

Pavlos Mavridis

CONTACT INFORMATION	Gartenstr. 13 72764 Reutlingen Germany	<i>Phone:</i> +49 160 93064015 <i>E-mail:</i> pmavridis@gmail.com <i>Web:</i> http://www.pmavridis.com
BORN	25 February 1981, Kozani, Greece	
PROFESSIONAL EXPERIENCE	Microsoft, Germany Senior Software Engineer Sep 2017 – Present Working on real-time physically-based rendering techniques for multiple hardware platforms (VR/AR/MR), with focus on anti-aliasing, perceptual rendering, high and low level performance optimizations. Key technologies: Modern C++, Direct3D, HLSL, Git, PIX/RenderDoc. Graz University of Technology, Austria Postdoctoral Researcher Apr 2016 – Aug 2017 Research and development of geometry processing and shape analysis algorithms with applications on 3D object reconstruction, retrieval and 3D printing. Key technologies: C/C++, RenderMan RIS, OpenVDB, L ^A T _E X. Athens University of Economics & Business, Greece Postdoctoral Researcher Jul 2013 – Jan 2016 Doctoral Researcher Feb 2013 – Jun 2013 Research and development of high performance geometric alignment methods with applications on 3D data acquisition and computational archaeology. Key technologies: C/C++, Eigen, OpenGL, OpenVDB, OpenMP, WebGL. Foundation of the Hellenic World, Greece Software Engineer Sep 2007 – Feb 2013 Worked on real-time rendering techniques for VR applications, running on immersive CAVE and Dome setups. Responsible for many aspects of the rendering technology, including stereoscopic rendering, shadows and realistic shading. Key technologies: C/C++, OpenGL, GLSL, SpeedTree, Python, Bash, Linux.	
MILITARY SERVICE	Compulsory military service Sep 2006 – Aug 2007 Division of electronic warfare, Greek Army.	
EDUCATION	Ph.D., Computer Graphics 2010 – 2013 Department of Informatics, Athens University of Economics & Business, Greece Thesis title: <i>“Efficient Texture Representation and Sampling Algorithms for Real-time Rendering”</i> . M.Sc., Computer Science 2004 – 2006 Department of Informatics and Telecommunications, National & Kapodistrian University of Athens, Greece B.Sc., Computer Science 1999 – 2004 Department of Informatics and Telecommunications, National & Kapodistrian University of Athens, Greece	
PERSONAL PROJECTS	HyperDroste (iOS App) Released on Nov 2014 A unique image processing app that lets you create infinite zooming <i>“Droste Effect”</i> animations from your photos. Inspired by the work of M.C. Escher. Key technologies: Objective C, OpenGL ES, H.264, Xcode, HTML5/CSS.	

TEACHING EXPERIENCE	<p>Graz University of Technology, Austria Simulation and Animation Summer term 2017 Postgraduate course on simulation and animation techniques. Topics: rigid-body dynamics, ordinary differential equations, fluid simulation, brittle fracture, skeletal animation.</p> <p>Graz University of Technology, Austria Computer Graphics and Realism Winter term 2016 Postgraduate course on physically-based photorealistic rendering techniques. Topics: microfacet BRDFs, ray-tracing, the rendering equation, monte carlo integration, global illumination techniques, importance sampling, denoising.</p> <p>National & Kapodistrian University of Athens, Greece Computer Graphics and Visualization Winter terms 2013 & 2014 Postgraduate course on real-time rendering and visualization techniques, co-taught with Prof. Th. Theoharis.</p>
REVIEWING ACTIVITIES	<p>Reviewer for International Conferences and Journals Eurographics, Transactions on Visualization and Computer Graphics (TVCG), The Visual Computer (TVCJ), Computers & Graphics, SpringerPlus.</p>
RESEARCH INTERESTS	<p>Real-time rendering techniques, VR and AR, global illumination algorithms, volumetric methods for rendering and geometry processing.</p>
SELECTED PUBLICATIONS	<p>Complete list available at: http://www.pmavridis.com/publication_list.html</p> <p>P. Mavridis, I. Sipiran, A. Andreadis and G. Papaioannou, “<i>Object Compression using k-Sparse Optimization</i>”, Computer Graphics Forum (Proceedings of Pacific Graphics 2015), Volume 34, Number 7, October 2015.</p> <p>P. Mavridis, A. Andreadis and G. Papaioannou, “<i>Efficient Sparse ICP</i>”, Computer Aided Geometric Design (CAGD), Volumes 35-36, May 2015.</p> <p>P. Mavridis and G. Papaioannou, “<i>The Compact YCoCg Frame Buffer</i>”, Journal of Computer Graphics Techniques (JCGT), Vol. 1, No. 1, Sept 2012.</p> <p>P. Mavridis and G. Papaioannou, “<i>Texture Compression using Wavelet Decomposition</i>”, Computer Graphics Forum (Proceedings of Pacific Graphics 2012), Volume 31, Number 7, September 2012.</p> <p>P. Mavridis and G. Papaioannou, “<i>High Quality Elliptical Texture Filtering on GPU</i>”, Proceedings of the 2011 ACM SIGGRAPH symposium on Interactive 3D Graphics and Games (i3D 2011).</p>
BOOK CHAPTERS	<p>P. Mavridis and G. Papaioannou, “<i>Practical Frame Buffer Compression</i>”, in the book GPU Pro 4: Advanced Rendering Techniques, Wolfgang Engel (ed.), A K Peters/CRC Press 2013.</p> <p>P. Mavridis and G. Papaioannou, “<i>Practical Elliptical Texture Filtering</i>”, in the book GPU Pro 3: Advanced Rendering Techniques, Wolfgang Engel (ed.), A K Peters/CRC Press 2012.</p>
LANGUAGES	<p>English (Fluent), Greek (Native)</p>
PERSONAL INTERESTS	<p>Hiking and photography.</p>