

# Andrew B. Frigyik

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## Positions

- 2021- Associate Professor, Óbuda University, Bánki Donát Faculty of Mechanical and Safety Engineering  
2012-2021 Assistant Professor, U. of Pécs, Institute of Mathematics and Informatics  
2009-2012 Research Associate, U. of Washington Dept. of Electrical Eng.  
2006-2009 Research Assistant Professor of Mathematics, Purdue U.

## Teaching experience

	Level	Year	University
Calculus And Analytic Geometry	100	2006	Purdue U.
Advanced Multivariable Calculus	300	2006	U. of Washington
Linear Algebra	300	2003-2005	U. of Washington
Linear Algebra	300	2007-2009	Purdue U.
Ordinary Differential Equations	300	2008	Purdue U.
Introduction To Real Analysis	400	2008-2009	Purdue U.
Engineering Mathematics	500	2009	Purdue U.
Convex Optimization	500	2008	Purdue U.
Introduction to Real Analysis	400	2013-	U. of Pécs
Probability Theory and Stat.	300	2012-	U. of Pécs
Probability Theory and Stat.	400	2013-	U. of Pécs
Linear Algebra	300	2012	U. of Pécs
Calculus	100	2012-2013	U. of Pécs
Stochastic Processes	400	2013-2021	U. of Pécs
Optimizaton Methods	400	2021-	Óbuda University
Modeling and Simulation	400	2021-	Óbuda University
Applied Mathematics	400	2021-	Óbuda University

## Education

- 2003-2006 Ph.D. Department of Mathematics, U. of Washington, Thesis Adviser: Professor Gunther Uhlmann  
2000-2003 Graduate st. Department of Applied Mathematics, U. of Washington  
1997-2000 Graduate st. Technical U. of Budapest, (Hungary)  
1992-1997 Diploma Technical U. of Budapest, (Hungary)

## Achievements

- 2008 Outstanding Teacher Award from the College of Science, Purdue U.
- 1997-2000 State scholarship to pursue graduate studies at Technical U. of Budapest
- 1998 Erasmus scholar
- 1997 Distinguished Diploma (top of the class) Major: Integrated Circuit Theory and Design, Minor: Intelligent Systems

## Academic Visits

- 2005 3 months at Purdue University working with Professor Plamen Stefanov.
- 1999 3 months at University College Dublin (Ireland) as a researcher under the supervision of Professor Michael Peter Kennedy.
- 1998 6 months with Silicon Systems Limited (Ireland) designing and analyzing mixed-signal circuits.
- 1998 3 months at University College Dublin (Ireland) as an Erasmus-student under the supervision of Professor Michael Peter Kennedy.
- 1997 3 months at University of Notre Dame (IN) working on my Diploma work.

## Languages

Fluent English and Hungarian and competent Russian and German.

## Publications

- [1] L. M. Dani, D. Tóth, A. B. Frigyik, and Z. Kozma, “Beyond henssge’s formula: Using regression trees and a support vector machine for time of death estimation in forensic medicine,” *Diagnostics*, vol. 13, no. 7, p. 1260, 2023.
- [2] A. Ortega, A. B. Frigyik, and M. Koniorczyk, “Orders of chaoticity of unitaries,” *Physica Scripta*, vol. 98, no. 3, p. 034 003, Feb. 2023. DOI: 10.1088/1402-4896/acb7ab. [Online]. Available: <https://dx.doi.org/10.1088/1402-4896/acb7ab>.
- [3] B. A. Frigyik, “Kvantumkriptográfia: Kvantumkulcs-elosztás, egy nem-technikai megközelítés,” *BIZTONSÁGTUDOMÁNYI SZEMLE*, vol. 4, pp. 51–60, 2022.
- [4] B. A. Frigyik, “Quantum cryptography: Quantum key distribution, a non-technical approach,” in *Mérnöki Szimpózium a Bánkin Előadásai : Proceedings of the Engineering Symposium at Bánki (ESB2021)*, 2022, pp. 61–69. [Online]. Available: <https://doi.org/10.48550/arXiv.2211.17089>.

- [5] T. Szakács and B. A. Frigyik, “Vehicle dynamic development and system analysis project,” *IOP CONFERENCE SERIES: MATERIALS SCIENCE AND ENGINEERING*, 2022, ISSN: 1757-8981.
- [6] J. Bernád and B. A. Frigyik, “On the limit relation for the quantum relative entropy,” *JOURNAL OF MATHEMATICAL PHYSICS*, vol. 58, 2017, ISSN: 0022-2488. DOI: 10.1063/1.4986246.
- [7] S. Feldman, M. Gupta, and B. A. Frigyik, “Revisiting stein’s paradox: Multi-task averaging,” *JOURNAL OF MACHINE LEARNING RESEARCH*, vol. 15, pp. 3441–3482, 2014, ISSN: 1532-4435.
- [8] S. Feldman, M. Gupta, and B. A. Frigyik, “Multi-task averaging,” in *26th Annual Conference on Neural Information Processing Systems 2012*, 2012, pp. 1178–1186.
- [9] B. A. Frigyik and M. Gupta, “Bounds on the bayes error given moments,” *IEEE TRANSACTIONS ON INFORMATION THEORY*, vol. 58, pp. 3606–3612, 2012, ISSN: 0018-9448. DOI: 10.1109/TIT.2012.2187634.
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- [11] B. A. Frigyik, M. Gupta, and Y. Chen, “Shadow dirichlet for restricted probability modeling,” in *Advances in Neural Information Processing Systems 23*, 2010, pp. 613–621.
- [12] B. A. Frigyik, S. Srivastava, and M. Gupta, “An introduction to functional derivatives,” in *University of Washington Electrical Engineering Technical Report UWEETR 2008: Department of Electrical Engineering*, 2008, pp. 1–7.
- [13] B. A. Frigyik, S. Srivastava, and M. Gupta, “Functional bregman divergence,” in *2008 IEEE International Symposium on Information Theory, ISIT 2008*, 2008, pp. 1681–1685. DOI: 10.1109/ISIT.2008.4595274.
- [14] B. A. Frigyik, S. Srivastava, and M. Gupta, “Functional bregman divergence and bayesian estimation of distributions,” *IEEE TRANSACTIONS ON INFORMATION THEORY*, vol. 54, pp. 5130–5139, 2008, ISSN: 0018-9448. DOI: 10.1109/TIT.2008.929943.
- [15] B. A. Frigyik, P. Stefanov, and G. Uhlmann, “The x-ray transform for a generic family of curves and weights,” *JOURNAL OF GEOMETRIC ANALYSIS*, vol. 18, pp. 89–108, 2008, ISSN: 1050-6926. DOI: 10.1007/s12220-007-9007-6.
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