

Prof. Ing. Vlastimil Havran, Ph.D.

Czech Technical University (CTU) in Prague, Faculty of Electrical Engineering (FEE)

Personal Information

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Email: havran@fel.cvut.cz
Homepage: <http://dcgi.fel.cvut.cz/home/havran>
Date and place of birth: 1972, May 20, Litomyšl, Czech Republic
Languages: Czech, English, German, Russian, Spanish

Qualification

Google Scholar 2018: citations/H-index/i10-index 2623/24/46 (all publications), 930/17/25 (since 2013).

Web of Science: citations/H-index 740/8 (excluding autocitations). *Scopus*: citations/H-index: 726/13

December 2018 Full professorship at CTU in Prague

April 2011 Habilitation Thesis defended at CTU in Prague, thesis entitled:

Efficient Searching Algorithms for Image Synthesis

April 2001 PhD degree at FEE, CTU in Prague, thesis title: *Heuristic Ray Shooting Algorithms*
(590 citations on Scholar Google, 172 citations at Web of Science)

February 1996 Master degree at FEE, CTU in Prague, thesis title: *Simulation of Optical Phenomena*

Employment History

since Dec. 2018: Full professor at FEE, CTU in Prague, Czech Republic

2011–Dec. 2018: Associate professor (“docent” in Czech) at FEE, CTU in Prague, Czech Republic

2008–June 2011: Adjunct professor/senior researcher at FEE, CTU in Prague, Czech Republic

2006–Dec. 2008: Assistant professor at FEE, CTU in Prague, Czech Republic

2003–Feb. 2006: Senior researcher at Max-Planck-Institute for Informatics, Saarbrücken, Germany

Education

2001–Aug. 2003 postdoc at Max-Planck-Institute for Informatics, Saarbrücken, Germany

1996–Apr. 2001 PhD degree in computer science, FEE, CTU in Prague

1990–Feb. 1996 Master degree in computer science, FEE, CTU in Prague

1986–June 1990 High school (computer engineering and electronics), Pardubice

Professional Research Services

- 2017: Papers co-chair for conference High Performance Graphics 2017, Los Angeles
- March 2010 – March 2013: associate editor of journal *Computer Graphics Forum*, ISSN 0167-7055, indexed by Web of Science
- *Eurographics 2007* – Programme tutorial co-chair together with Karol Myszkowski
- *Journal reviews* – ACM Transactions on Graphics, IEEE Transactions on Visualization and Computer Graphics, Computer Graphics Forum, IEEE Computer Graphics & Applications, Computers & Graphics, Visual Computer, Journal of Graphics Tools, etc.
- *Conference reviews* – Siggraph, Siggraph Asia, Eurographics, Eurographics Symposia and Workshops on Rendering, Graphics Interfaces, Pacific Graphics, SCCG, WSCG, IEEE Symposium on Interactive Ray Tracing, High Performance Graphics, GRAPP, etc.
- *IPC member in 50 conferences*: Eurographics 2012, 2013, 2016, 2017, Eurographics Symposium on Rendering (2008–2010, 2015, 2016), Eurographics short papers (2010, 2011, 2014, 2015), High Performance Graphics (2009–2011, 2014, 2017), Symposium on Interactive Ray Tracing (2006–2008), International Conference on Computer Graphics Theory and Applications (2007–2017), Spring Conference on Computer Graphics (2006–2017), Winter School of Computer Graphics (2009–2012), SIBGRAPI 2014, 2016, Graphics and Virtual Reality 2011.
- *Organizations*: Member of EUROGRAPHICS association and ACM SIGGRAPH

Funded Projects Participation and Leadership

Leading two projects by Czech Science Foundation, working in various projects (EU IST, Czech Science Foundation, Ministry of Education, university interim projects etc.) and company IT projects.

Selected Journal Publications, 2014–2018

1. M. Sbert, V. Havran, L. Szirmay-Kalos, V. Elvira: "Multiple Importance Sampling Characterization by Weighted Mean Invariance", *Visual Computer journal*, June 2018, Volume 34, issue 6-8, pages 843-862.
2. M. Sbert, V. Havran, L. Szirmay-Kalos: "Multiple importance sampling revisited: breaking the bounds", *EURASIP Journal on Advances in Signal Processing*, year 2018, doi.org/10.1186/s13634-018-0531-2, pages 1-15
3. V. Havran, J. Hosek, S. Nemcova, J. Cap, and J. Bittner: "*Lightdrum—Portable Light Stage for Accurate BTF Measurement on Site*", in *journal of Sensors (MDPI)*, Volume 17, issue 3, article no. 423, 2017, doi:10.3390/s17030423
4. J. Cap, J. Hosek, V. Havran, S. Nemcova, K. Macuchova: "Optomechanical design of rotary kaleidoscope for bidirectional texture function acquisition", in *Applied Optics*, Volume 56, Issue 26, pages 7373-7384, 2017.
5. J. Hosek, V. Havran, S. Nemcova, J. Bittner, and J. Cap: "*Optomechanical design of a portable compact bidirectional texture function measurement instrument*", in *journal of Applied Optics* 56, Issue 4, pages 1183-1193, February 2017
6. M. Sbert, V. Havran, L. Szirmay-Kalos: "*Variance Analysis of Multi-sample and One-sample Multiple Importance Sampling*", in *Computer Graphics Forum*, Volume 35, Issue 7, October 2016.
7. V. Havran, J. Filip, K. Myszkowski: "*Perceptually Motivated BRDF Comparison using Single Image*", in *Computer Graphics Forum*, 12 pages, June 2016 doi:10.1111/cgf.12944
8. M. Vinkler, V. Havran, J. Bittner, J. Sochor: "*Parallel On-Demand Hierarchy Construction on Contemporary GPUs*", 14 pages, in *IEEE Transactions on Visualization and Computer Graphics journal*, published August 2016, Issue 7, doi:10.1109/TVCG.2015.2465898
9. M. Vinkler, V. Havran, J. Bittner: "*Performance Comparison of Bounding Volume Hierarchies and Kd-trees for GPU Ray Tracing*", *Computer Graphics Forum*, published online November 2015, DOI: 10.1111/cgf.12776
10. M. Vinkler and V. Havran: "*Register Efficient Dynamic Memory Allocator for GPUs*", *Computer Graphics Forum*, Volume 34, Issue 8, pages 143–154. December 2015. DOI: 10.1111/cgf.12666
11. V. Bubnik and V. Havran: "*Light Chisel: 6DOF Pen Tracking*", *Eurographics 2015, Computer Graphics Forum*, Volume 34, No. 2, pages 325–336, May 2015. DOI: 10.1111/cgf.12563
12. V. Havran and P. Egert: "*Extensions to Bidirectional Texture Function Compression with Multi-Level Vector Quantization in OpenCL*", *Computers & Graphics (Elsevier)*, Volume 48, pages 1–10, May 2015. DOI: 10.1016/j.cag.2015.01.005
13. J. Bittner, M. Hapala, and V. Havran: "*Incremental BVH Construction for Ray Tracing*", *Computers & Graphics journal (Elsevier)*, Volume 48, pages 135–144, April 2015.

Selected Peer-Reviewed Conference Publications, 2014–2018

1. V. Havran and M. Sbert: "*Surface Reflectance Characterization by Statistical Tools*", in *proceedings of SCCG 2015 conference (ACM)*, pages 55–62, Smolenice, Slovakia, April 2015.
2. V. Havran and M. Sbert: "*Optimal Combination of Techniques in Multiple Importance Sampling*", *VRCAI 2014 conference (ACM)*, pages 141–150, November 2014.

Other information about projects and full publication list is available at:

<http://dcgi.fel.cvut.cz/members/havran>