

Jan Jakubův - Scientific CV

Born: October 28, 1981 in Vlašim, Czechoslovakia
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Education

(2007 – 2010) PhD. in Computer Science (Computing): “*Generic Process Shape Types and the Poly* System*”, at School of Mathematical and Computer Science, Heriot-Watt University, Edinburgh, under the supervision of Dr. J. B. Wells and Prof. F. Kamareddine, thesis defended in October 2010 *without corrections*.

(2000 – 2006) MSc. in Theoretical Computer Science: “*Automated Theorem Proving Using the Tableaux Methods*”, at Charles University in Prague, Faculty of Mathematics and Physics, Department of Theoretical Computer Science, under the supervision of Prof. P. Štěpánek.

Position

(2015 – present) Postdoctoral scientific researcher at Czech Technical University in Prague, Czech Institute of Informatics, Robotics and Cybernetics (CIIRC). Research topics: (1) Artificial Intelligence in Automated Theorem Proving (ERC/AI4REASON);

(2012 – 2015) Postdoctoral scientific researcher at Czech Technical University in Prague, Faculty of Electrical Engineering, Department of Computer Science, Agent Technology Center. Research topics: (1) Air Traffic Control Management, AgentFly project (FAA, since 2012); (2) Domain Independent Multiagent Planning (GAČR, since 2013).

Fundings

2015 - present Postdoc (team-member) supported by AI4REASON ERC Consolidator grant number 649043.

2012 - 2015 Postdoc (team-member) partially supported by Czech Science Foundation (GAČR, grant no. 13-22125S).

2006 - 2009 EPSRC studentship to undertake PhD study at Heriot-Watt University in Edinburgh, funded by EPSRC grant EP/C013573/1.

Research Interests

Artificial Intelligence; Machine Learning; Automated Reasoning; Formalization of Mathematics; Functional Programming; Distributed Computing; Process

Calculi; Type Systems; Automated Planning; Multiagent Systems; Multiagent Planning; Air Traffic Control

Teaching

- (2017/18) Czech Technical University in Prague, Faculty of Electrical Engineering: Functional Programming (B4B36FUP, tutorial, summer).
- (2015/16) & (2016/17) Czech Technical University in Prague, Faculty of Electrical Engineering: Functional and Logic Programming (A4(E)B33FLP, tutorials, summer), Automated Reasoning (A4M33AU, lecture & tutorials, summer).
- (2014/15) Czech Technical University in Prague, Faculty of Electrical Engineering: Advanced Algorithms (A4M33PAL, tutorial, winter), Automated Reasoning (A4M33AU, lecture & tutorials, summer).
- (2013/14) Czech Technical University in Prague, Faculty of Electrical Engineering: Advanced Algorithms (A4M33PAL, tutorial, winter), Automated Reasoning (A4M33AU, lecture & tutorial, summer), Functional and Logic Programming (A4(E)B33FLP, tutorials, summer).
- (2006/07) Charles University in Prague, Faculty of Mathematics and Physics: Algorithms and Data Structures II (TIN061, tutorials, summer), Internet (SWI096, tutorial, summer).

Citations

H-index (Scopus): 5

Prizes and Awards

- (2018) Part of the winning team in LTB category at the CADE ATP System Competition (CASC) at CADE 2018.
- (2016) Best Student Paper Award [6] on the 8th International Conference on Agents and Artificial Intelligence (ICAART), February 2016.
- (2015) Part of the winning team in Competition of Distributed Multi-Agent Planners (CoDMAP) at ICAPS 2015.
- (2006) The 2006 Federated Logic Conference (FLoC-06), Seattle, USA; Our team took the 3rd place at international Prolog contest.

Language Skills

Czech (native), English (fluent)

Programming Skills

advanced knowledge: Haskell, C/C++, C#, Python, Prolog, Java.

basic knowledge: Ocaml, Perl, Lisp, ML, PHP, Javascript, SQL, Postscript, Lua, F#, sh, bash.

Work Experience

(2010 – 2012) Freelance software developer for CMMS, s.r.o. and Tesla Electron-Tubes, a.s. (C# Programmer, Embedded Linux C Programmer, Single-board Application Developer).

Selected Publications

Journals

- [1] Jan Jakubův and Josef Urban. “Hierarchical invention of theorem proving strategies”. In: *AI Commun.* 31.3 (2018), pp. 237–250.
- [2] Jan Tožička, Jan Jakubův, and Antonín Komenda. “Recursive Reductions of Action Dependencies for Coordination-Based Multiagent Planning”. In: *Trans. Computational Collective Intelligence* 28 (2018), pp. 66–92.
- [3] Jan Tožička, Jan Jakubův, Antonín Komenda, and Michal Pěchouček. “Privacy-concerned multiagent planning”. In: *Knowl. Inf. Syst.* 48.3 (2016), pp. 581–618.

Proceedings

- [4] Zarathustra Goertzel, Jan Jakubův, Stephan Schulz, and Josef Urban. “ProofWatch: Watchlist Guidance for Large Theories in E”. In: *ITP*. Vol. 10895. Lecture Notes in Computer Science. Springer, 2018, pp. 270–288.
- [5] Jan Tožička, Jan Jakubův, Martin Svatoš, and Antonín Komenda. “Recursive Polynomial Reductions for Classical Planning”. In: *ICAPS*. AAAI Press, 2016, pp. 317–325.
- [6] Jan Tožička, Jan Jakubův, and Antonín Komenda. “Recursive Reductions of Internal Dependencies in Multiagent Planning”. In: *ICAART (2)*. SciTePress, 2016, pp. 181–191.
- [7] Jan Tožička, Jan Jakubův, and Antonín Komenda. “Generating Multi-Agent Plans by Distributed Intersection of Finite State Machines”. In: *ECAI*. Vol. 263. Frontiers in Artificial Intelligence and Applications. IOS Press, 2014, pp. 1111–1112.
- [8] Jan Jakubův and J. B. Wells. “Expressiveness of Generic Process Shape Types”. In: *TGC*. Vol. 6084. Lecture Notes in Computer Science. Springer, 2010, pp. 103–119.