

# Curriculum Vitae

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<https://aabbtree77.github.io/>

## 1 Education

B.Sc. (Electrical Eng.), 1999, Vilnius Gediminas Technical University.  
M.Sc. (Tech.), 2001, D.Sc. (Tech.), 2008, Helsinki University of Technology.

## 2 Employment

01.02.2014–Now: Hiatus/Self-Employed: IoT projects mostly, see Sect. 7, 8.

01.02.2013–31.01.2014: Faculty of Informatics at the University of Lugano,  
Via Giuseppe Buffi 13, CH-6904 Lugano, Switzerland.

01.09.2011–31.12.2012: DEMO, École Nationale Supérieure des Mines de Saint-Étienne,  
158 cours Fauriel, 42023 Saint-Étienne, CEDEX2, France.

01.09.2008–31.08.2009: Department of Neurobiology at the University of California, Los Angeles,  
73-235 CHS, Los Angeles, CA 90095-1763.

01.05.2000–31.07.2008: Faculty of Information and Natural Sciences at Helsinki University of Technology,  
P.O.Box 5400 (Konemiehentie 2), FI-02015, Finland.

## 3 Publications

1. D. Boscaini, R. Girdziušas, and M. M. Bronstein. Coulomb shapes: using electrostatic forces for deformation-invariant shape representation. In *Eurographics W. 3D Object Retrieval*, 2014. <https://diglib.eg.org/handle/10.2312/3dor.20141044.009-015>.
2. R. Girdziušas, J. Janusevskis, and R. Le Riche. On integration of multi-point improvements. In *NIPS W. Bayesian Opt. Dec. Making*, 2012. [http://www.emse.fr/~leriche/integ\\_multiEI\\_nips2012\\_final.pdf](http://www.emse.fr/~leriche/integ_multiEI_nips2012_final.pdf).
3. R. Le Riche, R. Girdziušas, and J. Janusevskis. A study of asynchronous budgeted optimization. In *NIPS W. Bayesian Opt. Dec. Making*, 2012. [http://www.emse.fr/~leriche/synchro\\_asynchro\\_final.pdf](http://www.emse.fr/~leriche/synchro_asynchro_final.pdf).
4. R. Girdziušas, R. Le Riche, F. Viale, and D. Ginsbourger. Parallel budgeted optimization applied to the design of an air duct. 2012. <http://hal.archives-ouvertes.fr/hal-00723427>.
5. R. Le Riche, R. Girdziušas, D. Villanueva, G. Picard, and D. Ginsbourger. Squaring the engineering optimization circle: Distributed global optimization algorithms for computationally expensive problems. 2012. [http://www.emse.fr/~leriche/rio2012\\_LeRiche.pdf](http://www.emse.fr/~leriche/rio2012_LeRiche.pdf).
6. J. Janusevskis, R. Le Riche, D. Ginsbourger, and R. Girdziušas. Expected improvements for the asynchronous parallel global optimization of expensive functions: Potentials and challenges. In *LNCS*, volume 7219, pages 413–418, 2012.
7. R. Girdziušas and D. Ringach. The Jacobian singularity in the Thomson problem. Unpublished. 2009. <http://aabbtree77.github.io/pdfs/ucla2009.pdf>.

8. R. Girdziušas. *Stability and Inference in Discrete Diffusion Scale-Spaces*. PhD thesis, Helsinki Univ. of Tech. <https://aaltodoc.aalto.fi/handle/123456789/2999>. Advisors: E. Oja and J. Laaksonen (Helsinki Univ. of Tech.). External examiners: S. Siltanen (Tampere Univ. of Tech.) and K. Ruotsalainen (Univ. of Oulu). Opponents: S. Siltanen and A. Gotchev (Tampere Univ. of Tech.).
9. R. Girdziušas and J. Laaksonen. When is a discrete diffusion a scale-space? In *ICCV*, 2007. <http://dx.doi.org/10.1109/ICCV.2007.4408895>.
10. R. Girdziušas and J. Laaksonen. How marginal likelihood inference unifies entropy, correlation and SNR-based stopping in nonlinear diffusion scale-spaces. In *LNCS*, volume 4843, pages 811–820, 2007.
11. R. Girdziušas and J. Laaksonen. Jacobi alternative to Bayesian evidence maximization. In *LNCS*, volume 3697, pages 247–252, 2005.
12. R. Girdziušas and J. Laaksonen. Use of input deformations with Brownian motion. In *LNCS*, volume 3686, pages 219–228, 2005.
13. R. Girdziušas and J. Laaksonen. Optimal stopping and constraints for diffusion models of signals with discontinuities. In *LNAI*, volume 3720, pages 576–583, 2005.
14. R. Girdziušas and J. Laaksonen. Optimal ratio of Lamé moduli with application to motion of Jupiter storms. In *LNCS*, volume 3540, pages 1096–1106, 2005.
15. R. Girdziušas and J. Laaksonen. Gaussian processes of nonlinear diffusion filtering. In *IJCNN*, pages 1012–1017, 2005. <http://dx.doi.org/10.1109/IJCNN.2005.1555991>.
16. R. Girdziušas and J. Laaksonen. Gaussian process regression with fluid hyperpriors. In *LNCS*, volume 3316, pages 567–572, 2004.
17. M. Aksela, R. Girdziušas, J. Laaksonen, E. Oja, and J. Kangas. Methods for adaptive combination of classifiers. *IJDAR*, 6(1):23–41, 2003.
18. M. Aksela, R. Girdziušas, J. Laaksonen, E. Oja, and J. Kangas. Class-confidence critic combining. In *IWFHR*, pages 201–206, 2002. <http://dx.doi.org/10.1109/IWFHR.2002.1030909>.
19. R. Girdziušas. Discriminative online recognition of isolated handwritten characters. In *Master's thesis*, 2001.
20. R. Girdziušas and J. Laaksonen. Multilayer perceptron approach to non-rigid image matching. In *ICONIP*, volume 1, pages 491–496, 2001.

## 4 Talks

- Presentations: ICONIP 2001, 2004; ICAPR 2005; ICANN 2005; OMD2 meetings (Paris 2011, 2012).
- Posters: SCIA 2005; IJCNN 2005; ECML 2005; ICCV 2007; ACCV 2007.
- Invited talk at the DIKU group, the University of Copenhagen, 2008.

## 5 Awards

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|------------------------|---|
| 01.09.1999–01.06.2000: | Nokia scholarship (Natalia Kantola, Robertas Tamulevičius). |
| 01.01.2002–01.07.2006: | ComMIT grant (postgraduate studies).                        |
| 09.11.2005–09.15.2005: | ICANN travel grant.   |
| 07.01.2006–12.01.2006: | HUT scholarship.  |
| 01.22.2008–01.24.2008: | Travel grant (Prof. Mads Nielsen).                          |
| 04.03.2008:            | Doctoral thesis award: “Pass with Distinction”.             |

## 6 Recommendation Letters

- Prof. Erkki Oja, Konemiehentie 2, P.O. Box 5400, 02015 HUT, Finland.  
Email: Erkki.Oja@hut.fi, phone: +358-9-451 3265, fax: +358 9 451 3277.
- Doc. Jorma Laaksonen, Konemiehentie 2, P.O. Box 5400, 02015 HUT, Finland.  
Email: Jorma.Laaksonen@hut.fi, phone: +358-9-451 3269, fax: +358 9 451 3277.
- Prof. Dario Ringach, Dep. of Neurobiology, UCLA, Los Angeles, CA 90095-1563.  
Email: dario@ucla.edu, phone: +310 825 6606.
- Doc. Rodolphe Le Riche, DEMO, 158 cours Fauriel, 42023 Saint-Étienne, CEDEX 2.  
Email: leriche@emse.fr, phone: +336 31 262 678.
- Assist. Prof. Michael M. Bronstein, SI-109, Via Giuseppe Buffi 13, 6904, Lugano, Switzerland.  
Email: michael.bronstein@usi.ch, phone: +41 58 666 4120.

## 7 Code on github.com

C, avr-gcc:	<a href="https://github.com/aabbtree77/adast">https://github.com/aabbtree77/adast</a> <a href="https://github.com/aabbtree77/atmega88-enc28j60-ethernet">https://github.com/aabbtree77/atmega88-enc28j60-ethernet</a> <a href="https://github.com/aabbtree77/atmega8-ssd1306-ds18b20-dht22">https://github.com/aabbtree77/atmega8-ssd1306-ds18b20-dht22</a> <a href="https://github.com/aabbtree77/digispark-attiny85-command-line">https://github.com/aabbtree77/digispark-attiny85-command-line</a> <a href="https://github.com/aabbtree77/hw-260-attiny45-dht22">https://github.com/aabbtree77/hw-260-attiny45-dht22</a>
C++11:	<a href="https://github.com/aabbtree77/what-happened-to-PyPy">https://github.com/aabbtree77/what-happened-to-PyPy</a>
Go, OpenGL, GLSL:	<a href="https://github.com/aabbtree77/twinpeekz">https://github.com/aabbtree77/twinpeekz</a>
Python:	<a href="https://github.com/aabbtree77/esp32-vpn">https://github.com/aabbtree77/esp32-vpn</a> <a href="https://github.com/aabbtree77/esp12e-usb2ttl-ds18b20-dht11">https://github.com/aabbtree77/esp12e-usb2ttl-ds18b20-dht11</a> <a href="https://github.com/aabbtree77/MNIST-0.17">https://github.com/aabbtree77/MNIST-0.17</a> (fork) <a href="https://github.com/aabbtree77/chateaudanet">https://github.com/aabbtree77/chateaudanet</a> <a href="https://github.com/aabbtree77/sendrecv">https://github.com/aabbtree77/sendrecv</a>
JavaScript, WebGL:	<a href="https://github.com/aabbtree77/twgl-webpack">https://github.com/aabbtree77/twgl-webpack</a> (fork)
LaTeX:	<a href="https://github.com/aabbtree77/rgresume">https://github.com/aabbtree77/rgresume</a>
HTML, CSS:	<a href="https://github.com/aabbtree77/aabbtree77.github.io">https://github.com/aabbtree77/aabbtree77.github.io</a>

## 8 Bug Reports/Fixes on github.com

Porting C++ Code from Windows to Linux:	<a href="https://github.com/Max1412/Graphics2/issues/24">Max1412/Graphics2/issues/24</a>
uint vs. uint32 in OpenGL:	<a href="https://github.com/go-gl/gl/issues/128">go-gl/gl/issues/128</a>
Screen Tearing:	<a href="https://github.com/godlikepanos/anki-3d-engine/issues/59">godlikepanos/anki-3d-engine/issues/59</a>
Deep vs. Shallow Copying:	<a href="https://github.com/polydojo/jispy/issues/1">polydojo/jispy/issues/1</a>

## 9 Additional Information

Date of birth:	30.12.1977.
Citizenship:	Lithuanian (Lithuania, European Union).
Languages:	English (7/10), Russian (8/10), Lithuanian (9/10).
Driver's licence:	B (U.S., 2008-2009).
Highest Chess ELO:	2227 (Blitz on lichess.org, 23.07.2022).
Erdős number:	5 (P. Erdős–B. Bollobas–H. Mannila–E. Bingham–E. Oja). 4 (P. Erdős–A. M. Odlyzko–L. J. Guibas–M. M. Bronstein).