

# Deniz Mevlevioğlu

## PhD Computer Science

---

LinkedIn Profile: [linkedin.com/in/deniz-mevlevioglu](https://www.linkedin.com/in/deniz-mevlevioglu)

Website: [denizmev.com](http://denizmev.com)

d.mevlevioglu@cs.ucc.ie | +353 21 420 5929

### Profile

I'm a Lecturer in Computer Science at University College Cork. I have a passion for human-computer interaction, virtual reality, and real-time physiological computing. My research explores how emerging technologies can support mental health, wellbeing, and immersive learning. I combine academic research with hands-on development, aiming to create interactive systems that are both meaningful and impactful.

### Skills

- Academic Research
- Data Analysis
- Game Development
- Teaching
- Web Development

### Interests

- Human-Computer Interaction
- Extended Reality
- Smart Health
- Biosensors
- Artificial Intelligence

### Programming Languages

- C#
- Python
- Java
- JavaScript

### Languages

- English (Full Professional Proficiency)
- Turkish (Native)

### Technologies

- Keras
- TensorFlow
- SKLearn
- Pytorch
- SPSS
- Unity
- Blender
- Three.js
- Git
- Linux

## Publications

### **Real-time Classification of Anxiety in Virtual Reality Therapy Using Biosensors and a Convolutional Neural Network.**

Deniz Mevlevioğlu, Sabin Tabirca, and David Murphy. 2024.

*MDPI Biosensors* 14 (3)

DOI: [10.3390/bios14030131](https://doi.org/10.3390/bios14030131)

### **Anxiety Classification in Virtual Reality Using Biosensors: A Mini Scoping Review.**

Deniz Mevlevioğlu, Sabin Tabirca, and David Murphy. 2023.

*PLoS One* 18 (7)

DOI: [10.1371/journal.pone.0287984](https://doi.org/10.1371/journal.pone.0287984)

### **Emotional Virtual Reality Stroop Task**

Deniz Mevlevioğlu, Sabin Tabirca, and David Murphy. 2023.

*IEEE International Conference on Pervasive Computing and Communications Workshops and other Affiliated Events (PerCom Workshops)*

DOI: [10.1109/PerComWorkshops56833.2023.10150350](https://doi.org/10.1109/PerComWorkshops56833.2023.10150350)

### **Emotional Virtual Reality Stroop Task: an Immersive Cognitive Test**

Deniz Mevlevioğlu, Sabin Tabirca, and David Murphy. 2022.

*In Proceedings of the ACM International Conference on Interactive Media Experiences (IMX '22).*

DOI: [10.1145/3505284.3532988](https://doi.org/10.1145/3505284.3532988)

### **Real-time Anxiety Prediction in Virtual Reality Therapy: Research Proposal.**

Deniz Mevlevioğlu, Sabin Tabirca, and David Murphy. 2021.

*Proceedings of the 12th ACM Multimedia Systems Conference (MMSys '22).*

DOI: [10.1145/3524273.3533926](https://doi.org/10.1145/3524273.3533926)

### **Emotional Virtual Reality Stroop Task: Pilot Design.**

Deniz Mevlevioğlu, Sabin Tabirca, and David Murphy. 2021.

*In Proceedings of the 27th ACM Symposium on Virtual Reality Software and Technology (VRST '21).*

DOI: [10.1145/3489849.3489952](https://doi.org/10.1145/3489849.3489952)

### **Visual Respiratory Feedback in Virtual Reality Exposure Therapy: A Pilot Study.**

Deniz Mevlevioğlu, Sabin Tabirca, and David Murphy. 2021.

*In Proceedings of the ACM International Conference on Interactive Media Experiences (IMX '21).*

DOI: [10.1145/3452918.3458799](https://doi.org/10.1145/3452918.3458799)

## **Real-time Anxiety Prediction in Virtual Reality Exposure Therapy.**

Deniz Mevlevioğlu, David Murphy, and Sabin Tabirca. 2021.

*In Adjunct Proceedings of the ACM International Conference on Interactive Media Experiences (IMX '21).*

**DOI:** [10.6084/m9.figshare.14699751.v1](https://doi.org/10.6084/m9.figshare.14699751.v1)

## Education



### **PhD in Computer Science**

University College Cork

2020 - 2024

- Thesis Title: “*Real-time Anxiety Classification in Virtual Reality Exposure Therapy*”



### **Msc in Interactive Media**

University College Cork

2018 - 2019

- Thesis Title: “*Visual Respiratory Feedback in Virtual Reality Exposure Therapy*”
- 1:1 Honours



### **BA in Psychology**

Bahcesehir University

2018 - 2019

- 74/100 GPA

## Other Education



### **Epigeum Research Integrity**

Oxford University Press

2020



### **Pedagogical Formation**

Marmara University

2018

# Work Experience



## Lecturer in AI & XR

University College Cork, School of Computer Science and Information Technology

*May 2025 to present*

### Responsibilities:

- Design, deliver, and assess undergraduate and postgraduate modules in Computer Science, with a focus on human-computer interaction, extended reality, and artificial intelligence.
- Conduct independent and collaborative research aligned with departmental priorities, contribute to peer-reviewed publications, and pursue external funding opportunities.
- Participate in public engagement, outreach, and science communication activities to promote Computer Science and increase societal impact.
- Contribute to the academic life of the department through committee work, quality assurance processes, and curriculum reviews.
- Foster cross-disciplinary collaborations within the university and with external academic, industry, and community partners.



## Postdoctoral Researcher

Technological University of the Shannon: Midlands Midwest, School of

Engineering, EU TRANSMIXR project

*September 2024 to May 2025*

### Responsibilities:

- Collaborated with EU partners and stakeholders, including TG4, VRAI, Khora, Satore, CWI, Sound and Vision, VUB, TCD, and Immersion, with a vision to *"Ignite the Immersive Media Sector by Enabling New Narrative Visions"*
- Developed Extended Reality environments and toolkits to extend the reach of XR environments to the cultural sector
- Contributed to the extension of research grants and prepared research proposals
- Disseminated research results in international venues by writing papers about the evaluation of the environments

### Skills and technologies:

*Extended Reality • C# • Living Lab Methodology • Co-creation • Impact assessment  
• Artificial Intelligence • Biosensors • Python • Volumetric Video • Synchrony • QoE*

# Work Experience



## Demonstrator

University College Cork, School of Computer Science and Information Technology

*September 2019 to June 2024*

Responsibilities:

- Demonstrated for practical sessions to a class of approximately 40 MSc students
- Presented over five tutorials per semester on computer science topics
- Guided students through problem-solving to improve their programming skills

Skills and technologies:

*Virtual Reality • Python • Java • HTML • CSS • JavaScript • PHP • Blender • jQuery • three.js • WebGL • Teaching*



## Visiting Researcher

University of Virginia, Link Lab

*June 2023 to September 2023*

Responsibilities:

- Designed and carried out the research project entitled “Interpersonal synchrony of socially anxious dyads during Zoom video calls”.
- Made presentations about my research to the team
- Collaborated with a team of psychologists and engineers

Skills and technologies:

*Python • Biosensors • R • Project Management • Collaboration*



## Tutor

University College Cork, Munster Programming Training

*June 2019 to June 2023*

Responsibilities:

- Delivered lectures that enabled over 60 secondary students to be proficient in creating the front-end and back-end of their personal websites from scratch
- Provided hands-on exercises each week based on the students' levels
- Created and graded assignments

Skills and technologies:

*HTML • CSS • JavaScript • PHP • SQL • MySQL • Apache • Teaching • Communication*



## **Web Developer**

Freelance

*June 2019 to October 2020*

Responsibilities:

- Designed and developed personal and e-commerce websites
- Came up with dynamic solutions based on customer needs
- Worked with a team of designers and developers
- Made sure the websites follow accessibility standards
- Provided SEO

Skills and technologies:

*HTML • CSS • JavaScript • PHP • WordPress • SEO • Development*



## **Tutor**

University College Cork, School of Arts and Humanities

*September 2020 to December 2020*

Responsibilities:

- Prepared and delivered tutorials to a class of 40 BA students about creating a personal website using WordPress
- Created hands-on exercises to analyse their skills and needs
- Introduced and familiarised students with technologies useful for academia

Skills and technologies:

*Teaching • HTML • CSS • WordPress • Communication*



## **Intern School Counselor**

Feridun Tumer Technical Anatolian Secondary School

*January 2017 to June 2017*

Responsibilities:

- Made a year-long education plan after assessing student needs
- Held introductory seminars to students and employees, providing information about counselling
- Created individualised education programs for students with special needs

Skills and technologies:

*Teaching • Counselling • Communication*

# Activities



## Guest Lecturer

University College Cork, School of Computer Science and Information Technology  
2022-2023

- Prepared and delivered a guest lecture with the topic “Using Python for Scripting in Blender” to approximately 40 postgraduate students



## Ireland Team Lead

European Girls' Olympiads of Informatics  
2022

- Represented the Irish Team in the European Girls' Olympiad in Informatics as a team lead. Our team came back with a bronze medal.



## Project Advisor

University College Cork, School of Computer Science and Information Technology  
2022

- Supervised two Master's projects in the field of Computer Science, Human-Computer Interaction and Virtual Reality



## Student Volunteer Chair

ACM International Conference on Interactive Media Experiences (IMX)  
2022

- Directed and monitored a team of student volunteers to aid hundreds of participants for ACM IMX 2022, the leading international conference for interactive media experiences held in Aveiro, Portugal and virtually



## Academic Speaker

NBT Berlin - International Forum on Neural Engineering & Brain Technologies  
2022

- Presented my work titled 'Real-time anxiety prediction in Virtual Reality' to more than a hundred people in Berlin



## Panellist

SFI Advance CRT Research Colloquium  
2022

- Organised and presented student contributions in the SFI ADVANCE research colloquium held in Dublin



## Competitor - Team XHalers

VR4Rehab Competition  
2021

- Collaborated with a team of physiotherapists, nurses, physicians and computer scientists to design and prototype “Short games for long covid”; a VR application for aiding in the management of long-covid symptoms for the VR4Rehab hackathon by Interreg, held virtually