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 Date of birth: January 20, 1973
 Nationality: American



PROFESSIONAL EXPERIENCE

- 2013–2014 **Research Fellow** at the **Ludwig-Maximilians-Universität** in München
- 2010–2011 • Published *Combinatorics of the double shuffle Lie algebra*
 • Taught Analysis, Differential Equations, Linear Algebra and Statistics
 • Developed educational material and exams
 • Planned staff budget and hired assistants
- 2011–2013 **Instructor** at the **University of Applied Sciences** in Rosenheim
 • Taught mathematics in the degree programs of Business Administration, Electrical Engineering, Mathematical Economics and Mechatronics
 • Developed educational material and exams
- 2009–2010 **Postdoc** at the **Université Paris XI** with the Harmonic Analysis workgroup in Orsay, France
 • Implemented dimension tests using data bases of algebraic structures on the server *MEDICIS* at *École Polytechnique* in the MAPLE programming language
 • Published *The algebra of cell-zeta values*
 • Became one of the few international experts on Ecalle's theory of moulds
- 2008–2009 **Postdoc** at the **Max-Planck-Institut für Mathematik** in Bonn
 • Worked in joint project with H. Gangl on the *Broadhurst - Kreimer conjecture*

EDUCATION

- 2004–2008 **Ph.D.** in Mathematics WITH HIGHEST HONORS (MENTION TRÈS HONORABLE)
 Université Paris VI in Paris, France and University of Pennsylvania in Philadelphia, USA
 • Thesis advisor: Prof. Dr. Leila Schneps
 • Title: *Multizeta values: Lie algebras and periods on $\mathfrak{M}_{0,n}$*
- 2002–2004 **Master's Degree** in Algebraic Methods WITH HIGH HONORS (MENTION BIEN)
Université Paris VI
 • Title of thesis: *The double shuffle Lie algebra and the Grothendieck-Teichmüller Lie algebra*
- 1998–2001 **Bachelor's Degree** in Mathematics SUMMA CUM LAUDE
University of California Berkeley

PUBLICATIONS

PUBLICATIONS IN PEER-REVIEWED JOURNALS

- S. Carr**, L. Schneps. Combinatorics of the double shuffle Lie algebra. *Advanced Studies in Pure Mathematics*, 63:59–89, 2012
- F. Brown, **S. Carr**, L. Schneps. The algebra of cell-zeta values. *Comp. Math.*, 146(3):731–771, 2010. arXiv:0910.0122
- S. Carr**. Periods on the moduli space of genus 0 curves. *Oberwolfach Reports*, 4(2):1495–1497, 2007

PUBLICATIONS ON www.arxiv.org

- S. Carr**. A polygonal presentation of $Pic(\mathfrak{M}_{0,n})$. arXiv:0911.2649, 2009
- S. Carr**. Multizeta values: Lie algebras and periods on $\mathfrak{M}_{0,n}$ (Ph.D. thesis). arXiv:0911.2643, 2008

CONTRIBUTIONS TO OTHER PAPERS

- J. Ecalle. The flexion structure and dimorphy: flexion units, singulators, generators, and the enumeration of multizeta irreducibles. *Asymptotics in Dynamics, Geometry and PDEs*, 2:27–212, 2010

HONORS AND AWARDS

- 2010–2012 **Dorothea Schlözer Fellowship** for women in research, *Georg-August-Universität Göttingen*
- 2009–2010 **Postdoctoral Fellowship** for research in mathematics, *Île-de-France*
- 2008 **Distinguished Teaching Award**, *University of Pennsylvania*
- 2004–2007 **Doctoral Fellowship**, *Université Paris VI*
- 1998–2001 **California Alumni Scholarship**, *University of California Berkeley*

TALKS AT INTERNATIONAL CONFERENCES

- 10/2013 **Applications of the y -cyclic property of the double shuffle Lie algebra**
New Approaches to Multiple Zeta Values, *Instituto de Ciencias Matemáticas*, Madrid
- 07/2012 **The Broadhurst-Kreimer conjecture for the $ekma^\bullet$ and $carma^\bullet$ moulds**
Periods and Motives, *Instituto de Ciencias Matemáticas*, Madrid
- 09/2010 **Moulds and multiple zeta values**
Galois-theoretic Arithmetic Geometry, *International Institute for Advanced Studies*, Kyoto
- 05/2008 **Multizeta values and moduli spaces**
Grothendieck-Teichmüller Theory, *Universidad Nacional Autónoma de México*, Cuernavaca
- 05/2007 **Periods on the moduli space of genus 0 curves**
Arithmetic and Differential Galois Groups, *Mathematisches Forschungsinstitut*, Oberwolfach

LANGUAGES

- English** (mother tongue)
- German** (fluent)
- French** (fluent)
- Spanish** (basic)

IT SKILLS

PROGRAMMING LANGUAGES

Expert MAPLE
Intermediate HTML, GAP, MATHEMATICA
Basic C++

TOOLS

LaTeX, Open Office, MS Office

OPERATING SYSTEMS

Linux/Unix, MAC OS, Windows

TRANSLATION AND EDITING WORK

- 2011 M. Hindry. **Arithmetics**. ISBN-13: 978-1447121305
• Translated of the French textbook *Arithmétique* into English
- 2003 A. Chambert-Loir. **A Field Guide to Algebra**. ISBN-13: 978-038721483
• Translated of the French textbook *Arithmétique* into English

PERSONAL INTERESTS

GLOBAL ENVIRONMENTAL ISSUES: species preservation, animal treatment, climate change

BIRDWATCHING

YOGA: Ashtanga, Iyengar and Jivamukti styles

REFERENCES

Peter Pickl, LMU-Mathematisches-Institut, Theresienstr. 39, 80333 München
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Robert Powers, University of Pennsylvania Dept. of Mathematics, 209 S. 33rd St., Philadelphia, PA 19104 USA
rpowers@math.upenn.edu, +1 (215) 898-8464

Leila Schneps, Institut de Mathématiques de Jussieu, 4 Place Jussieu Case 247, 75252 Paris Cedex France
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