CURRICULUM VITAE

Pavel Hrubeš

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Date of birth: 5/5/1980
Nationality: Czech

EDUCATION

Charles University in Prague 2004-2007
Ph.D. degree in mathematics. The theme of the Ph.D. work was 'proof complexity' and the supervisor Pavel Pudlák.

Charles University in Prague, 1998-2004.
Master's degree in mathematics and philosophy.

EMPLOYMENT AND EXPERIENCE

Center for Computational Intractability, Princeton, September 2009 - present time.
Postdoctoral fellow in theoretical computer science.

Institute for Advanced Study, Princeton, September 2008- August 2009.
Postdoctoral fellow in theoretical computer science/ discrete mathematics group, headed by Avi Wigderson.

University of Toronto, January 2008 - July 2008. Postdoctoral fellow at the Department of Computer Science, theory group. The supervisor was Stephen Cook.

Czech Academy of Science, 2004 - 2007.
Part-time research position.

Ludwig-Maximilian University, Munich, 2006. Short-term MATHLOGAPS position.

RESEARCH INTERESTS

Proof complexity.
Complexity of proofs in propositional logic, non-classical logics, and algebraic proof systems.

Algebraic circuit complexity.
Sizes of algebraic circuits computing symbolic polynomials.

Mathematical logic and philosophy of mathematics
Questions concerning logical structure of mathematical reasoning.

AWARDS AND INVITED LECTURES

Kurt Gödel Centenary Research Prize Fellowship, 2006

Winter meeting of Association for Symbolic Logic, San Diego, 2008
Invited lecture with title *Proof complexity after* $NP \neq coNP$.

ACADEMIC REFERENCES

Pavel Pudlák
Mathematical Institute of Czech Academy of Science, Prague
pudlak@math.cas.cz

Stephen Cook
Department of Computer Science, University of Toronto
sacook@cs.toronto.edu

Avi Wigderson
Institute for Advanced Study, Princeton
avi@ias.edu

PUBLICATIONS

- Arithmetic complexity in algebraic extensions, with A. Yehudayoff, submitted.
- Monotone separations for constant degree polynomials, with A. Yehudayoff, to appear in *IPL*.
- Proof complexity of polynomial identities, with I. Tzameret, *CCC '09: Proceedings of the 2009 24th Annual IEEE Conference on Computational Complexity*, (2009), 41–51.
- Kreisel's conjecture with minimality principle, *Journal of Symbolic Logic* **74, 3** (2009) 976-988.
- On lengths of proofs in non-classical logics, *Annals of Pure and Applied Logic* **157** (2009) 194 - 205.
- Lower bounds for modal logics, *Journal of Symbolic Logic* **72, 3** (2007) 941-958.
- A lower bound for intuitionistic logic, *Annals of Pure and Applied Logic* **146** (2007) 72 - 90.
- On hierarchies of universal predicates, *ArXiv*, (2007).
- Theories very close to *PA* where Kreisel's conjecture is false, *Journal of Symbolic Logic*, **72** (2007) 123-137.