

Curriculum Vitae

1 General

Name: Christakis (Chris) Christou
Official Address:
Department of Design & Multimedia
University of Nicosia,
Makedonitissas Avenue,
1700 Nicosia,
Cyprus

Email: christou.ch@unic.ac.cy
Tel.: +357 97 84 50 72
Research Gate:
www.researchgate.net/profile/Chris_Christou3

2 Education

1991 - 1994 University of Oxford, Oxford, UK (St. Catherine's College)

Doctor of Philosophy: Human Vision and the Physics of Natural Images (Based at the University Laboratory of Physiology and the Robotics Research Laboratory, Dept. of Engineering Sciences)

1989 - 1990 Heriot-Watt University, Edinburgh, Scotland

MSc: Knowledge Based Systems (Artificial Intelligence, Course-Based Masters)

1984 - 1987 University of Sussex, Falmer, UK

BA (Hons): Philosophy with Cognitive Studies 2:1

Additional Recent Training

- **2016 Machine Learning by Stanford University on Coursera.** Certificate: (<https://www.coursera.org/account/accomplishments/records/34YJQR2YEE2Y>)
- **2015 Brain-Computer Interfaces,** Radboud Summer School, Nijmegen. Certificate earned August 2015.

3 Professional Career

2007 - Present University of Nicosia, Cyprus

Associate Professor, Applied Multimedia (tenured), Associate Program Coordinator

- Undergraduate Teaching: Computer Graphics Modelling & Animation, Virtual Reality (VR Cinematics), 3D Game Design & Development, VR Game Development (Computer Science Dept.)
- Masters Teaching: 3D Game Development, Interactive Web Development.

2013 - Ongoing Cyprus University of Technology, Cyprus
Adjunct Researcher – Department of Multimedia and Graphic Arts

- Serious Games and Virtual Reality applications.

2004 - 2007 University College London, London, UK.
Research Fellow, Department of Computer Science, Virtual Environments & Computer Graphics Group

- Project PRESENCCIA (EU FET): Developed a prototype interactive, multi-user, distributed online virtual environment for cross-platform display using a TCP distributed messaging system.
- Project CREATE (EU IST): Mixed reality for design, education and cultural heritage.

2002 - 2003 Smartsight Limited/University of Manchester Institute of Science & Technology, UK.
Consultant & Developer

- Development of a sound-based navigation aid for the blind.

1999 - 2002 Unilever Research, Port Sunlight, UK.
Scientist – Imaging Sciences Group

- Managed a team developing applications with new technologies for consumer analytics. Included applications of Eye-Tracking, Photorealistic Graphics, Virtual Touch and Virtual Reality. Created one of the first prototype HMD-based applications with embedded eye-tracking. Collaborated with Prof. Alan Wing (University of Birmingham, Neurosciences) and Prof. John Mollon (Colour Science, University of Cambridge).

1996 - 1999 Max Planck Institute for Biological Cybernetics, Tübingen, Germany.
Research Fellow

- Studied spatial cognition in 3D virtual environments. Supervisor: Prof. dr. Heinrich Bülthoff.

1994 - 1996 Helmholtz Institute, Utrecht University, Netherlands.
Research Associate

- Human Vision & Shape from Shading using Photorealistic Graphics. Supervisor: Prof. dr. Jan Koenderink.

4 Professional Expertise

4.1 Teaching Experience

Undergraduate & Graduate Courses Developed & Taught:

- 3D Modeling and Animation (BA Program).
- Web Design & Development (BA Program).
- Virtual Reality (Cinematic VR Experiences) (BA Program).
- 3D Game Design & Development (BA Program).
- Virtual Reality Game Development (BSc Program).

4.2 Computing & Creative Technologies Skills

Programming Languages: C/C++/C#, JavaScript, MATLAB, PHP.

Virtual Reality:

Hardware: HTC Vive, Oculus Rift, CAVE, GearVR, Google Cardboard, LEAP (motion sensor), Phantom Haptics, Vicon Motion Tracking, Kinect, Xbox 360 controller game interfacing.

Software: Unity3D (C#), OpenVR, OpenGL & WebGL, Leap SDK, OpenHaptics/GHOST (Virtual Touch), OpenGL Performer (CAVE).

Artificial Intelligence:

Computer Vision, Machine Learning (e.g. SVMs, Neural Networks), Search Methods, Probabilistic Inference.

Web Development:

HTML5, CSS3, MySQL, PHP, Javascript, Joomla.

Hardware & Network Communications:

Genuino (Arduino), Raspberry Pi with OpenCV, Empatica E4 (wearable bio-sensor, developed a Unity3D communications interface), RS232 Serial Interfacing, Bluetooth Interfacing, TCP/IP, Unity3D HLAPI.

Software Applications:

3DS Max, Unity3D, Photoshop, Dreamweaver, MS Office.

4.3 Cognitive Science Skills

Psychophysical methods for measurement of perceptual thresholds: e.g. methods of constants, limits and adjustments. Signal detection theory for data analysis.

Cognitive and Perceptual Psychology: Experimental design and statistical analysis. Related software knowledge: Matlab, Mathematica, Psychtoolbox, Statistica.

Psychophysiology:

- Eye tracking and Pupillary response measurements. Eye-tracking embedded in HMD.
- Electrodermal responses (GSR), Heart Rate Variability, Blood Volume Amplitude measurements using Empatica E4, Mindmedia Nexus 10.
- EEG (Brain-Computer Interfaces): OpenBCI and Biosemi Active 2.

5 Professional Affiliations

- IEEE Computer Society, member.
- The Association for the Advancement of Affective Computing, member.
- European Brain & Behaviour Society.

6 Funding, Exhibitions and Media Presentations

- Member and Web Site Manager, Cyprus Science and Research Centre – Horizon 2020 Programme at “Teaming Phase 1” (agreement number 763594). <http://www.cysrc.eu>
- TedX Nicosia 2017 – Demonstration “Painting in 3D” using HTC Vive HMD.

- TedX Nicosia 2015 – Demonstration of computer-assisted graphics using Leap Motion tracker mounted on Oculus Rift HMD with video pass-through.
- TedX Nicosia 2014 – Immersive Installation ‘War Torn’. Allowed participants to experience war in the Middle East. Used Oculus Rift HMD, Kinect Body Tracking, Virtual Crowds. Created with Unity3D game engine.
- 2012 – 2014 PA1 on RPF project number ANΘΡΩΠΙΣΤΙΚΕΣ/ΠΑΙΔΙ/0609(BIE)/11 “Early Identification and Assessment of Preschool Children with Specific Language Impairment in Cyprus”. Value €10,000.
- The Slade Centre for Electronic Media’s Node.London Exhibition. Presented ‘MetteLand’ – An Emergent Environment that Interacts with the Mood of its User. Utilized particle systems, emergent systems and human bio-sensors. Collaboration with artist Mette Ramsgard Thomsen, March 2006.
- Appearance on BBC2 series ‘Science at Christmas’: Episode on the human senses, broadcast (2001). Demonstrating virtual touch in 3D environments using a haptic feedback robot.
- Royal Society Summer Exhibition (2001): ‘Fooling the Senses’ - Demonstration of Virtual Touch, in collaboration with Oxford University and Unilever Research, UK.

Selected Recent Publications

Christou C.G., Aristidou P. (2017) Steering Versus Teleport Locomotion for Head Mounted Displays. In: De Paolis L., Bourdot P., Mongelli A. (eds) Augmented Reality, Virtual Reality, and Computer Graphics. AVR 2017. Lecture Notes in Computer Science, vol 10325. Springer.

Christou, C. G., Herakleous, K., Tzanavari, A. & Poullis, C. (2015), Psychophysiological responses to virtual crowds: Implications for wearable computing, International Conference on Affective Computing and Intelligent Interaction, Xi’An, China, IEEE 978-1-4799-9953-8/15.

Christou, C & Michael D. (2014) Aliens versus Humans: Do Avatars Make a Difference in How We Play the Game? Games and Virtual Worlds for Serious Applications (VS-GAMES), 2014 6th International Conference on, [10.1109/VS-Games.2014.7012029](https://doi.org/10.1109/VS-Games.2014.7012029). Best Paper Award.