Jan Krajíček's bibliography

- Last update: 27.September 2024

- Chapters in books are listed among papers (both expository and research).

- Starting with 2012 I sent all preprints to the ArXiv.

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- As a matter of principle I do not co-sign papers resulting from thesis work of my (PhD or MSc) students.

Thesis and habilitations

1. RNDr.Thesis: "Non-classical Foundations of Mathematics", in Czech, Charles University, April 1985.

2. CSc.Habilitation: "Complexity of Formal Proofs", a collection of five papers (in English) with an introduction and overview (in Czech), Academy of Sciences, September 1989.

3. DrSc.Habilitation: "Bounded Arithmetic, Propositional Calculus, and Complexity Theory", a collection of ten papers (in English) with an introduction and overview (in Czech), Academy of Sciences, August 1992.

4. Doc.Habilitation: "Lower bounds in propositional calculus and independence results in bounded arithmetic", a collection of twelve papers (in English) with an introduction and overview (in Czech), Charles University, May 2000.

Abstracts and extended abstracts - selected

1. "Some Theorems on the Lattice of Local Interpretability Types" (abstract), *Commentationes Mathematicae Universitas Carolinae*, **24(2)**, (1983), p. 387.

2. "A Possible Modal Reformulation of Comprehension Scheme" (abstract), *Commentationes Mathematicae Universitas Carolinae*, **24(2)**, (1983), pp. 387-388.

3. "Measures of Complexity of Proofs" (extended abstract), Abstracts of 8th Inter. Congress on *Logic, Methodology and Philosophy of Science* '87, Moscow, August 1987, Vol. 5, Part 1, pp. 151-154.

4. "Three Theorems on Bounded Arithmetic" (abstract), Annual 1989 Meeting of ASL at Los Angeles, *J. Symbolic Logic*, **55(1)**, pp.377-378.

5. with P. Beame, R. Impagliazzo, T. Pitassi, P.Pudlák and A. Woods: "Exponential Lower Bound for the Pigeonhole Principle" (extended abstract), in: Proc. ACM Symp. on Theory of Computing, ACM Press, (1992), pp.200-220.

6. "Problems of complexity theory in models of bounded arithmetic" (extended abstract), in: *Proof Theory, Complexity and Metamathematics*, Technological University of Vienna and Kurt Godel Society, (1994).

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10. "Propositional proofs, proofs of membership in polynomial ideals, and their complexity", in: Abstracts of the annual European meeting of the Association of Symbolic Logic, *Logic Colloquium 95*, Haifa (August 9-17, 1995), (1995), p.PROOF-22. Also in: *Bulletin of the ASL*, **3(1)**, (1997), pp.77-78.

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12. "Bounded arithmetic, propositional logic, and complexity theory", in: Proc. of the bi-annual meeting of the Japanese Mathematical Society, Tokyo, September 1997.

13. "Effective interpolation", a syllabus and references for a course given at the Tohoku University in Sendai (Japan), October 2-4, 1997.

14. "Forcing with random variables and proof complexity", eds. A.Beckmann, U.Berger, B.Löwe, and J.V.Tucker: Logical Approaches to Computational Barriers, 2nd Conference on Computability in Europe, CiE 2006, Swansea, UK, July 2006, Lecture Notes in Computer Science, Springer, (2006), pp.277-278.

15. Proof search problem (ext.abstract), in: Mathematical Logic: Proof Theory, Constructive Mathematics (9.-13.11.2020), Oberwolfach Reports (OWR), Report No. 34/2020, (2020), pp.45-46.

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1. "Modal Set Theory", Proc. 2nd Easter Conference on Model Theory, Wittenberg 1984, in: Seminarberichte Nr. 60, Humboldt Univ., Berlin, (1984), pp. 87-99.

2. "Generalizations of Proofs", Proc. 5th Easter Conf. on Model Theory, Wendisch-Rietz 1987, in: Seminarberichte Nr. 93, Humboldt University, Berlin, (1987), pp. 82-99.

3. with P. Clote: "Open Problems", in: "Arithmetic, Proof Theory and Computational Complexity", eds. P. Clote and J. Krajíček, Oxford Press, (1993), pp.1-19.

4. "A fundamental problem of mathematical logic", Annals of the Kurt Gödel Society, Springer-Verlag, Collegium Logicum, Vol.2, (1996), pp.56-64. ISBN 3-211-82796-X.

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