Curriculum Vitae

1 General

Name: Chris Christou
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2 Education

1991 - 1994   University of Oxford, Oxford, UK (St. Catherine's College)
Doctor of Philosophy: Human Vision and the Physics of Natural Images
Supervisors: Andrew Zisserman (Engineering Sciences) Andrew Parker (Physiology)

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**. Grade Achieved: 94.9%, Certificate:
  (https://www.coursera.org/account/accomplishments/verify/NNGD95ZQFVCW)

- **2015 Brain-Computer Interfaces**, Radboud Summer School, Nijmegen. Certificate earned August 2015.

3 Professional Career

2007 - Present   University of Nicosia, Cyprus
Associate Professor, Dept. of Design & Multimedia, Dept. Computer Science
- Undergraduate Teaching: Virtual Reality, 3D Game Design & Development, VR Game Development (Computer Science Dept.), Web Design & Development.
- Masters Teaching: In collaboration with the Institute for the Future MSc in Metaverse Systems, Introduction to XR, AR/VR Development

2004 - 2007   University College London, London, UK.
Research Fellow, Department of Computer Science, Virtual Environments & Computer Graphics Group
- Project PRESENCCIA (EU FET): Multi-user, distributed online virtual environments.
- Project CREATE (EU IST): Mixed Reality for design, education, and cultural heritage.

2002 - 2004   Consultant.
Clients: Unilever (Consumer Studies), Smartsight (Sound-based navigation aid for the blind).

1999 - 2002   Unilever Research, Port Sunlight, UK.
Scientist – Imaging Sciences Group
- Managed team developing applications using new technologies for consumer analytics (e.g. eye-tracking, Virtual Reality).
- Created a prototype HMD with embedded eye-tracking for consumer analysis.
- Collaborated with Prof. Anya Hurlbert (Newcastle) & Prof. John Mollon (Cambridge) on colour science and with Prof. Alan Wing (Birmingham) on touch perception.

1996 - 1999   Max Planck Institute for Biological Cybernetics, Tübingen, Germany.
Research Fellow
- Spatial cognition in Virtual Reality. Supervisor: Prof. dr. Heinrich Bülthoff.

1994 - 1996   Helmholtz Institute, Utrecht University, Netherlands.
Research Associate
- Shape from Shading and Computer Graphics. Supervisor: Prof. dr. Jan Koenderink.

4   Professional Expertise

4.1   Teaching
Undergraduate & Graduate Teaching and Administration. Student Supervision.

4.2   Computing & Creative Technologies Skills
Programming Languages: C/C++/C#, JavaScript, Processing Java, MATLAB, PHP.

Virtual Reality, Augmented Reality:
 Hardware: HTC Vive, Oculus Rift & Quest, CAVE, Google Cardboard VR, LEAP (hand motion sensor), Kinect body tracking, Vive Trackers for full body avatar control.
 Software Development: Android SDK, Unity3D (C#), OpenXR, OpenGL, Leap SDK, OpenHaptics, Recent experience with ARKit and ARCore plus Unity for iOS and Android AR app development.

Artificial Intelligence:
 Machine Learning & Neural networks (e.g. supervised, unsupervised, reinforcement learning algorithms, search algorithms, probabilistic inference using Octave/MATLAB).

Web Development:
 Front-end: HTML, CSS, JavaScript. Back-end: PHP, MySQL.

General Hardware & Network Communications:
Genuino (Arduino), Raspberry Pi, Empatica E4 (wearable bio sensor, e.g. developed a Unity3D communications interface for E4 wrist band).

Software Applications (selected):
Unity3D, 3DS Max, Blender, Photoshop, Dreamweaver, MS Office.

4.3 Research Methods

Quantitative and qualitative experimental design and statistical analysis.

Psychophysical methods for measurement of perceptual thresholds.

Psychophysiology:

- Eye tracking and Pupillary response measurements. Eye-tracking embedded in HMD.
- Electrodermal responses (GSR), HRV, BVP measurements (Mindmedia Nexus).
- Some familiarity with EEG.

5 Academic Activities

- Program committee for VRST (International VR conference)
- Reviewer for Transactions on Visualization and Computer Graphics.
- Reviewer for Perception Journal.
- Guest lecturer at Cyprus University of Technology, Rehabilitation Sciences MSc.

6 Funding and Collaborations

- Collaboration with the Cyprus Institute of Neurology – Stroke Rehabilitation Lab

- Consortium Member and Web Site Manager of Cyprus Science and Research Centre (CSRC) – Horizon 2020 Programme EU application at "Teaming Phase 1" (agreement number 763594). http://www.cysrc.eu

- 2012 – 2014 PA1 on RPF project number ΑΝΘΡΩΠΙΣΤΙΚΕΣ/ΠΑΙΔΙ/0609(ΒΙΕ)/11 "Early Identification and Assessment of Preschool Children with Specific Language Impairment in Cyprus". Developed online interactive applications and evaluation database. Value €10,000.

- 2013 – Ongoing collaboration with Cyprus University of Technology, Cyprus, *Adjunct Researcher – Department of Multimedia and Graphic Arts. Development of* Serious Games, Interactive and Virtual Reality applications.

7 Funding, Exhibitions and Media Presentations

- Member of Program Committee VRST 2020.
- 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.
- 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.