

## Fabrizio Pece

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| CONTACT            | <p>f.pece@cs.ucl.ac.uk<br/><a href="http://www.cs.ucl.ac.uk/staff/F.Pece/">http://www.cs.ucl.ac.uk/staff/F.Pece/</a><br/>Mobile:<br/>Telephone +44 (0)20 3549 5246</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <p>Media Technology Campus<br/>One Euston Square<br/>40, Melton Street, NW1 2FD<br/>London, UK</p> |
| EDUCATION          | <p><b>University College London (UCL), United Kingdom</b><br/><i>February 2010 - present</i></p> <p><b>PhD candidate</b> (exp. March 2014) - Virtual Environments and Computer Graphics group</p> <ul style="list-style-type: none"><li>• Thesis Title: Videos in Context for Telecommunication and Spatial Browsing</li><li>• Currently writing up.</li><li>• Fields of research: Videos in context, panoramic imagery, human-computer interaction, heterogeneous cameras network for telecommunication, 3D reconstruction from images and videos.</li><li>• Advisors: Prof. Jan Kautz and Dr. Tim Weyrich</li></ul> <p><b>University College London (UCL), United Kingdom</b><br/><i>September 2008 - September 2009</i></p> <p><b>M.Sc. Vision Imaging and Virtual Environments</b> (Awarded Distinction)</p> <ul style="list-style-type: none"><li>• Modules: Image Processing, Computer Graphics, Optimization, Virtual Environments.</li><li>• Thesis: <b>HDR for Dynamic Scenes</b><ul style="list-style-type: none"><li>• Supervisor: Prof. Jan Kautz</li><li>• Awarded Best Master Project prizes by BBC &amp; Microsoft Research.</li></ul></li></ul> <p><b>University of Bergen (UIB), Norway</b><br/><i>January 2007 - July 2007</i></p> <p>Erasmus study programme in Computer Science</p> <p><b>Università degli Studi di Roma Tor Vergata, Italy</b><br/><i>September 2005 - September 2008</i></p> <p><b>B.Sc. Informatics Engineering</b> (Graduated with 102/110)</p> <ul style="list-style-type: none"><li>• Thesis: <b>Efficient Representations for Image Classification Based on Support Vector Machines and SIFT Descriptors</b><ul style="list-style-type: none"><li>• Supervisor: Prof. Robert Basili</li></ul></li></ul> |                                                                                                    |
| RESEARCH INTERESTS | Stereo vision and 3D reconstruction from videos and images, heterogeneous cameras network and calibration, videos in panoramic context, panoramic imagery, human-computer interaction, computational photography, HDR and time-varying imagery, virtual environments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                    |
| AWARDS             | Received Best Paper Honourable Mention Award at CHI 2013 for PanoInserts<br>Rabin Ezra Scholarship 2010/2011 & 2011/2012<br>BBC Research Best Master Project Prize 2008/2009<br>Microsoft Research Best Master Project Prize 2008/2009                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                    |
| INVITED TALKS      | BBC Research and Development - London, United Kingdom, June 2010<br>The <i>First Beaming Workshop</i> - Barcelona, Spain, June 2011<br>Max-Planck-Institut für Informatik - Saarbrücken, Germany, October 2013<br>Dagstuhl Seminar on <i>Real-World Visual Computing</i> - Dagstuhl, Germany, October 2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                    |

REFEREED  
JOURNAL  
PUBLICATIONS

**Beaming: An Asymmetric Telepresence System**

*A. Steed, W. Steptoe, W. Oyekoya, F. Pece, T. Weyrich, J. Kautz,  
D. Friedman, A. Peer, M. Solazzi, F. Tecchia, M. Bergamasco, M. Slater*  
IEEE Computer Graphics and Applications - 32:6, 10-17, 2012

**Acting in Collaborative Multimodal Mixed Reality Environments**

*W. Steptoe, J. Normand, O. Oyekoya, F. Pece, E. Giannopoulos, F. Tecchia,  
A. Steed and M. Slater*  
Presence - Teleoperators and Virtual Environments, MIT Press (2012)  
21(4), Fall 2012, pages 406-422

REFEREED  
CONFERENCE  
PUBLICATIONS

**Video Collections in Panoramic Contexts**

*J. Tompkin, F. Pece, R. Shah, S. Izadi, J. Kautz and C. Theobalt*  
Symposium on User Interface Software and Technology (UIST 2013),  
St Andrews, UK, October 8-11, 2013

**PanoInserts: Practical Spatial Teleconferencing**

*F. Pece, W. Steptoe, S. Julier, T. Weyrich, J. Kautz, A. Steed*  
ACM CHI Human Factors in Computing Systems (CHI 2013), Paris,  
France, April 22-May 2, 2013

**CHI 2013 Best Paper Honorable Mention Award**

**Simplified User Interface for Architectural Reconstruction**

*F. Wanner, F. Pece and J. Kautz*  
Theory and Practice of Computer Graphics 2012, Didcot, UK, 2012

**Towards Moment Imagery: Automatic Cinemagraphs**

*J. Tompkin, F. Pece, K. Subr and J. Kautz*  
Conference on Visual Media Production (CVMP) 2011, London, UK

**Adapting Standard Video Codecs for Depth Streaming**

*F. Pece, J. Kautz and T. Weyrich*  
Joint Virtual Reality Conference of EuroVR (JVRC) 2011, Nottingham, UK

**Bitmap Movement Detection: HDR for Dynamic Scenes**

*F. Pece and J. Kautz*  
Conference on Visual Media Production (CVMP) 2010, London, UK

EXHIBITS

**Video Collections in Panoramic Contexts**

*J. Tompkin, F. Pece, R. Shah, S. Izadi, J. Kautz and C. Theobalt*  
Symposium on User Interface Software and Technology (UIST), Oct. 2013

ACADEMIC  
EXPERIENCE

**Lecturing**

Multimedia Computing - mixed M.Sc./B.Sc. module - Spring 2011–2013

**Teaching Assistant**

Computer Graphics - mixed M.Sc./B.Sc. module - Fall 2011/2012  
Advanced Modelling, Rendering and Animation - M.Sc. module - Spring 2012/2013  
Computational Photography - M.Sc. module - Spring 2013/2014  
Introduction to C++ - M.Sc. module - Fall 2011–2013  
Publishing Scientific Papers with L<sup>A</sup>T<sub>E</sub>X/BIB<sub>T</sub>E<sub>X</sub> - 2010–2012

ACADEMIC  
SERVICE

**Reviewer**

SIGGRAPH '13 | CHI '13, '14 | EG '12, '13 | ISMAR '13 | IEEE Transactions on  
Cybernetics '14

PROFESSIONAL  
EXPERIENCE

**Internship**  
**Disney Research, Zurich, Switzerland**  
*June - November 2010*

Worked on physical reproduction of reflectance fields with Prof. Jan Kautz, Dr. Wojciech Matusik, Prof. Szymon Rusinkiewicz and Dr. Bernd Bickel. Developed a system for the physical reproduction of reflectance fields through relief images and albedo/specularity maps.

**Researcher**  
**Disney Research, Zurich, Switzerland & University College London, United Kingdom**  
*October 2009 - February 2010*

Worked on printing bidirectional reflectance distribution functions on embossed surfaces with Prof. Jan Kautz, Dr. Wojciech Matusik and Prof. Szymon Rusinkiewicz. Researched new methods to automate the embossing process by defining mathematical models that map the desired results to the actual results in order to minimise the gap between them.

**Customer advisor**  
**Ecom S.a.S electronic and informatics supplies**, Campobasso, Italy  
*May - August 2008*

**Private tutor Mathematics and Physics**, Rome, Italy  
*December 2004 - January 2007*

LANGUAGES

**Italian** (native), **English** (fluent), **French** (limited working proficiency), **Spanish** (passive)

TECHNICAL  
SKILLS

**General**

Strong computer graphics, image processing, computer vision, virtual environments and information compression skills. Extensive experience with camera hardware and optics. Good knowledge of networking and machine learning.

**Mathematical Expertise**

Calculus, linear and non-linear systems theory, linear and non-linear algebra, probability, random variables and stochastic processes, dynamic optimization (linear, non-linear, quadratic).

**Programming**

- C/C++, UNIX shell scripting (strong); Java, XML, HTML (medium).
- Mathematica and many relevant systems and APIs for scene-graphs, hardware interface, networking and GUI design.
- MATLAB: Image Processing, Optimization, SPM, Linear Algebra, Fourier Transforms, Nonlinear Numerical Methods, Polynomials, Statistics, Visualization.

**Statistics**

SPSS, Excel

**Applications**

Unity, 3D Studio Max, MS Office and other common productivity and media packages for Windows, Mac OS X and Linux platforms.

**Operating Systems**

Linux, Mac OS X, Microsoft Windows 7/Vista/XP/2000.

EXTRA  
ACTIVITIES

**Societies Membership**

Association for Computing Machinery (ACM), 2012-present  
Eurographics: European Association for Computer Graphics, 2011-2012  
Scouts, Associazione Guide e Scout Cattolici Italiani, 1993–1999

**Sports**

Basketball: Junior level 1995–2001. Agonistic level: 2001–2004.

Achievements: Regional champion: 2001–2004; National League, under-21: 2003-2004; Regional representative 1999-2004; School representative 1999–2004; Team captain Olympia Campobasso 2002-2003.

**Volunteering**

Biblioteca Provinciale P. Albino (Library), Campobasso, Italy, May 2004

Helped the library with duties such as books cataloguing and events planning.

**Interests**

Reading, movies, art, photography, music and travels.

REFEREES

**Prof. Jan Kautz**

Professor in the VECG group  
Department of Computer Science  
University College London, UK  
Phone: +44 (0)20 7679 3249  
j.kautz@cs.ucl.ac.uk

**Dr. Shahram Izadi**

Senior researcher and leader  
of the I3DT group  
Microsoft Research  
Cambridge, UK  
shahrami@microsoft.com

*Additional referees available on request.*