Vladislav Kraevoy

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CANADA

Education

2003-2007	Ph.D. in Computer Science, UBC, Supervisor: Dr. Alla Sheffer.
2001-2003	M.Sc. in Computer Science, Technion, Supervisors: Dr. Alla Sheffer and Dr. Craig Gotsman.
1996-2001	B.Sc. in Computer Science, Technion.

Objective

An accomplished and motivated software engineer seeking a position in software development.

Skills and attributes

- Strong object-oriented design and implementation skills
- Strong software engineering skills in debugging, testing, and working with a large code-base
- Extensive experience in Software Development with C/C++/Java (7 yrs), Win32 API/MFC/STL/ATL (5 yrs), OpenGL/DirectX (5 yrs).
- Solid research background in Digital Geometry Processing, Animation, Graphics, Human-Computer Interface, AI and Algorithms.

Research interests

The focus of my current and future research is in the field of computer graphics. I am especially interested in the new interdisciplinary research area of Digital Geometry Processing (DGP) which has applications in both computer graphics and engineering. In particular I am interested in morphing, mesh parameterization, remeshing, subdivision and editing.

Publications

1. V. Kraevoy, A. Sheffer, D. Cohen-Or, A. Shamir, (2008). **Non-homogeneous Resizing of Complex Models,** ACM Transactions on Graphics (Proc. SIGGRAPH Asia 2008).
2. V. Kraevoy, A. Sheffer, (2007). **Shuffler: Modeling with Interchangeable Parts,** Proc. Pacific Graphics 2007.
3. V. Kraevoy, M. van de Panne and A. Sheffer, (2007). **Contour-based Modeling Using Deformable 3D Templates**, Technical Report TR-2007-13, Dept. of Computer Science, UBC.
4. V. Kraevoy, A. Sheffer, (2006). **Variational, meaningful shape decomposition,** Technical sketch at SIGGRAPH 2006. (Acceptance rate of 23%).
5. V. Kraevoy, A. Sheffer, (2005). **Template Based Mesh Completion.** Eurographics/ACM SIGGRAPH Symposium on Geometry Processing, pages 13-22. (Acceptance rate of 25%).
6. D. Julius, V. Kraevoy, A. Sheffer (2005). **D-Charts: Quasi-Developable Mesh Segmentation**, *Computer Graphics Forum* (Proc. Eurographics 2005). 24(3): 581-590. (Acceptance rate of 16%).
7. V. Kraevoy, A. Sheffer, (2005). **Boneless Motion Reconstruction.** Technical sketch at SIGGRAPH 2005. (Acceptance rate of 25%).
8. V. Kraevoy, A. Sheffer, (2006). **Mean Value Geometry Encoding.** International Journal of Shape Modeling (IJSM) 12(1): 29-46.
9. V. Kraevoy, A. Sheffer, (2004). **Cross-Parameterization and Compatible Remeshing of 3D Models.** ACM Transactions on Graphics (Proc. SIGGRAPH 2004). 23(3): 861-869. (Acceptance rate of 17%).
10. V. Kraevoy, A. Sheffer, (2004). **Shape Preserving Mesh Deformation.** Technical sketch at SIGGRAPH 2004. (Acceptance rate of 36%).
11. A. Sheffer, V. Kraevoy, (2004). **Pyramid coordinates for morphing and deformation.** Proc. Second International Symposium on 3DPVT (3D Data Processing, Visualization, and Transmission), *invited*.
12. Cross-parameterization and compatible remeshing. Poster presentation at the ASI Exchange 2004 and the Canadian Conference on Intelligent Systems IS 2004.
13. V. Kraevoy, A. Sheffer and C. Gotsman, (2003). **Matchmaker: Constructing Constrained Texture Maps.** ACM Transactions on Graphics (Proc. SIGGRAPH 2003). 22(3): 326-333. (Acceptance rate of 19%).

Details are available at: http://www.cs.ubc.ca/~vlady/

Experience

Postdoctoral position Imager computer graphics lab University of British Columbia 2007-2008	We developed a new method for non-homogeneous resizing of complex models. The associated research paper was accepted at SIGGRAPH Asia (2008).
Doctoral thesis research Imager computer graphics lab University of British Columbia 2003-2007	In collaboration with my advisor, Professor Alla Sheffer, we developed a set of efficient and robust 3D data parameterization and editing tools for model acquisition, repair, and editing. This research direction has lead to the development of new algorithms for template based mesh completion, feature-preserving cross-parameterization, model segmentation, and a novel local geometry representation. The associated research papers were published in leading computer graphics venues such as SIGGRAPH (2004), Eurographics (2005), and the Symposium on Geometry Processing (2005).
Laboratory engineer Center for Graphics and Geometric Computing 02/2002-07/2003	Laboratory engineer for the department's Center for Graphics and Geometric Computing. In this capacity I worked as a computer administrator and a project manager. I advised students regarding their projects and assisted faculty members in getting price quotes and specifications for hardware/software packages.
Teaching Assistant Technion 09/2001-01/2002	I taught **Introduction to Robotics** under the supervision of Dr. Hector Rotstein.
Research assistant. Center for Graphics and Geometric Computing Technion 2001-2003	We developed a new and robust method for computing feature-preserving texture mapping of polygonal models. It is the first method that guarantees a solution and provides a provably valid parameterization. The associated research paper was published at SIGGRAPH (2003).
Software developer Ninio Ohad, Inc 02/1999 – 11/2000	I participated in developing interactive educational software in math and geometry. My work involved development of artificial intelligence algorithms.

Fellowships and awards

- 2006-2007 **University Graduate Fellowship** – The University of British Columbia.
- 2005-2006 **University Graduate Fellowship** – The University of British Columbia.
- 2003-2004 **Graduate Entrance Scholarship** – The University of British Columbia.