

George Vogiatzis

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Research Experience

Senior Lecturer in Computer Science

Aston University
Full time UK academic post corresponding to ‘Assistant Professor’ of US universities. Work is roughly equally split between research and teaching duties (including postgraduate student supervision).

Jan 2010–present
Birmingham, UK

Senior Research Scientist

Toshiba Research Europe
A full time industrial research post. I was a member of the Computer Vision Group doing research in cultural heritage digitization, photorealistic 3d animation and other applications of 3d vision.

Apr 2006–Dec 2009
Cambridge, UK

Education

PhD in Computer Vision

Trinity College, Cambridge
Thesis entitled: ‘Visual Estimation of Shape, Reflectance and Illumination’

Oct 2002–Apr 2006
Cambridge, UK

MSci (1st class) Mathematics and Computer Science

Imperial College

Oct 1997–June 2001
London, UK

Honors and Awards

Junior Research Fellowship, 2006–2009

A prestigious, 4-year, non-stipendiary post-doctoral research fellowship awarded through annual international competition. I held this in conjunction with my post at Toshiba Research.

Wolfson College, Cambridge

Cambridge Gates Scholarship, 2002–2005

A 3-year fees and expenses scholarship awarded by the Gates Cambridge Trust for PhD studies in Cambridge University

Gates Cambridge Trust

Journal articles

- [1] G.J. Brostow, C. Hernandez, G. Vogiatzis, B. Stenger, and R. Cipolla. Video normals from colored lights. *IEEE Trans. Pattern Anal. Mach. Intell.*, 33(10):2104–2114, October 2011.
- [2] C. Hernández, G. Vogiatzis, and R. Cipolla. Multi-view photometric stereo. *IEEE Trans. Pattern Anal. Mach. Intell.*, 30(1):548–554, March 2008.

- [3] C. Hernández, G. Vogiatzis, and R. Cipolla. Overcoming shadows in 3-source photometric stereo. *IEEE Trans. Pattern Anal. Mach. Intell.*, 33(2):419–426, February 2011.
- [4] G. Vogiatzis, C. Hernández, P. H. S. Torr, and R. Cipolla. Multi-view stereo via volumetric graph-cuts and occlusion robust photo-consistency. *IEEE Trans. Pattern Anal. Mach. Intell.*, 29(12):2241–2246, December 2007.
- [5] G. Vogiatzis, P. H. S. Torr, S. M. Seitz, and R. Cipolla. Reconstructing relief surfaces. *Image and Vision Computing*, 26(3):397–404, March 2008.
- [6] George Vogiatzis and Carlos Hernández. Video-based, real-time multi-view stereo. *Image and Vision Computing*, 29(7):434 – 441, 2011.
- [7] George Vogiatzis and Carlos Hernndez. Self-calibrated, multi-spectral photometric stereo for 3d face capture. *International Journal of Computer Vision*, 97(1):91–103, 2012.

Book chapters

- [1] C. Hernández and G. Vogiatzis. *Computer Vision: Detection, Recognition and Reconstruction*, chapter 11 – Shape from Photographs: A Multi-view Stereo Pipeline, pages 281–312. Springer-Verlag, 2010.
- [2] G. Vogiatzis and C. Hernández. *Computer Vision: Detection, Recognition and Reconstruction*, chapter 12 – Practical 3D Reconstruction Based on Photometric Stereo, pages 330–347. Springer-Verlag, 2010.

Papers in refereed conferences

- [1] N. Campbell, G. Vogiatzis, C. Hernández, and R. Cipolla. Automatic 3d object segmentation in multiple views using volumetric graph-cuts. In *Proc. British Machine Vision Conf. (BMVC)*, volume 1, pages 530–539, 2007.
- [2] N. Campbell, G. Vogiatzis, C. Hernández, and R. Cipolla. Using multiple hypotheses to improve depth-maps for multi-view stereo. In *Proc. 10th Europ. Conf. on Computer Vision (ECCV)*, 2008.
- [3] Neill D.F. Campbell, George Vogiatzis, Carlos Hernández, and Roberto Cipolla. Automatic object segmentation from calibrated images. In *Visual Media Production (CVMP), 2011 Conference for*, pages 126 –137, Nov. 2011.
- [4] C. Hernández and G. Vogiatzis. Self-calibrating a real-time monocular 3d facial capture system. In *International Symposium on 3D Data Processing Visualization and Transmission (3DPVT)*, 2010.
- [5] C. Hernández, G. Vogiatzis, G. J. Brostow, B. Stenger, and R. Cipolla. Non-rigid photometric stereo with colored lights. In *Proc. 11th Intl. Conf. on Computer Vision (ICCV)*, 2007.
- [6] C. Hernández, G. Vogiatzis, and R. Cipolla. Probabilistic visibility for multi-view stereo. In *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR)*, 2007.
- [7] C. Hernández, G. Vogiatzis, and R. Cipolla. Shadows in three-source photometric stereo. In *Proc. 10th Europ. Conf. on Computer Vision (ECCV)*, 2008.
- [8] R. Jensen, A. Dahl, G. Vogiatzis, E. Tola, and Aanæs H. Large scale multi-view stereopsis evaluation. In *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR)*, 2014.
- [9] G. Vogiatzis, P. Favaro, and R. Cipolla. Using frontier points to recover shape, reflectance and illumination. In *Proc. 10th Intl. Conf. on Computer Vision (ICCV)*, pages 228–235, 2005.
- [10] G. Vogiatzis, C. Hernández, and R. Cipolla. Lighting-up geometry: accurate 3d modelling of museum artifacts with a torch and a camera. In *Proc. of Eurographics 2006 (Short papers)*, pages 85–88, 2006.

- [11] G. Vogiatzis, C. Hernández, and R. Cipolla. Reconstruction in the round using photometric normals and silhouettes. In *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR)*, pages 1847–1854, 2006.
- [12] G. Vogiatzis, P. H. S. Torr, and R. Cipolla. Bayesian stochastic mesh optimization for 3d reconstruction. In *Proc. British Machine Vision Conf. (BMVC)*, pages 711–718, 2003.
- [13] G. Vogiatzis, P. H. S. Torr, and R. Cipolla. Multi-view stereo via volumetric graph-cuts. In *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR)*, volume 1, pages 391–398, 2005.
- [14] G. Vogiatzis, P. H. S. Torr, S. M. Seitz, and R. Cipolla. Reconstructing relief surfaces. In *Proc. British Machine Vision Conf. (BMVC)*, pages 117–126, 2004.
- [15] Oliver J. Woodford and George Vogiatzis. A generative model for online depth fusion. In *Proc. 12th Europ. Conf. on Computer Vision (ECCV)*, 2012.

Invited talks

- [1] G. Vogiatzis. Accurate image-based 3d modelling. Invited seminar at University College, London, 2006.
- [2] G. Vogiatzis. Photometric methods for 3d reconstruction. Advanced Research Seminar at International Computer Vision Summer School, 2008.
- [3] G. Vogiatzis. Towards real-time, interactive multi-view stereo with video. Invited seminar at Oxford University, 2009.
- [4] G. Vogiatzis. Real-time multi-view stereo from video. Invited seminar at University College, London, 2010.
- [5] G. Vogiatzis. Towards real-time, interactive multi-view stereo with video,. Invited seminar at Imperial College, 2010.
- [6] G. Vogiatzis. A 3d facial capture system using 3 coloured lights and a camera. Invited seminar at Queen Mary, University of London, 2011.
- [7] G. Vogiatzis. Adventures in the world of 3d computer vision. Invited seminar at Microsoft Research Cambridge, 2012.

Patents

- [1] R. Cipolla, G. Vogiatzis, P. Favaro, R. Funayama, and H. Yanagihara. Reflectance and illumination properties from varying illumination. Patent No. WO/2007/042844UK, Application No. PCT/GB2006/050325, Filed in 2005, Granted in 2007.
- [2] R. Cipolla, G. Vogiatzis, and C. Hernández. Imaging system and method. Patent No. WO/2010/041584, Application No. PCT/JP2009/067136, Filed in 2006, Granted in 2010.

Organizing

- [1] G. Vogiatzis. 3d shape reconstruction from photographs: a multi-view stereo approach. Advanced Research Tutorial held at CVPR 2010, 2012. <http://carlos-hernandez.org/cvpr2010/index.html>.
- [2] G. Vogiatzis. First international workshop on live dense reconstruction from moving cameras (*LDRMC2011*). ICCV 2011 Workshop, 2012. <http://www.doc.ic.ac.uk/livedensereconstruction/>.