

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

Personal Information

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Languages: Czech, English, German, Russian, Spanish

Qualification

Google Scholar 2023: citations/H-index/i10-index 3505/30/57 (all publications), 803/17/24 (since 2018).
Web of Science: citations/H-index 1072/17 (excluding autocitations). *Scopus*: citations/H-index: 1127/17
2018 December Full professorship at CTU in Prague
2011 April Habilitation Thesis defended at CTU in Prague, thesis entitled:
Efficient Searching Algorithms for Image Synthesis
2001 April PhD degree at FEE, CTU in Prague, thesis title: *Heuristic Ray Shooting Algorithms*
(677 citations on Scholar Google, 172 citations at Web of Science)
1996 February 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

- 2021: Papers co-chair for conference GRAPP 2021, Vienna
- 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, IEEE Symposium on Interactive Ray Tracing, High Performance Graphics, GRAPP, etc.
- *IPC member in 60 conferences*: Eurographics 2012, 2013, 2016, 2017, 2022, Eurographics Symposium on Rendering (2008–2010, 2015, 2016), Eurographics short papers (2010, 2011, 2014, 2015), High Performance Graphics (2009–2011, 2014, 2017, 2019–2023), Symposium on Interactive Ray Tracing (2006–2008), International Conference on Computer Graphics Theory and Applications (2007–2020), Spring Conference on Computer Graphics (2006–2017), Winter School of Computer Graphics (2009–2012), SIBGRAPI 2014, 2016, 2018–2022, Graphics and Virtual Reality 2011.

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.

Patents

1. V. Havran, J. Hosek, J. Bittner, S. Nemcova, J. Cap: "Portable device for measuring the geometry of an object and its spatially varying surface reflectance on site", United States Patent US 10,764,482 B2, 1 September, 2020.
2. V. Havran, M. Vinkler, J. Bittner, W-J. Lee : "Method and apparatus for rendering using locations and sizes of primitives", United States Patent US 10,580,193 B2, 3 March, 2020.

Selected Journal Publications

1. S. Nemcova, V. Havran, J. Hosek: "*Different view on diffraction limited imaging optics design*", Journal of the Optical Society of America A, Volume 40, Issue 1, pages 149-154, January 2023.
2. J. Sloup, V. Havran: "*Optimizing Ray Tracing of Trimmed NURBS Surfaces on the GPU*", Computer Graphics Forum journal (Pacific Graphics 2021, Wellington, New Zealand), Volume 40, Issue 7, pages 161-172, November 2021.
3. V. Havran, J. Hosek, S. Nemcova, J. Cap: "*Increasing the Spatial Resolution of BTF Measurement with Scheimpflug Imaging*", in Computer Graphics Forum, Volume 38, Issue 1, pages 592-609, February 2019.
4. M. Sbert, V. Havran, L. Szirmay-Kalos, V. Elvira: "*Multiple Importance Sampling Characterization by Weighted Mean Invariance*", Visual Computer journal, Volume 34, issue 6-8, pages 843-862, June 2018.
5. M. Sbert, V. Havran, L. Szirmay-Kalos: "*Multiple importance sampling revisited: breaking the bounds*", EURASIP Journal on Advances in Signal Processing, Volume 15, pages 1-15, 2018.
6. 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, pages 1-57, 2017.
7. 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.
8. J. Hosek, V. Havran, S. Nemcova, J. Bittner, and J. Cap: "*Optomechanical design of a portable compact bidirectional texture function measurement instrument*", in Applied Optics 56, Issue 4, pages 1183-1193, February 2017.
9. 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, pages 541-460, October 2016.
10. V. Havran, J. Filip, K. Myszkowski: "*Perceptually Motivated BRDF Comparison using Single Image*", in Computer Graphics Forum, Volume 35, Issue 4, pages 1-14, June 2016.
11. M. Vinkler, V. Havran, J. Bittner, J. Sochor: "*Parallel On-Demand Hierarchy Construction on Contemporary GPUs*", in IEEE Transactions on Visualization and Computer Graphics journal, Volume 22, Issue 7, pages 1886-98, August 2016.
12. M. Sbert, V. Havran, L. Szirmay-Kalos: "*Variance Analysis of Multi-sample and One-sample Multiple Importance Sampling*", conference Pacific Graphics (Conference page), published in Computer Graphics Forum, Volume 35, Issue 7, October 2016.
13. M. Vinkler, V. Havran, J. Bittner: "*Performance Comparison of Bounding Volume Hierarchies and Kd-trees for GPU Ray Tracing*", in Computer Graphics Forum, accepted September 2015, published online 18th November 2015, DOI: 10.1111/cgf.12776, Volume 8, Issue 35, pages 68-79, December 2016.

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

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