

KOSTAS VARDIS

Profession Computer Scientist (BSc, MSc, PhD)
E-mail kvardis@hotmail.com
Web kostasvardis.com

Location Athens, Greece
Date of Birth 19th December 1982
Military Obligations Fullfilled (11/2010 - 07/2011)

Professional Experience

- 2018** **Think Silicon**
Senior Software Engineer
Development of drivers and software tools of ultra-low power GPUs.
Research Projects:
- [GPU-WEAR](#) (2016-2018)
Ultra-low power heterogeneous GPUs for Wearable/IoT devices.
EU-funded H2020 project (GID: 717850).
Main task: R&D on the open-source software [GLOVE \(GL Over Vulkan\)](#).
Technologies: C, C++, OpenGL ES, EGL, Vulkan
- 2011 - 2018** **Athens University of Economics and Business**
Postdoctoral Researcher/Developer at [AUEB Computer Graphics Group](#) (2016 - 2018)
Projects:
- Visualization Engine for the CostOS software of [Nomitech Ltd.](#) (2016-2017)
Research, design and development of a high-performance, real-time visualization solution for large-volume 3D datasets.
Position: Senior researcher/developer

Doctoral Researcher/Developer at [AUEB Computer Graphics Group](#) (2011 - 2016)
Projects:
- [GLIDE](#) (2014-2015)
Goal-driven Lighting for Dynamic 3D Environments (ARISTEIA II programme)
18-month research project co-funded by the General Secretariat of Research and Technology and the European Union.
Position: Researcher/developer
- [PRESIOUS](#) (2013-2016)
Predictive digitization, restoration and degradation assessment of cultural heritage objects.
3-year EU-funded STREP project (GID: 600533).
Position: Researcher/lead developer for Computer Graphics AUEB Group
Technologies: C++, C#, OpenGL, WebGL, CUDA, Qt, etc.
- 2008 - 2013** **Oraton Simulation Intelligence Technologies**
Senior Software Engineer – contractor
Development of desktop- and web-based systems for map data visualization in the private and public sector.
Technologies: C#, ASP.NET, PHP, Javascript, Silverlight, etc.
- 2008 - 2009** **Evorad**
Graphics and Medical Visualization Software Engineer
Development of GPU- and GPGPU-based software for the visualization of 3D medical images. Technical direction in 3D Graphics.
Technologies: Java, OpenGL, CUDA

2006 - 2008 **SEGA – The Creative Assembly**
Programmer

Graphics Engine and UI Programmer on Empire: Total War (released on March 2009).

Technologies: C++, DirectX, SpeedTree, Lua

Selected Personal and Freelance Projects

2010 **iTMS**

A client-server medical support application designed to present experts with quick and informative data of their patients on a mobile platform.

Technologies: Objective-C

2009 - 2011 **Ingame FMScout/FM Assistant**

Real-time scouting and editing utility for Sports Interactive's Football Manager 2009-2011.

Technologies: C#

Publications

- [1] A. A. Vasilakis*, K. Vardis*, G. Papaioannou*, and K. Moustakas. “**Variable k -Buffer using Importance Maps**”. In: *EG 2017 - Short Papers*. Ed. by A. Peytavie and C. Bosch. The Eurographics Association, 2017 (*these authors contributed equally to this work).
URL: <https://diglib.eg.org/handle/10.2312/egsh20171005>.
 - [2] G. Papaioannou, T. Schreck, A. Andreadis, P. Mavridis, R. Gregor, I. Sipiran, and K. Vardis. “**From Reassembly to Object Completion: A Complete Systems Pipeline**”. In: *J. Comput. Cult. Herit.* 10.2 (Mar. 2017), 8:1–8:22. ISSN: 1556-4673.
URL: <http://doi.acm.org/10.1145/3009905>.
 - [3] K. Vardis, A. A. Vasilakis, and G. Papaioannou. “**DIRT: Deferred Image-based Ray Tracing**”. In: *Eurographics/ ACM SIGGRAPH Symposium on High Performance Graphics*. Ed. by U. Assarsson and W. Hunt. Dublin, Ireland: The Eurographics Association, 2016. ISBN: 978-3-03868-008-6.
URL: <https://diglib.eg.org/handle/10.2312/hpg20161193>.
 - [4] K. Vardis, A. A. Vasilakis, and G. Papaioannou. “**A Multiview and Multilayer Approach for Interactive Ray Tracing**”. In: *Proceedings of the ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games*. I3D '16. Redmond, Washington: ACM, 2016, pp. 171–178. ISBN: 978-1-4503-4043-4.
URL: <http://doi.acm.org/10.1145/2856400.2856401>.
 - [5] K. Vardis, G. Papaioannou, and A. Gkaravelis. “**Real-time Radiance Caching using Chrominance Compression**”. In: *Journal of Computer Graphics Techniques (JCGT)* 3.4 (Dec. 2014), pp. 111–131. ISSN: 2331-7418.
URL: <http://jcgt.org/published/0003/04/06>.
Presented in: *Proceedings of the ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games*. I3D'15. San Francisco, California.
 - [6] K. Vardis, G. Papaioannou, and A. Gaitatzes. “**Multi-view Ambient Occlusion with Importance Sampling**”. In: *Proceedings of the ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games*. I3D '13. Orlando, Florida: ACM, 2013, pp. 111–118. ISBN: 978-1-4503-1956-0.
URL: <http://doi.acm.org/10.1145/2448196.2448214>.
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Technical Reports

- [7] A. Gkaravelis*, C. Kalampokis*, G. Papaioannou*, K. Vardis*, and A. A. Vasilakis*. “**STAR on Interactive Global Illumination Techniques and Inverse Lighting Problems**”. Tech. rep. GLIDE: Goal-driven Lighting for Dynamic 3D Environments, Deliverable 1.1. Athens University of Economics and Business, Aug. 2014 (*authors listed in alphabetical order).
URL: <http://graphics.cs.aueb.gr/graphics/docs/GLIDE-D1.1.pdf>.

PhD Thesis

- [8] K. Vardis. "Efficient Illumination Algorithms for Global Illumination In Interactive and Real-Time Rendering". PhD thesis. Department of Informatics, Athens University of Economics and Business, 2016.
URL: <http://hdl.handle.net/10442/hedi/41947>.

Research Interests

Interactive graphics, rendering techniques, illumination algorithms

Reviewer

[Eurographics](#), [High-Performance Graphics \(HPG\)](#)

Teaching Experience

2012 - 2015 **Athens University of Economics and Business**
Teaching Assistant - Computer Science BSc

Computer Graphics	Winter semester	4th year course
Databases	Eastern semester	2nd year course

Education

2011 - 2016 **Athens University of Economics and Business, Greece**
PhD in Computer Graphics. Advisor: Prof. G. Papaioannou

2004 - 2005 **University of Hull, UK**
MSc in Virtual Environments and Visualization

2001 - 2004 **University of Sussex, UK**
BSc (Hons) in Computer Science

Languages

Greek Native
English Fluent