

Curriculum Vitae

PERSONAL DATA:

Full Name : Philipp Gerhardy
Date of Birth : 13. October, 1976
Citizenship : German

LANGUAGES: Danish(native), German(native), English(fluent), Norwegian(fluent).

EDUCATION:

1995 'Studentereksamen' (Graduation) from Duborg Skolen (Danish High School) in Flensburg, Germany.
1996-2003 Study of English and Computer Sciences at Aarhus University, Denmark.
2003 Master degree ('cand.scient.') in Computer Sciences (minor subject: English) at Aarhus University, Denmark. Supervisor of Master's Thesis ('speciale'): Ulrich Kohlenbach.
1.2.2003-31.1.2006 Ph.D. in Computer Sciences at Aarhus University, Denmark. Supervisor: Ulrich Kohlenbach

ACADEMIC EMPLOYMENT AND POSITIONS:

1.3.2000-31.12.2002 Student programmer at Aarhus University on the Workspace-project (<http://www.daimi.au.dk/workspace/index.htm>).
1.2.2003-31.1.2006 Student instructor at the Department of Computer Sciences, University of Aarhus and the Department of Mathematics, Darmstadt University of Technology..
1.7.2006-30.3.2007 Postdoc at the Department of Philosophy, Carnegie Mellon University, Pittsburgh, USA (supported by the Villum Kann Rasmussen Foundation).
1.4.2007- Postdoc at the Department of Mathematics, University of Oslo, Norway.

At Aarhus University I was a teaching assistant for the courses “Automata and Logic”, “Semantics of Programming Languages”, “Algorithms and Datastructures” and “Contract-based Programming”. At Darmstadt University I was a teaching assistant for “Introduction to Mathematical Logic”.

GRANTS AND SCHOLARSHIPS:

- Ph.D. scholarship 2003-2006, BRICS, University of Aarhus, Denmark.
- Postdoc scholarship July 2006-March 2007, Villum Kann Rasmussen Foundation.
- Postdoc scholarship April 2007-March 2010, University of Oslo.

ACTIVITIES:

Conferences, workshops, summer schools etc. attended (no talks):

- EEF Foundations Summer School on Logical Methods, Aarhus, 25.6-6.7.2001.
- Workshop on Implicit Computational Complexity (ICC '02), Copenhagen, Denmark, 20.7-21.7.2002.
- IEEE Symposium on Logic in Computer Science (LICS '02), Copenhagen, Denmark, 22.6-25.6.2002.
- Marktoberdorf Summer School 2003 on 'Proof Technology and Computation', Marktoberdorf, 29.7.-10.8.2003.

Stays abroad (during graduate studies):

- Department of Mathematics, Darmstadt University of Technology, 1.6.2004-30.4.2005 (visiting Ph.D.-student).

Refereeing:

- Higher-Order Symbolic Computation (Journal).

- FOSSACS '04, Foundations of Software Science and Computation Structures (Conference).
- Methods for Modalities 3, 2003 (Workshop).
- Journal of Logic and Algebraic Programming (Journal).
- LICS '08, Logic in Computer Science (Conference).
- Mathematical Reviews, AMS.

List Of Publications

I. Journal Publications:

1. The Role of Contractions in Cut Elimination. *Notre Dame Journal of Formal Logic*, vol. 46, no. 2, pp. 165-171 (2005).
2. (with Ulrich Kohlenbach) Extracting Herbrand Disjunctions by Functional Interpretation. *Archive for Mathematical Logic*, vol. 44, pp. 633-644 (2005).
3. A quantitative version of Kirk's fixed point theorem for asymptotic contractions. *Journal of Mathematical Analysis and Applications*, vol 316, no.1, pp. 339-345 (2006).
4. (with Ulrich Kohlenbach) Strongly Uniform Bounds from Semi-Constructive Proofs. *Annals of Pure and Applied Logic*, vol. 141, pp. 89-107 (2006).
5. (with Ulrich Kohlenbach) General logical metatheorems for functional analysis. *Trans. Am. Math. Soc.*, vol. 360, pp. 2615-2660 (2008).
6. (with J.Avigad and H.Towsner) Local stability of ergodic averages. *Trans. Am. Math. Soc.*, vol. 362, pp. 261-288 (2010).
7. Proof mining in topological dynamics. *Notre Dame Journal of Formal Logic*, vol. 49, no. 4, pp.431-446 (2008).

II. Conference Papers:

1. Refined Complexity Analysis of Cut Elimination. In: M. Baaz, J. Makovsky, (eds.) *Proceedings of the 17th International Workshop CSL 2003*, pp. 212-225, Springer Berlin(2003).
2. Functional interpretation and modified realizability interpretation of the double-negation shift. 10pp. In: *Local proceedings of "Computability in Europe, 2006"*.
3. Proof mining in practice. To appear in: *Proceedings of the Logic Colloquium 2007*, Wroclaw.

4. (with M.Barra) Skolem + Tetration is well-ordered. To appear in: K. Ambos-Spies, B. Löwe, W. Merkle (eds.): Mathematical Theory and Computational Practice, Fifth Conference on Computability in Europe, CiE 2009, Heidelberg, Germany, July 2009, Proceedings, Lecture Notes in Computer Science volume 5635.

III.Other Publications:

1. Improved Complexity Analysis of Cut Elimination and Herbrand's Theorem. Master's Thesis (2003).
2. Applications of Proof Interpretations. Ph.D. thesis (2006).

Talks given at conferences and seminars.

I.Conference Talks

1. Talk at '17th International Workshop CSL 2003', Vienna, 25.-30.8.2003.
2. Talk at 'Colloquium Logicum 2004', Heidelberg, 17.-19.9.2004.
3. Talk at 'Constructive Logic and Mathematics 2004', Benediktbeuern, 15.-19.11.2004.
4. Talk at 'Mathematics, Algorithms, Proofs', Dagstuhl, 10.-14.1.2005.
5. Talk at 'Mathematical Logic: Proof Theory, Type Theory and Constructive Mathematics', Oberwolfach, 21.3-25.3.2005.
6. Talk at 'Mathematics, Algorithms, Proofs', Castro-Urdiales, 9.-13.1.2005.
7. Talk at 'Computability in Europe 2006', Swansea, 30.6.-5.7.2006.
8. Talk at 'AMS-ASL Special Session on Logical Methods in Computational Mathematics', Joint Mathematics Meeting 2007, New Orleans, 5.1-8.1.2007.
9. Talk at 'Proofs, Computation, Complexity 2007', Swansea, 13.4.-14.4.2007.

10. Talk at 'Methods of Proof Theory in Mathematics', Max-Planck Institut für Mathematik Bonn, 3.6.-10.6.2007.
11. Talk at 'Logic Colloquium 2007', Wrocław, 14.7.-19.7.2007.
12. Talk at 'Infinity in Logic & Computation 2007', Cape Town, 3.-5.11.2007.
13. Talk at 'Mathematical Logic: Proof Theory and Constructive Mathematics', Oberwolfach, 6.-12.4.2008.
14. Talk at 'Logic Colloquium 2008', Bern, 3.7-8.7.2008.
15. Talk at 'Workshop on Proof Theory', Bern, 9.7.-11.7.2008.
16. Talk at 'Proofs, Computation, Complexity 2008', Oslo, 8.8-9.8.2008.
17. Talk at 'AMS-ASL Special Session on Logic and Dynamical Systems', Joint Mathematics Meeting 2009, Washington D.C., 5.-8.1.2009.
18. Talk at 'Leeds Symposium on Proof Theory and Constructivism', Leeds, 3.-16.7.2009.
19. Talk at 'Ramsey Theory in Logic, Combinatorics and Complexity', Bertinoro, 25.-30.10.2009.

II. Colloquium Talks, guest lectures and seminar talks

1. Colloquium on Mathematical Logic, Utrecht, 28.11.2003.(invited by Dr. Lev Beklemishev).
2. Seminar talk, Darmstadt, 25.6.2004.
3. Pi-Lambda Seminar, Aarhus, 19.5.2005.
4. Math Logic Seminar, Pittsburgh, 12.9. and 7.11.2006.
5. Seminar for Matematisk Logikk, Oslo, several dates 2007 and 2008.
6. Felleskollokviet 2008, Oslo, 18.4.2008.