Curriculum Vitae of Julia Lieb

Personal Data

Address:	Institute of Mathematics, University of Zurich
	Winterthurerstrasse 190, 8057 Zurich, Switzerland
Phone:	+41 44 635 60 57
Email:	julia.lieb@math.uzh.ch
Website:	`https://www.math.uzh.ch/index.php?id=people&key1=13047`
Date of Birth:	7. January, 1988
Place of Birth:	Kronach, Germany
Nationality:	German

Keywords of research interests

- Polynomial matrices and counting problems over finite fields

- Linear systems over finite fields

- Convolutional codes

- Code-based cryptography

Professional experience

09/2020 -	PostDoctoral Researcher at the University of Zurich (with SNF grant in Applied Algebra group)
09/2018 - 08/2020	DFG research fellowship at the University of Aveiro/Portugal (until 08/2019) and the University of Zurich (from 09/2019), topic of the research project: „Construction and decoding of convolutional codes over the erasure channel"
09/2017 - 08/2018	Postdoc at the Institute of Mathematics at the University of Würzburg, research project: „Construction and decoding of convolutional codes over the erasure channel" (funded by SCIENTIA Postdoc scholarship)
01/2017 - 08/2017 **06/2014 - 09/2016**	Research Assistent at the Institute of Mathematics at the University of Würzburg (chair for Dynamical systems and control theory)
10/2016 - 12/2016	Research Assistant at the Institute of Mathematics at the University of Zurich (chair for Applied Algebra)
10/2010 - 09/2014	Graduate assistant at the Institute of Mathematics at the University of Würzburg

Education

10/2014 – 09/2017	PhD student in mathematics at the University of Würzburg Degree: Dr. rer. nat. (grade: 1 (very good)) Title of the PhD thesis: „Counting Polynomial Matrices over Finite Fields with Certain Coprimeness Properties and Applications to Linear Systems and Coding Theory"
09/2016 – 12/2016	Visiting PhD student at the Institute of Mathematics at the University of Zurich
10/2012 – 09/2014	Master studies in Mathematics at the University of Würzburg Degree: Master of science (grade: 1,0 (very good)) Thesis title: Prime unzerstörbare Blaschkeprodukte
10/2009 – 03/2012	Bachelor studies in Mathematics at the University of Würzburg Degree: Bachelor of science (grade: 1,0 (very good)) Thesis title: Wiman-Valiron-Theorie
10/2007 - 12/2012	Teaching degree for secondary schools with subjects mathematics and catholic theology at the University of Würzburg (State examination with grade 1,14)

Awards

2007	Success in the test for highly skilled high-school graduates of Bavaria and admission to the „Max-Weber-Programme Bavaria"
2007	Admission to the Elite Network of Bavaria
2012	Best state examination for teaching degree for secondary schools in the fall of 2012
2014	Award of Otto-Volk for my master degree with grade 1,0
2015	Admission to the programme „Mentoring in science" of the University of Würzburg

Scholarships and Grants

09/2017-08/2018	SCIENTIA Postdoc scholarship of the University of Würzburg
09/2018-08/2020	DFG research scholarship
	DAAD P.R.I.M.E. Fellowship (selection 2017, returned)
01/2020-	SNF grant (volume CHF 545.000, PI Prof. Rosenthal, I was involved in the application)

Presentations and Conferences

Invited talks

04/2016	*Probability Estimations for Networks of Linear Systems and their Correlation with Interconnected Convolutional Codes* University of Zurich
03/2017	*Probability estimates for networks of linear systems and convolutional codes* University of Aveiro (Portugal)
10/2017	*Construction of MDP convolutional codes* University of Neuenburg (Switzerland)
01/2018	*Construction of MDP convolutional codes* TU Munich
02/2018	*MDP Faltungscodes* University of Konstanz (Germany)
01/2019	*The Connection between Discrete-Time Linear systems and Convolutional Codes* University of Würzburg (Germany)
06/2019	*The problem of constructing complete MDP convolutional codes over small fields* University of Alicante (Spain)

Talks and poster presentations on conferences

09/2014	*Reachability of Random Linear Systems over Finite Fields (talk)* Fourth International Castle Meeting on Coding Theory and Applications (4ICTMA) at Castle of Palmela, Portugal
02/2015	*What is the probability that a parallel connection is reachable? (poster)* Oberwolfach Workshop Control Theory: A Mathematical Perspective on Cyber-Physical Systems

06/2015	*Probability of Reachability for networks of linear Systems over Finite Fields (talk)* 7th Workshop on Coding and Systems, Salamanca (Spain)
08/2016	*Probability Estimations for Linear Systems and Convolutional Codes (talk)* Dagstuhl Seminar "Coding Theory in the Time of Big Data"
03/2017	*Probability estimates for networks of linear systems over finite fields and Applications to convolutional codes (talk)* Workshop on Networks of Linear Systems and Operator Theory, Sde Boker, Israel
07/2017	*Probability Estimates for Linear Systems and Convolutional Codes (poster)* Munich Workshop on Coding and Applications (MCA 2017)
04/2018	*MDP Convolutional Codes (poster)* Munich Workshop on Coding and Cryptography (MWCC 2018)
12/2018	*The problem of constructing (complete) MDP convolutional codes over small fields (talk)* Dagstuhl Seminar "Algebraic Coding Theory for Networks, Storage, and Security"
07/2019	*MDP convolutional codes (talk),* SIAM Conference on Applied Algebraic Geometry, Bern
07/2019	*Construction of Complete MDP convolutional codes (poster)* Munich Workshop on Coding and Cryptography (MWCC 2019)

Attended conferences

03/2019	Oberwolfach Workshop *Contemporary Coding Theory*
06/2020	IEEE International Symposium on Information Theory (ISIT 2020) *virtual conference*
07/2020	International Workshop on the Arithmetic of Finite Fields (WAIFI 2020) *virtual conference*

Community service

- Reviewer for „Journal of Algebra and its Applications"
- Reviewer for „Linear Algebra and its Applications"
- Reviewer for „Designs, Codes and Cryptography"
- Reviewer for „Finite Fields and their Applications"
- Reviewer for „IEEE Transactions on Information Theory"
- Reviewer for „IEEE Transactions on Communications"

Qualification

- Participation in several softskillseminars (with focus on presentation skills)
- Participation in several workshops about career management and communication skills

08/2020