Game Element and Mechanic (GEM) Framework for the design of personalized game experiences that can be abstracted to inform the development of adaptive systems.
- Develop a strong background in relevant statistical analysis and software (SPSS and FACTOR).
- Perform analysis, interpretation, and evaluation of data using statistical analysis techniques.

[2012 – 2012] **Bachelor of Media and Communication (Honours)**

Royal Melbourne Institute of Technology

Address: Australia

Thesis: Projekt.ID

Main subject / occupational skills covered:

“The Intrepid Adventures of Mr Thagoras: Game elements and educational material in video games”

This project investigated how elements of video games can be incorporated into a video game that helps motivate players to learn and understand the basics of Trigonometry.

During the honour’s degree, I developed and acquired skills to complete my research:

- Critical analysis and review of existing literature surrounding cognitive learning, interactive mathematical applications and games, and learning techniques.
- Application development (development of 2D game).

Resulting in:

The development of an interactive game teaching the basics of Trigonometry (Sine, Cosine, and Tangent ratios).

[2018 – 2022] **Doctor of Philosophy (Engineering and Information Systems)**

Sapienza University of Rome

Address: Italy

Thesis: Mastering Human Factors in Cybersecurity

Main subject / occupational skills covered:

Often, the emphasis on ways to secure a system is on an attacker's behavior. As a result, little attention focus on user behavior as a threat to a system. This study focuses on establishing if user behavior may be regarded as a danger, and if so, how a threat model of bad user cybersecurity behaviors might be utilized to improve system security-or at the very least make users more aware of the repercussions of their activities.

This research explored the areas of:

- Natural Language Processing
- Threat Modelling techniques (e.g., STRIDE)
- Artificial Intelligence and Machine Learning techniques applied to cybersecurity
- Interactive technologies (i.e., games) for educating users about cybersecurity-related issues.

The research project itself produced the following outputs:

- A new user-centered approach to threat modelling called STRIDE-HF.

- An interactive game titled Another Week at the Office (AWATO) to help users become more aware of STRIDE-HF.

This research also involved user testing and data analysis.

Bachelor of Arts: Games Graphic Design

Main subject / occupational skills covered:

During the bachelor's degree, I developed and acquired the following skills:

- Critical analysis and understanding of group collaborations and leadership within small teams to achieve a common objective.
- Solid understanding of (social) psychological structures of human behaviour.
- Understanding of programming languages (C, C#, JavaScript, Java, WebGL 2.0, X3D, VRML).
- The use and workflow processes of interactive design.
- Graphic design knowledge relating to 2D and 3D concept design (characters, environments, environmental assets, character assets).
- Deep understanding on the use, creation, and development of sound design within interactive experiences.

My role within this group consisted of the following:

- **Environmental sound designer:** where I oversaw the coordination of the environmental sounds.

"Refracted"

This was the major final (first year project) project for the maths and physics course. It was a solo project where the player must solve puzzles using properties of light and materials physics (i.e. index of refraction).

This resulted in the following outcomes:

The development of a physical game where players used various cards (which represented the values of materials) in order to complete puzzles.

"Lucia"

This was the major final (third year project) project that consisted of a team (6 people) designing and developing a 3D PC game. This game was built using the Unreal Development Kit (UDK).

This game told the story of a young girl named Lucia who wakes up in her house and her family is missing. She learns that various objects in the house and outside environment have become "alive". She finds out that she must use light (e.g., flashlight) to morph these objects in order to complete puzzles.

My role within this group consisted of the following:

- **Project Leader:** where I was in charge of coordinating the project and managing the team in terms of meeting milestones.
- **Lead environmental artist and designer:** where I was responsible for creating all the environmental art, assets, textures, materials, special effects, as well as technical aspects that involved implementing these assets within the game.

"Submerged"

This was the major final (second year project) project for the sound design course. It consisted of a team of four people designing and developing a complete auditory experience (i.e., no visual graphics). The premise of the experience is that the user must navigate through a level entirely based on sound cues. The level itself was a sinking ship with various sound effects (e.g. explosions, screaming passengers, water, boat noises, etc.).

LANGUAGE SKILLS

Mother tongue(s): English

Other language(s):

Italian

LISTENING B1 **READING** B1 **WRITING** A2

SPOKEN PRODUCTION B1 **SPOKEN INTERACTION** B2

DIGITAL SKILLS

My Digital Skills

Unreal Engine | Zoom | Suite Adobe Suite (Adobe Photoshop, Adobe Illustrator, Adobe InDesign, Adobe XD) | Google Drive | Google Docs | Microsoft Office

PUBLICATIONS

- [2022] **AWATO: A Serious Game to Improve Cybersecurity Awareness**
https://link.springer.com/chapter/10.1007/978-3-031-05637-6_33
- [2021] **Gea2: A Serious Game for Technology-Enhanced Learning in STEM**
<https://ieeexplore.ieee.org/abstract/document/9684728>
- [2021] **Human Factors in Phishing Attacks: A Systematic Literature Review**
<https://dl.acm.org/doi/abs/10.1145/3469886>
- [2021]
Gaeta: The Great Adventure-A Cultural Heritage Game about the History of Gaeta
https://link.springer.com/chapter/10.1007/978-3-030-78645-8_23
- [2021] **A Human Factor Approach to Threat Modeling**
https://link.springer.com/chapter/10.1007/978-3-030-77392-2_10
- [2021]
The Game Element and Mechanic (GEM) framework: A structural approach for implementing game elements and mechanics into game experiences
<https://www.sciencedirect.com/science/article/abs/pii/S1875952120300835>
- [2020]
CyberVR: an interactive learning experience in virtual reality for cybersecurity related issues
<https://dl.acm.org/doi/abs/10.1145/3399715.3399860>
- [2020] **V-DOOR: A Real-Time Virtual Dressing Room Application Using Oculus Rift**
<https://dl.acm.org/doi/abs/10.1145/3399715.3399959>

- [2020]
Another week at the office (AWATO)–an interactive serious game for threat modeling human factors
https://link.springer.com/chapter/10.1007/978-3-030-50309-3_9
- [2020]
Intelligent Pedagogic Agents (IPAs) in GEA2, an Educational Game to Teach STEM Topics
https://link.springer.com/chapter/10.1007/978-3-030-52287-2_23
- [2020] **A game-based learning experience for improving cybersecurity awareness.**
https://iris.uniroma1.it/retrieve/handle/11573/1419370/1501140/Veneruso_A-game-based_2020.pdf
- [2019] **An approach to identifying what has gone wrong in a user interaction**
https://link.springer.com/chapter/10.1007/978-3-030-29387-1_20
- [2019] **Alerting users about phishing attacks**
https://link.springer.com/chapter/10.1007/978-3-030-22351-9_9
- [2018]
An analysis of players' personality type and preferences for game elements and mechanics
<https://www.sciencedirect.com/science/article/abs/pii/S1875952117300460>
- [2018] **VERTO: a visual notation for declarative process models**
<https://dl.acm.org/doi/abs/10.1145/3206505.3206594>
- [2016]
The emerging adolescent World of Warcraft video gamer: A five factor exploratory profile model
<https://www.sciencedirect.com/science/article/abs/pii/S1875952116300271>
- [2016]
Conquering an exo-planet through the use of a virtual role playing game assisted by an emotionally intelligent pedagogical agent
<https://www.proquest.com/docview/1859715065?pq-origsite=gscholar&fromopenview=true>
- [2016] **Predictors of video game console aggression**
http://www.scielo.org.ar/scielo.php?script=sci_arttext&pid=S1852-42062016000100007
- [2016]
Projekt. ID: investigating how game elements and mechanics can be aligned to players preferences
<https://researchrepository.rmit.edu.au/esploro/outputs/doctoral/ProjektID-investigating-how-game-elements-and/9921864106001341>

[2013]

Towards personalised, gamified systems: an investigation into game design, personality and player typologies

<https://dl.acm.org/doi/abs/10.1145/2513002.2513024>

[2014]

Gamicards-an alternative method for paper-prototyping the design of gamified systems

https://link.springer.com/chapter/10.1007/978-3-662-45212-7_2

[2013]

Like this: How game elements in social media and collaboration are changing the flow of information

<https://researchrepository.rmit.edu.au/esploro/outputs/conferenceProceeding/Like-this-How-game-elements-in/9921860086301341>