

FERENC ÁGOSTON BARTHA

Phone: +1 832 989 9693
Address: 7490 Brompton Road, Apt. #318, Houston, TX-77025
E-mail: Ferenc.A.Bartha@rice.edu
WWW: <http://fab2.web.rice.edu/>

BRIEF INTRODUCTION

I have several years of research and teaching experience gained at various universities. I hold a PhD degree in mathematics from University of Bergen and an MSc degree from University of Szeged. I speak fluent English and decent Norwegian, my main field of interest includes dynamical systems, delay equations, rigorous computations and automatic differentiation.

WORK EXPERIENCE

2014 March – present

Rice University, Department of Computer Science Houston, TX, USA
(of which 50% is at **Halmstad University**) Halmstad, SWEDEN

Postdoctoral Research Associate

- Validated simulation of hybrid systems
-

2013 January – 2013 June

Norwegian University of Science and Technology, Trondheim, NORWAY
Department of Mathematical Sciences

Lecturer (Universitetslektor)

- teaching*: Calculus II (in Norwegian, 200+ students)
-

2012 October – 2012 December

University of Bergen Bergen, NORWAY

Lecturer (Timelønnet Lektor)

- teaching*: Mathematical problem solving and presentation (in Norwegian)
-

2008 October – 2012 October

University of Bergen, Department of Mathematics Bergen, NORWAY
(of which more than half year at **University of Uppsala**) Uppsala, SWEDEN

PhD student, Research Fellow

- Application of interval arithmetic and automatic differentiation for a range of dynamical systems (DE, ODE, DDE, PDE)
 - teaching*: Mathematical problem solving and presentation ('11 and '12)
 - teaching*: Calculus I ('10)
-

2009 January – 2012 April

Klubb Fantoft, SIB Bergen, NORWAY

Shift leader, Bartender

- volunteer work*
-

2003 September – 2008 June

University of Szeged (SZTE),
Department of Applied Mathematics

Szeged, HUNGARY

Student Lecturer (demonstrátor)

- *teaching:* Practice groups “Calculus for programmers”, “Probability theory”, “Basics of stochastics”

SCIENTIFIC PUBLICATIONS

F Bogár, F Bartha, FA Bartha, NH March
**Pauli potential from Heilmann-Lieb
electron density obtained by summing
hydrogenic closed-shell densities over the
entire bound-state spectrum**
Physical Review A, Volume 83, Issue 1, 2011

FA Bartha, Á Garab, T Krisztin
**Local stability implies global stability for
the 2-dimensional Ricker map**
Journal of Difference Equations and Applications,
Volume 19, Issue 12, 2013
Best JDEA Paper 2013 Award

FA Bartha

**Computer-aided proofs and algorithms in
analysis**

(PhD Thesis) Bergen Open Research Archive, 2013

FA Bartha, H Munthe-Kaas

**Computing of B-series by automatic
differentiation**

Discrete and Continuous Dynamical Systems - Series A,
Volume 34, Issue 3, 2014

FA Bartha, Á Garab

**Necessary and Sufficient Condition for the
Global Stability of a Delayed Discrete-Time
Single Neuron Model**

Journal of Computational Dynamics,
Volume 1, Issue 2, 2014

EDUCATION

2008 September – 2013 June

University of Bergen, Norway,
PhD student

thesis: Computer-aided proofs and
algorithms in analysis
supervisor: Warwick Tucker

2008 September – 2013 January

University of Szeged, Hungary,
PhD student

2006 September – 2007 February

University of Perugia, Italy,
Erasmus student

2003 September – 2008 June

University of Szeged, Hungary,
Mathematics Major (5 years program)
all grades are of the highest level.

thesis: The existence of the Morse
decomposition of the global attractor
for several state-dependent delay
differential equations (in Hungarian)
supervisor: Tibor Krisztin

1998 September – 2003 June

Radnóti Miklós High School, Hungary,
Special Mathematics
all grades are of the highest level.

SKILLS

Key skills

fast learner, keen insights, logical thinking

Computer skills

advanced user, C++, MATLAB, MAPLE,
LaTeX, MS Office

Language skills

<i>native</i>	Hungarian	C2
<i>advanced</i>	English	C1
<i>advanced</i>	Norwegian	B2 bokmål A2 nynorsk
<i>intermediate</i>	Italian	B1
<i>beginner</i>	French	A2
<i>beginner</i>	German	A1

PERSONAL

Interests history, languages

Hobbies kayak, swimming, instruments