Prof. Jaakko Lehtinen

Curriculum Vitae
February 15, 2017

1. Personal Information

Full name	Jaakko Tapani Lehtinen
Date of birth	1977
Place of birth	Vantaa, Finland
Citizenship	Finnish

2. Education, degrees received

- 2007 D.Sc. (Tech.), with honors
  - thesis "Theory and Algorithms for Efficient Physically-Based Illumination"
  - Helsinki University of Technology
  - Supervisor Prof. Lauri Savioja

- 2004 M.Sc. (Tech.)
  - thesis "Foundations of Precomputed Radiance Transfer"
  - Helsinki University of Technology

- 1996 matriculation examination
  - Linnankosken lukio, Porvoo, Finland
  - nationwide ~99.9th percentile that year (5 laudatur, 1 eximia cum laude approbatur)

4. Current Positions

- **Associate professor** (tenured and promoted from assistant professor in May 2016)
  Department of Computer Science, Aalto University
  September 2012-

- **Principal Research Scientist**
  NVIDIA Corporation, Helsinki, Finland
  June 2010-

5. Previous work experience

- **Postdoctoral Associate** with Professor Frédo Durand
  Computer Science and Artificial Intelligence Laboratory (CSAIL)
  Massachusetts Institute of Technology
  November 2007-May 2010

- **Researcher** (research assistant, then PhD student)
  Laboratory of Media Technology, Helsinki University of Technology
  2003-2007

- **Senior programmer**
  Remedy Entertainment Ltd., Espoo, Finland
  Responsible for major graphics technology features for worldwide blockbuster hit games Max Payne, Max Payne 2, and Alan Wake.

6. International research visits

- Massachusetts Institute of Technology
  In addition to postdoc time in 2007-10, several visits per year 2010-2017.

7. Positions of trust in scientific communities

- **Papers co-chair**, ACM SIGGRAPH High-Performance Graphics 2013
- **Papers co-chair**, EUROGRAPHICS Symposium on Rendering 2015
- Member of the working group on rendering of the EUROGRAPHICS association, 2015-

8. Awards

- ERC Starting Grant 2014 AA ranking ("fulfills all ERC conditions for excellence")
- NVIDIA Graduate Fellowship, consisting of USD 25 000 in research funding, 2006-2007.
- Teacher of the Year, Aalto University Computer Science Degree Program, 2013
- Best class, Aalto University Computer Science Degree Program, 2012, 2013, 2014, 2015

9. Research funding

- Academy of Finland Grant# 277833 ("Robust Unbiased Image Synthesis"). Approx. 500k€. Grants awarded to 16% of applicants.

10. Supervision of research

- Leader of the computer graphics research group at Aalto University 2012-
- Graduated PhD students
  - Mr. Miika Aittala (2011-, graduation October 2016, postdoc at INRIA 2016-17, MIT 2017-)
    - Mr. Aittala's thesis described as "ONE OF THE VERY FEW BEST DISSERTATIONS WORLDWIDE IN GRAPHICS THIS YEAR" (thesis examiner/opponent Prof. Steve Marschner of Cornell University) and "THE DISSERTATION IS AMONG THE STRONGEST IN THE FIELD OF MATERIAL CAPTURE IN A DECADE" (thesis pre-examiner Prof. Szymon Rusinkiewicz of Princeton University).
- PhD students under supervision
  - Mr. Markus Kettunen (2013-)
  - Mr. Ari Silvennoinen (2013-)
- ~10 Masters' theses supervised

11. Other academic merits

- **Associate editor**
  - **ACM Transactions on Graphics (JuFo 3)**
  - Journal of Computer Graphics Techniques (JCGT)
- **Papers committee member (SIGGRAPH 2011, 2012, 2014, 2016, 2017; EUROGRAPHICS 2010, 2013**, Eurographics Symposium on Rendering 2008, 2009, 2010, 2012, 2013, Pacific Graphics 2008, IEEE Symposium on Interactive Ray Tracing 2008, ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games 2008)
- **Paper referee** for ACM SIGGRAPH 2006-2017, ACM SIGGRAPH Asia 2008-2016, Eurographics 2005-2016, Computer Graphics Forum 2006-2016, Eurographics Symposium on Rendering 2006-2016, Pacific Graphics 2006, IEEE Transactions on Visualization and Computer Graphics 2007, IEEE Transactions on Multimedia 2008, International Journal on Computer Vision 2013, Visual Computer 2013.

- **Thesis committee chairman** for Dr. Petrik Clarberg (Lund University, 2012)
- **Funding application reviewer**
    - The Austrian Science Foundation (FWF)
    - ETH Zürich Research Commission
    - Helsinki Doctoral Education Network in Information and Communications Technology (HICT)

12. Scientific and societal impact

- Google Scholar h-index 17, 993 citations
  (February 15, 2017)

- Cited by all major realistic image synthesis
  researchers in the world

- Industrial impact

    - Research leading to unprecedented ability to capture photorealistic material appearance from cell phone photos (Aittala, Weyrich, and Lehtinen 2015; Aittala, Aila, and Lehtinen 2016) currently being productized by NVIDIA Corporation on a license from Aalto University.

    - Gradient-domain path tracing (Kettunen et al., 2015) is currently being implemented at Weta Digital, the foremost visual effects company in the world, in their production environment.

    - Served as graphics technology programmer for Alan Wake (2009), Max Payne 1 & 2 (2001, 2003) developed by Remedy Entertainment. **The two Max Payne games have sold in excess of 7 million copies worldwide and generated $100Ms of revenue,** and featured several never-seen-before graphics techniques. See www.maxpayne.com for the list of awards received by the games, including numerous "Game of the Year" honors. Alan Wake has **sold over 2 million copies** worldwide and received critical praise, among others “Game of the Year” from Time Magazine.

    - Final Reality (1997), lead programmer. A freeware benchmark suite for measuring the graphics performance of PCs. This project spun off Futuremark Ltd., makers of the 3DMark benchmarks. **Tens of millions of copies** were distributed.