

ROBERT D. KALNINS

B.ENG, M.A., PH.D.

[HTTP://WWW.CS.PRINCETON.EDU/~RKALNINS](http://www.cs.princeton.edu/~rkalnins)

RKALNINS@ALUMNI.PRINCETON.EDU

EDUCATION



1999 – 2004

Princeton University - Department of Computer Science
Princeton, New Jersey, U.S.A.

- Earned M.A. and Ph.D. degrees in Computer Science under advisor Professor Adam Finkelstein.
- Researched and developed tools for non-photorealistic (*i.e.*, artistically stylized) 3D animation.



1997 – 1999

Princeton University - Department of Electrical Engineering
Princeton, New Jersey, U.S.A.

- Studied nanoscale quantum-effect devices and physics under advisor Professor Steven Chou.



1993 - 1997

McMaster University - Department of Engineering Physics
Hamilton, Ontario, Canada

- Earned B. Eng. degree with distinction in the Department of Engineering Physics.
- Achieved highest GPA amongst the 3 500 graduates, and awarded over ten scholarships.

PUBLICATIONS

REFEREED ARTICLES



- Kalnins, R. D., Markosian, L., Meier, B.J., Kowalski, M.A., Lee, J.C., Davidson, P., Webb, M., Hughes, J.F., and A. Finkelstein. “WYSIWYG NPR: Drawing Strokes Directly on 3D Models.” *Proceedings of SIGGRAPH 2002 in ACM Transactions on Graphics*, 21 (3), 755-762, 2002.
http://www.cs.princeton.edu/gfx/pubs/Kalnins_2002_WND



- Kalnins, R. D., Davidson, P., Markosian, L., and A. Finkelstein. “Coherent Stylized Silhouettes.” *Proceedings of SIGGRAPH 2003 in ACM Transactions on Graphics*, 22 (3), 856-861, 2003.
http://www.cs.princeton.edu/gfx/pubs/Kalnins_2003_CSS

PH.D. THESIS



- Kalnins, R. D. “WYSIWYG NPR: Interactive Stylization for Stroke-Based Rendering of 3D Animation.” Ph.D. dissertation in Computer Science, Princeton University, Princeton, New Jersey, June 2004.
http://www.cs.princeton.edu/gfx/pubs/_2004_WNI

SOFTWARE PROJECTS



Jot
Stylized Rendering of 3D Animation
<http://jot.cs.princeton.edu>

- Prototype platform for tools that enable an artist to sketch directly into 3D scenes to describe how the animated objects will be rendered in stroke-based artistic styles.
- Stylizations too rich and complex to animate by hand are rendered with frame-to-frame coherence automatically, even during real-time interactive animation.
- This emerging class of tools for stylized rendering will significantly extend the aesthetic range of CGI beyond today's narrow scope of photorealistic rendering systems.

PROFESSIONAL EXPERIENCE



1995 - 1997 Summers
McMaster University – Department of Engineering Physics
Hamilton, Ontario, Canada

- Developed equipment control and data analysis software for the semiconductor laser group.



1993 January - July
University of Toronto – Department of Physics
Toronto, Ontario, Canada

- Performed design simulations for the proposed international Superconducting Supercollider.

AWARDS

1999 - 2004

- *Ph.D. Fellowship* - Full tuition and stipend for research in Computer Science at Princeton University

1997 - 1999

- *NSERC Graduate Fellowship* - Two-year fellowship sponsored by Canadian federal government
- *Ph.D. Fellowship* - Full tuition and stipend for research in Engineering at Princeton University

1993 - 1997

- *Governor General's Medal* - Government award for highest GPA amongst all graduates
- *APEO Gold Medal* - Professional award for highest GPA amongst engineering graduates
- *University Scholarship* - Senior year scholarship from McMaster University
- *Phi Delta Theta Foundation Award* - Scholarship from Phi Delta Theta organization
- *Ray Lawson Scholarship* - Scholarship awarded by McMaster University
- *Dalley Memorial Scholarship* - Scholarship awarded by McMaster University
- *NSERC Research Award* - Research stipend sponsored by Canadian federal government
- *APEO Scholarship* - Scholarship from Association of Professional Engineers of Ontario
- *University Scholarship* - Sophomore year scholarship from McMaster University
- *Canada Scholarship* - Four-year fellowship sponsored by Canadian federal government
- *Chancellor's Scholarship* - Entrance scholarship from McMaster University