

# Eric Heitz

Maverick – INRIA Grenoble  
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## Doctor in computer graphics

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### Education

- 2010 – 2014 **Ph.D. in the MAVERICK team at INRIA**, Grenoble.  
Advisor: Fabrice Neyret.  
Thesis: **Multi-scale appearance for realistic and efficient rendering of complex surfaces.**
- 2008 – 2010 **Master's Degree at KIT Department of Informatics**, Karlsruhe.  
Highest honors.
- 2006 – 2010 **Master's Degree at Ensimag**, Grenoble.  
Highest honors.
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### Work Experience

- since Nov. 2014 **KIT Computer Graphics Group**, Karlsruhe, Germany.  
Postdoctoral researcher.  
In collaboration with Carsten Dachsbacher.
- 2013 **Weta Digital**, Wellington, New-Zealand.  
Visitor. 1 month. Multiscale rendering in Weta's pipeline with LEADR mapping and SVOs.  
In collaboration with Antoine Bouthors.
- 2013 **NVIDIA Research**, Paris, France.  
Research internship. 3 months. Multiscale physically-based rendering with SVOs.  
In collaboration with Cyril Crassin and David Luebke.
- 2012 **LIGUM, Montréal University**, Canada.  
Research internship. 6 months. Filtering color mapped textures and surfaces.  
In collaboration with Pierre Poulin and Derek Nowrouzezahrai.
- 2011 **Université Stendhal**, Grenoble, France.  
Teaching assistant in computer science. 1 year.
- 2010 **MAVERICK team at INRIA**, Grenoble, France.  
Research internship. 5 months. Simulating an evolving cloudy sky.
- 2009–2010 **KIT Humanoids and Intelligence Systems Lab**, Karlsruhe, Germany.  
Research internship. 6 months. Adaptive GPU raycasting.
- 2009–2010 **KIT Intelligent Sensor-Actuator-Systems Laboratory**, Karlsruhe, Germany.  
Student lab job. 5 months, 40h/month. Numerical simulation of elastic bodies.
- 2009–2010 **Karlsruher Institut für Technologie**, Karlsruhe, Germany.  
Student lab job. 5 months, 35h/month. Image processing algorithms for nano-biology.
- 2009–2010 **LSIIT**, Strasbourg, France.  
Research internship. 3 months. Mesh simplification for pieces of art visualization.

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## Publications

### Peer-Reviewed Journals/Conferences

- Importance Sampling Microfacet-Based BSDFs using the Distribution of Visible Normals.  
**Eric Heitz** and Eugene d'Eon. Eurographics Symposium on Rendering, 2014.  
**Best Paper Award.**
- Understanding the Masking-Shadowing Function in Microfacet-Based BRDFs.  
**Eric Heitz.** The Journal of Computer Graphics Techniques, 2014.
- Linear Efficient Antialiased Displacement and Reflectance Mapping.  
Jonathan Dupuy\*, **Eric Heitz\***, Jean-Claude Iehl, Pierre Poulin, Fabrice Neyret, Victor Ostromoukhov. ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia), 2013. \***Joint first authors.**
- Filtering Non-Linear Transfer Functions on Surfaces.  
**Eric Heitz**, Derek Nowrouzezahrai, Pierre Poulin, Fabrice Neyret. IEEE Transactions on Visualization and Computer Graphics, 2013.
- Filtering Color Mapped Textures and Surfaces.  
**Eric Heitz**, Derek Nowrouzezahrai, Pierre Poulin, Fabrice Neyret. ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (i3D), 2013.  
**Best Paper Award.**
- Correlation effect between transmitter and receiver azimuthal directions on the illumination function from a random rough surface.  
**Eric Heitz**, Christophe Bourlier, Nicolas Pinel. Waves in Random and Complex Media, 2013.
- Representing Appearance and Pre-filtering Subpixel Data in Sparse Voxel Octrees.  
**Eric Heitz** and Fabrice Neyret. HPG'2012.  
**Best Paper Award.**
- Adaptive GPU Ray Casting Based on Spectral Analysis.  
Stefan Suwelack, **Eric Heitz**, Roland Unterhinninghofen, Rüdiger Dillmann. 5th International Workshop on Medical Imaging and Augmented Reality, 2010.

### Courses

- Physically Based Shading in Theory and Practice.  
Stephen Hill, Stephen McAuley, Jonathan Dupuy, Yoshiharu Gotanda, **Eric Heitz**, Naty Hoffman, Sébastien Lagarde, Anders Langlands, Ian Megibben, Farhez Rayani, Charles de Rousiers. SIGGRAPH 2014 Course.

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## Professional Activities

### Reviewer

Pacific Graphics 2014, Computer & Graphics 2014, Eurographics 2013, Transactions on Visualization and Computer Graphics 2013

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## Technical skills and knowledges

<b>Main skills</b>	Computer graphics, signal/image processing, numerical simulation.
<b>Languages/API</b>	C/C++, OpenGL, Cuda, Asm, Java, Ada.
<b>Softwares</b>	Matlab, Scilab, Maple, LaTeX, Inkscape.

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## Languages

<b>French</b>	Native language.
<b>German</b>	Fluent.
<b>English</b>	Working knowledges. TOEIC score: 905/990