

Curriculum Vitae - Erika Ábrahám

Contact Information

Name	Erika Ábrahám
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Personal Details

Date and place of birth	November 9, 1970, Szeged, Hungary
Nationality	Hungarian
Sex	female
Family status	unmarried, two children (14 and 17)

Education

1985-1989	Radnóti Miklós High School, Szeged, Hungary
1990-1991	Acquisition of the German matriculation standard
1992-1999	Studies, Christian-Albrechts-University Kiel, Germany
Degree	Diploma
Major/Minor	Computer Science / Physics
Average mark	1.0 (with award)
1999-2005	Ph.D. student, Christian-Albrechts-University Kiel, Germany
Jan 2005	Ph.D. received from the University of Leiden, The Netherlands. Promotors: Prof. W.-P. de Roever and Prof. J. N. Kok Co-Promotors: Prof. F. S. de Boer and Prof. M. Steffen
2005-2007	Researcher, Albert-Ludwigs-University Freiburg, Germany
2007-2008	Researcher, Jülich Research Centre, Germany
2008-2013	Junior professor, RWTH Aachen University, Germany
2013-today	Full professor, RWTH Aachen University, Germany

Project participation

MobiJ (2002-2005)	<i>Assertional methods for mobile asynchronous channels in Java</i> Dutch-German DFG-NWO bilateral project, RO 1122/9-1, RO 1122/9-2, RO 1122/9-4
OMEGA (2002-2005)	<i>Correct development of real-time embedded systems</i> European project, IST-2001-33522
AVACS (2005-2007)	<i>Automatic verification and analysis of complex systems</i> DFG Transregional Collaborative Research Center 14
VOSS (2008)	<i>Validation of stochastic systems</i> Dutch-German NWO-DFG bilateral cooperation program

Project acquisition

AlgoSyn (2008-today)	<i>Algorithmic synthesis of reactive and discrete-continuous systems</i> DFG Research Training Group 1298 (1 scholarship holder and 3 student assistants in my group, travel funds)
ROCKS (2009-today)	<i>Rigorous dependability analysis using model checking techniques for stochastic systems</i> (German site coordinator) Dutch-German NWO-DFG bilateral cooperation program (1 student assistant in my group, travel funds)
HySmart (2010-today)	<i>Hybrid systems modeling and analysis with rewriting techniques</i> (project coordinator) Norway-German DAAD ppp project, ID 50727668 (travel funds)
CeBUG (2010-today)	<i>Counterexample generation for stochastic systems using bounded model checking</i> (project coordinator) DFG project, AB 461/1-1 (1 researcher and 2 student assistants in my group, travel funds)
OASys (2012-today)	<i>Online algorithms for optimal control of hybrid propulsion systems</i> (project coordinator) DFG project, AB 461/2-1 (0.5 researcher in my group, travel funds)
HyPro (2013-today)	<i>A Toolbox for the Reachability Analysis of Hybrid Systems using Geometric Approximations</i> (project coordinator) DFG project, AB 461/4-1 (1 researcher in my group, travel funds)

Further Achievements and Contributions

Diploma award	University Kiel, 1999
Best presentation award	Int. Conf. on Engineering of Complex Computer Systems (ICECCS'01)
Best paper award	CSI Int. Symp. on Computer Science and Software Engineering (CSSE'11)
Invited talks	Int. Symp. on Formal Methods for Components and Objects (FMCO'02) Computability in Europe (CiE'06) Dagstuhl Seminar "Algorithms and Applications for the Next Generation of SAT Solvers", 2009 Workshop on Automata and Logic for Data Manipulating Programs (LIAFA'10) Dagstuhl Seminar "Verification over Discrete-Continuous Boundaries", 2010 Workshop on Probabilistic and Hybrid System Verification, Beijing, China, 2013 Formal Description of Programming Concepts (IFIP Working Group 2.2), Lisbon, Portugal, 2013 Workshop on Computable Analysis and Rigorous Numerics, Maastricht, The Netherlands, 2013 <i>Formal methods for hybrid systems</i> , Passau, Germany, 2013 Int. School on Formal Methods for the Design of Computer, Communication and Software Systems: Executable Software Models (SFM-14:ESM), 2014
PC member, conference co-chair	Int. Workshop on Rewriting Techniques for Real-Time Systems (RTRTS'10) Int. Symp. on Theoretical Aspects of Software Engineering (TASE'10) Int. Symp. on Formal Aspects of Component Software (FACS'11) Int. Symp. on Fundamentals of Computation Theory (FCT'11) Int. Conf. on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH'11) Int. Conf. on Hybrid Systems: Computation and Control (HSCC'12) Int. Conf. on Quantitative Evaluation of Systems (QEST'12) Int. Symp. on Formal Aspects of Component Software (FACS'12) Int. Conf. on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH'12) Int. Workshop on Numerical Software Verification (NSV'12)

Int. Workshop on Formal Techniques for Safety-Critical Systems (FTSCS'12)
 Int. Conf. on Hybrid Systems: Computation and Control (HSCC'13)
 Int. Conf. on Tools and Algorithms for the Construction and Analysis of Systems (TACAS'13)
 Int. Conf. on Formal Modeling and Analysis of Timed Systems (FORMATS'13)
 Int. Conf. on integrated Formal Methods (iFM'13)
 Int. Workshop on Formal Techniques for Safety-Critical Systems (FTSCS'13)
 IEEE Int. Workshop on Formal Methods Integration (FMI'13)
 Int. Conf. on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH'13)
 Int. Conf. on Advances in System Simulation (SIMUL'13)
 Int. Conf. on Tools and Algorithms for the Construction and Analysis of Systems (TACAS'14), co-chair
 IFIP Int. Conf. on Formal Techniques for Distributed Objects, Components and Systems (FORTE'14), co-chair
 IEEE Int. Workshop on Formal Methods Integration (FMI'14)
 Int. Conf. on Formal Modeling and Analysis of Timed Systems (FORMATS'14)
 Workshop on Hybrid Autonomous Systems (HAS'14)
 Int. Conf. on Hybrid Systems: Computation and Control (HSCC'14)
 Int. Conf. on integrated Formal Methods (iFM'14)
 Summer Computer Simulation Conf. (SCSC'14)
 Int. Conf. on Advances in System Simulation (SIMUL'14)
 Int. Conf. on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH'14)
 Int. Conf. on Tools and Algorithms for the Construction and Analysis of Systems (TACAS'15)

Commission work
 Since 2008: Member of different teaching-related commissions at the department
 2010-2011: Speaker of the young scientists at RWTH Aachen University
 Since 2012: Deputy equal opportunity commissioner of the RWTH Aachen University

Teaching since 2008

Each winter term: Lecture on “*Satisfiability checking*”
 Average evaluation: 1.5 (scale 1-5 with 1 being the best)

Each sommer term: Lecture on “*Modeling and analysis of hybrid systems*”
Average evaluation: 1.65 (scale 1-5 with 1 being the best)
Each semester: *Seminar* and *practical courses* related to the above areas.
Each year: Organization of different *events for high-school students* (aim: motivation for computer science, information about studies).

January 21, 2014