

Post-Doctoral Fellow
Department of Computer Science
2500 University Dr. NW
University of Calgary
Calgary, AB T2N 1N4
streitl@cpsc.ucalgary.ca
Tele: (403) 210-9474

Resume of **LISA STREIT**

Web: www.cpsc.ucalgary.ca/~streitl

Citizenship: Canadian
Address: 3807 Marine Drive
Burnaby, BC, V5J-3E3
streit@cs.ubc.ca
Tele: (604) 222-8871

OBJECTIVE

- To use problem solving, research and development and interpersonal skills as well as computer graphics knowledge and experience to build tools for creation and navigation of complex computer generated scenes.

SUMMARY OF QUALIFICATIONS

- Years of self-directed and collaborative research and development experience
- Technical writing and formal publication experience
- Extraordinary organizational and multi-tasking skills
- Strong interpersonal, leadership and communication skills
- Advanced degree in Computer Science - Ph.D. Nov. 2004 - Computer Graphics
- Strong work ethic and recognition of open-mindedness, continual self-education, innovation and creativity

RELEVANT SKILLS AND EXPERIENCE

- **Research and Development**
 - Researched and developed sketched-based interaction for complex scene creation and simulation control.
 - Researched and developed a system involving interactive procedural 3D modelling as well as optimizing large amounts of geometry (LOD) and using hardware for interactive photorealistic effects.
 - Researched and developed algorithms for simulating sketch-based illustrative results both from images (image processing) and 3D models.
 - Received many awards for research and research publications
 - Specific Technology Skills
 - Operating Systems: User, developer and administrator (Linux, Unix, Windows 2000,98,XP)
 - Programming Languages: extensively C and C++ (GNU and Visual C++). Basic, Lisp etc.
 - Software Development Tools (various revision control tools, scripting, software build tools)
 - Software Interface and Graphics APIs (GLUI, OpenGL, vertex shaders)
 - Extensive graphics algorithm experience (rendering, modelling, animation, hardware accel. etc.)
 - Experience with Maya, 3D Studio Max, Photoshop and Illustrator
 - Experience with database and distributed programming environments
- **Technical Writing and Communication**
 - Primary and co-authored a variety of technical publications
 - Received award for technical publication at Eurographics 1998
 - Formal research presentations at a variety of venues, including international conferences
 - Annual reviewer for several technical publications (e.g. SIGGRAPH, Eurographics etc.)
 - Taught both introductory computer science and technical details of computer graphics both as a formal instructor and hands-on lab instructor
- **Leadership, Organization and Interpersonal Skills**
 - Initiated two pivotal weekly research seminars to overview current publications and lab work and disseminate paper calls. Voluntarily presented overviews of lab work at conferences.
 - Formally taught introductory computer science, coordinating lab instructors and redesigning curriculum.
 - Lab instructor for both junior computer science courses and senior computer graphics courses.
 - Collaborated on several research projects both directly and indirectly associated with thesis work.
 - Helped to coordinate guest speakers and candidate and industry visits.
 - A member of space committee responsible for office allocation sensitivities and the treasurer of CSGSA.
 - Initiated and organized several dept./lab social events (i.e. open houses, summer BBQ's, Christmas parties, sports teams/events)

PROFESSIONAL EXPERIENCE

- **NSERC Post-Doctoral Fellow:** *Computer Graphics Group,* 01/2004- present
Department of Computer Science, University of Calgary
Research primarily in procedural modelling of complex natural scenes, specifically plants. Development of sketch-based control of simulation techniques for assisting modellers in creating large plant collections.
- **Research Assistant:** *Imager Computer Graphics Group* 09-04 2002/2003
Department of Computer Science, University of British Columbia
Initiating and coordinating research seminars, guest speakers, paper and conference deadlines and continued thesis work.
- **Teaching Assistant:**
Introduction to Computer Graphics/Computer Science, Comp. Sci. UBC 09-04 2001/02, 98/99
Introductory Computer Science & Computer Graphics, Comp. Sci. UofA 09-06, 1995 - 98
Dept. of Computing Science & Dept. of Mathematics, Univ. of Alberta 09-04 1993/994
Lab instruction, addressing student inquires/concerns, all aspects of design to marking of assignments and exams, update of website and marks and course/instructor coordination.
- **Instructor:**
Introduction to Computer Science, Dept. of Computing Science, Univ. of Alberta 06-08 1998
Summer Youth University, Faculty of Extension, University of Alberta 06-08 1996, 1997
Involved designed course for high-school and first year computer science students. Designed and coordinated labs and teaching assistants, administration of course (assignments, exams, web-site) and student concerns.
- **Systems Analyst:** *Home Oil Company Ltd. Calgary, Alberta* 05-08 1994-95
Included handling, coordination, design and resolution of problem reports from our internal users with regard to our financial system (database), conversion of financial accounting system to a new platform and design of a new interface.

EDUCATION

- Ph. D. Imager Graphics Group, Computer Science, Univ. of British Columbia Sep. 1998 - Dec. 2003
Modelling of Feather Coat Morphogenesis for Computer Graphics **Degree Awarded May 2004**
Researched and developed a system for modelling developing feather coats as well as movement of the feathers and skin at interactive rates.
- M. Sc. Render Graphics Group, Computing Science, Univ. of Alberta Sep. 1996 - Jul. 1998
Importance Driven Halftoning **Degree Awarded Dec. 1998**
- B. Sc. Computer Science, Industrial Internship Program Sep. 1991 - Apr. 1996
Computing Science, University of Alberta **Degree Awarded Jun. 1996**

PUBLICATIONS

- Modelling Plant Variation through Growth. *Accepted to Eurographics 2005.*
- Mario Costa Sousa, Brett Achron, Daniel Teece, Sheelagh Carpendale, David S. Ebert, Bruce Gooch, Victoria Interrante, Lisa Streit, Oleg Veryovka, *Theory and Practice of Non-Photorealistic Graphics: Algorithms, Methods, and Production Systems*, ACM SIGGRAPH 2003 Course 10. (During Ph.D.)
- Streit, L. and Heidrich, W. (2002) A Biological-Parameterized Feather Model. *Computer Graphics Forum (Eurographics)*. Vol. 21, No. 3, pp. 565-573. (Ph.D. Work)
- Adrian Secord, Wolfgang Heidrich and Lisa Streit (2002) Fast-Primitive Distribution for Illustration. *Eurographics Workshop on Rendering 2002*. pp. 225-236 (During Ph.D.)
- Lisa Streit and Wolfgang Heidrich. (2002) Generating Feather Coats Using Bézier Curves. *Conference Abstracts and Applications of SIGGRAPH 2002 - International Conference on Computer Graphics and Interactive Techniques*. p. 188 (Ph.D. Work)
- Streit, L.M. and Buchanan, J.W.(1998) Importance Driven Halftoning. *Computer Graphics Forum (Eurographics)*. Vol. 17, No. 3, pp.207-217. (M.Sc. Work)
- John Buchanan and Lisa Streit (1998) Variable Shape Halftoning. *Proceedings of IASTED International Conference on Computer Graphics and Image Manipulation*. July 1998. pp. 45-49. (M.Sc. Work)
- John Buchanan, Lisa Streit and Oleg Veryovka (1998) Edge Enhancement Issues in Halftoning. *Graphics Interface 1998*. pp. 209-216. (M.Sc. Work)

FELLOWSHIPS and AWARDS

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| • NSERC Post-Doctoral Fellowship | Ph.D./UBC | Jan. 2004 - Jan. 2006 |
| • University Graduate Fellowship | Ph.D./UBC | Sep. 2001 - Dec. 2002 |
| • NSERC PGS B Graduate Fellowship | Ph.D./UBC | Sep. 1999 - Aug. 2001 |
| • 3rd Prize of Gunther Enderle Award (3rd Best/Best Student Paper, EG '98) | M.Sc./UofA | Aug. 1998- Aug. 1999 |
| • Mary Louise Imire Graduate Student Award | M.Sc./UofA | Aug. 1998 |
| • Graduate Research Assistantship Award (Highest M.Sc. Grades) | M.Sc./UofA | Sep. 1997 - Apr. 1998 |
| • Graduate Studies Research Scholarship | M.Sc./UofA | Sep. 1997 - Apr. 1998 |
| • Dean's Honour Role | B.Sc./UofA | 1992/1993 1996/1997 |

ADDITIONAL INFORMATION

Memberships

- Association of Computing Machinery (ACM), since 1999
- Eurographics Association, since 1999
- Institute of Electrical and Electronics Engineers (IEEE), since 1998

- A list of research projects and complete list of publications can be found at www.cpsc.ucalgary.ca/~streitl
- A full version of my CV can be found at www.cpsc.ucalgary.ca/~streitl/cv.pdf

Review of Research Publications

- ACM SIGGRAPH Annual Conference 2001, 2002, 2005
- Eurographics Conference 2004, 2005
- Eurographics Symposium on Rendering 2003
- Graphics Interface 2001-2005
- IEEE Transactions on Image Processing 2004
- Journal of Graphics Tools 2002 - Special Issue on Hardware Accelerated Rendering Techniques
- Visual Computer 2004

REFERENCES

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| <ul style="list-style-type: none">• Dr. Wolfgang Heidrich
Department of Computer Science
2366 Main Mall
The University of British Columbia
Vancouver, BC
V6T 1Z4 CANADA
e-mail: heidrich@cs.ubc.ca
tele: +1 (604) 822-4326 | <ul style="list-style-type: none">• Dr. John Buchanan
Electronic Arts Canada
4330 Sanderson Way
Burnaby, BC
V5G 4X1 CANADA
e-mail: juancho@ea.com
tele: +1 (604) 729-6370 |
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Further references available upon request.