



George-Alex Koulieris

Computer Graphics, Perception, Displays

Employment

- Currently **Assistant Professor, Durham University, Department of Computer Science, UK.**
- 2015-2018 **Post-doctoral Fellow, Inria Sophia-Antipolis, Team GraphDeco, France, 28 months.**
- Feb.-July 2016 **Visiting Scholar, UC Berkeley, INRIA@Silicon Valley Program, French Institute for Research in Computer Science and Automation, Sophia-Antipolis, France.**
"Improving 3D Stereo Displays based on Human Perception"
Collaborators: Prof. Martin S. Banks, Dr. George Drettakis

Education

- 2015 **PhD., Department of Electronic & Computer Engineering, Technical University of Crete, Greece.**
"Context-aware Gaze Prediction applied to Game Level Design, Level-of-Detail and Stereo Manipulation"
Supervisor: Assoc. Prof. Katerina Mania, Collaborators: Dr. George Drettakis, Prof. Douglas Cunningham
- 2011 **MSc., School of Computer Science, Athens University of Economics and Business, Greece.**
Thesis: *"Brain-MRI Volume Data Processing and Visualization"*
Supervisors: Assist. Prof. Georgios Papaioannou, Prof. Theoharis Theoharis
- 2009 **BSc, Department of Informatics & Telecommunications, University of Athens, Greece.**
Thesis: *"Efficient Soft Shadow Mapping"*
Supervisors: Dr. George Drettakis, Prof. Theoharis Theoharis

Publications in journals

- 2017 ○ **Koulieris, G. A.,** Bui, B., Banks, M. S., Drettakis, G. (2017). Accommodation and Comfort in Head Mounted Displays. *ACM Transactions on Graphics (ACM SIGGRAPH 2017)*, Los Angeles, California 30 July - 3 August
- 2014 ○ **Koulieris, G. A.,** Drettakis, G., Cunningham, D., Mania, K. (2014). C-LOD: Context-aware Material Level-Of-Detail applied to Mobile Graphics. *Computer Graphics Forum (EGSR)* (Vol. 33, No. 4, pp. 41-49), Lyon, France
- **Koulieris, G. A.,** Drettakis, G., Cunningham, D., Mania, K. (2014). An Automated High Level Saliency Predictor for Smart Game Balancing. *ACM Transactions on Applied Perception (TAP)* 11, 4, Article 17 (September 2014), 21 pages.

Publications in conferences

- 2018 ○ **Koulieris, G. A.,** Aksit K., Richardt C., Mantiuk R., Mania K. (2018, to appear). Cutting-edge VR/AR Display Technologies (Gaze-, Accommodation-, Motion-aware and HDR-enabled). Full-day course at IEEE VR 2018, Reutlingen, Germany.

- 2017
- Patney, A., Kim, J., Robinson, P., **Koulieris, G. A.**, Wetzstein, G., Steinicke, F. (2017). Applications of Visual Perception to Virtual Reality Rendering. Half-day course at ACM SIGGRAPH 2017, LA, California, USA
 - Banks, M. S., Johnson, P. V., Kim, J., **Koulieris G. A.**, Drettakis, G., Parnell, J., Love, G. D. (2017). Focus-tunable and Fixed Lenses and Stereoscopic 3D Displays. Emerging Liquid Crystal Technologies XII, SPIE 2017, San Francisco, USA
- 2016
- **Koulieris, G. A.**, Drettakis, G., Cunningham, D., Mania, K. (2016). Gaze Prediction using Machine Learning for Dynamic Stereo Manipulation in Games. IEEE VR 2016, pp. 113-120, Greenville, South Carolina 19-23 March
- 2015
- Sidorakis, N., **Koulieris, G. A.**, Mania, K., "Binocular eye-tracking for the control of a 3D immersive multimedia user interface," IEEE 1st Workshop on Everyday Virtual Reality (WEVR), pp.15-18, 23-25 March 2015, Arles, France
- 2014
- McNamara, A., Mania, K., **Koulieris, G. A.**, Itti, L. (2014). Attention-Aware Rendering, Mobile Graphics and Games. Half-day course ACM SIGGRAPH 2014, Vancouver, Canada
 - **Koulieris, G. A.**, Drettakis, G., Cunningham, D., Mania, K. (2014). High Level Saliency Prediction for Smart Game Balancing. Talk, ACM SIGGRAPH 2014, Vancouver, Canada
 - **Koulieris, G. A.**, Drettakis, G., Cunningham, D., Sidorakis, N., Mania, K. (2014). Context-aware Material Selective Rendering for Mobile Graphics. Poster [**won 3rd place at the ACM Student Research Competition**], ACM SIGGRAPH 2014, Vancouver, Canada
- 2012
- Paraskeva, C., **Koulieris, G. A.**, Coxon, M., Mania, K. (2012). Gender Differences in Spatial Awareness in Immersive Virtual Environments: A Preliminary Investigation. 11th ACM Siggraph International Conference on Virtual Reality Continuum and its Applications on Industry, December 2012, Singapore.

Teaching

C.G. **Teaching Assistant**, Laboratory Course 2009-2010(AUEB), 2012-2015(TUC)

V.R. **Teaching Assistant**, Laboratory Course 2012-2015(TUC)

SIGGRAPH Applications of Visual Perception to Virtual Reality Rendering. *Course SIGGRAPH '17, LA*

SIGGRAPH Attention-Aware Rendering, Mobile Graphics and Games. *Course SIGGRAPH '14, Vancouver*

Grants and scholarships

2015-2017 **Inria@Silicon Valley**, Sophia-Antipolis/UC Berkeley (16 months)

2012-2014 **Heracleitus II**, EU Social Fund & Greek National Strategic Reference Framework (36 months)

2008-2009 **Inria** Sophia-Antipolis Unit, France, REVES Team Intern (6 months)

Computer skills

Programming C, C++, C#, Java, OpenGL/WebGL/GLSL, D3D/HLSL, Matlab, x86 ASM, HTML, JS, SQL
 Platforms Unity 3D, R, LaTeX, Arduino/Electronics, Android Programming

Awards

2014 **3rd place** at the ACM Graduate Student Research Competition, SIGGRAPH 2014

2010 **Top-3 MSc semester course performance**, School of Computer Science, AUEB

2004 **Great Moment for Education Award**, Award for the grades achieved at the university admission exams, Eurobank EFG

Talks

- 2017 **University of Cambridge, UK**, Accommodation and Comfort in Head-mounted Displays
Inria Rennes, France, Applied Visual Perception for Near-eye Displays

Reviewer

- 2018 Eurographics
ACM CHI
IEEE VR
- 2014-2017 ACM Transactions on Applied Perception
- 2014-2015 ACM SIGGRAPH General Submissions
ACM Symposium on Applied Perception
- 2015 Computer Graphics Forum
- 2014 MIT Presence: Teleoperators and Virtual Environments
VS Games
- 2013 ACM Computational Aesthetics

Vocational training

- 2016 Biomedical responsible conduct of research, UC Berkeley, USA

Languages

- English C2 Proficient
German B2 Upper Intermediate
Greek Native speaker

Other professional experience

- 2013-15 **Co-authoring of EU research proposals**, *Technical University of Crete, Chania, Greece.*
- 2013-15 **Co-organizing of *Open Science Days***, *Technical University of Crete, Chania, Greece.*
- 2011 **Systems Manager**, *Hellenic Army, Athens, Greece.*
- 7/2010 **Summer School in New Technologies**, *NCSR Demokritos, Athens, Greece.*
- 10/2008- **REVES Team Intern**, *Inria, Sophia-Antipolis Unit, France.*
- 3/2009 Working on efficient Soft Shadow Mapping algorithms

Workshops

- Summer School on Human Computer Confluence**, *July 2012, Milan, Italy*
- Modern Software Applications**, *Apple Computers, DIT UOA, Greece*
- JAVA Developer Day**, *Sun Microsystems, AIT Athens, Greece*
- Linux Seminar**, *Divani Caravel, Athens, Greece*
- Green ICT Standards**, *Divani Caravel, Athens, Greece*
- InterMedia Café for the future of multi-device interactivity**, *Intracom, Athens, Greece*

Students (co-)supervised

- Inria Mathieu Chambe
TUC Christos Paraskeva
Nikolaos Sidorakis
Fotis Pegios
Iordanis Fytanoglou
Panagiotis Kotsarinis