

# JAKUB MICHALISZYN

## PERSONAL DETAILS

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ADDRESS	Wrocław, Poland
DATE OF BIRTH	22 July 1985
PHONE	+48 663 212 071
EMAIL	Jakub.Michaliszyn@gmail.com
WEB PAGE	<a href="http://ii.uni.wroc.pl/~jmi/">http://ii.uni.wroc.pl/~jmi/</a>
LANGUAGES	Polish (native), English (fluent), German (basic)

## WORK EXPERIENCE

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2015–NOW	Adiunkt at University of Wrocław, Institute of Computer Science
2013–2015	Imperial College London, research associate in the Verification of Autonomous Systems group.
2012–2013	Imperial College London, research associate in an EU-funded project “Artifact-Centric Service Interoperation” ( <a href="http://www.acsi-project.eu">www.acsi-project.eu</a> ) coordinated by IBM.
2010–2012	A specialist in a EU project, responsible for creating and managing databases, providing statistics and writing reports.
2009–2010	Database administrator at University of Wrocław, responsible for the deployment of a new administration system.

## EDUCATION

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2008–2012	University of Wrocław, PHD studies in Computer Science. PHD thesis “Decidability of modal logics with particular emphasis on the interval temporal logics.”
2008	First prize in the contest for the best master thesis in Logic and its Applications organized by Polish Association for Logic and Philosophy of Science.
2004–2008	University of Wrocław, Master studies in Computer Science. Master thesis “PDL Constructions in the Guarded Fragment.”

## IT SKILLS

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DATABASES	Employed as databases administrator (PostgreSQL and Oracle) and taught the Databases course at University of Wrocław four times in 2009-2012.
C++	Very good knowledge of C and C++.
UNIX/LINUX	Taught a Linux course and have a good knowledge of UNIX-based systems.
WEB DEVELOPMENT	Created a number of web pages using jQuery, PHP with Smarty and MySQL. Took a part in developing open source forum software phpBB.
PYTHON	Wrote several NLP-related programs in Python.
OTHERS	Use $\LaTeX$ , git and svn on a daily basis. Have some experience with Matlab, Java, Prolog, Haskell and OCaml.

## OTHER EXPERIENCE

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COMMITTEES	Program committee member of AIML 2014, ECAI 2014&2016, AAMAS 2015, SR 2016, IJCAI 2015&2016.
LECTURES	Gave a lecture (30 hours) on Logic for Computer Science (in English) in 2012 and a (make up) lecture on Regular Languages and Computational Complexity in 2016.
TUTORING	Tutor for Python, Linux, Databases, Programming, Logic and WWW at University of Wrocław and Systems Verification at Imperial College. Teacher of Compensatory Lessons for Newcomers in 2009-2011.
OWN GRANT	Principal investigator in a Polish National Science Centre Sonata grant (October 2015 – September 2018) on logics for big data.
PREVIOUS GRANTS	Principal investigator in a Polish National Science Centre Preludium grant (October 2012 – September 2015) on decision problems for logics. Participated in Polish Ministry of Science and Higher Education grants N206 022 31/3660 and N N206 371339 during my PHD studies.

## SUMMARY OF MY RESEARCH

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This is a short summary of my research. The full list of my papers is available at my web page.

QUERYING BIG DATA	Currently, I focus on developing, studying and implementing languages for analysing graph databases. I founded a research group that developed a new query language (IJCAI'16) with attractive complexity and expressive power.
VERIFICATION OF MAS	I developed novel verification techniques for Multi-Agent Systems (MAS). I founded an epistemic interval-based specification language (IJCAI'13, ECAI'14, KR'16), I introduced an abstraction technique for the logic ATL (KR'14) and implemented it in MCMAS (a model checker written in C++, AAMAS'15&'16), and I put forward the results regarding model checking artifact-centric systems (KR'14), a methodology for reasoning about business process models.
INTERVAL TEMPORAL LOGICS	Interval temporal logics, such as the Halpern–Shoham logic, provide a way to express properties of events that can be used in planning, verifying and natural language processing. I proved that a simple fragment of this logic is very expressible and its satisfiability problem is undecidable (LICS'11).
OTHER FIELDS	I showed that modal logic is decidable over any class of frames definable by universal Horn formulae (LICS'12), also in the case of the finite satisfiability problem (AIML'12). I proved decidability of various fragments of first-order logic (ICALP'09, LICS'12, CSL'12). I also worked on embeddings of XML tree patterns (CoRR'12) and finite automata theory (CoRR'09).

## INTERESTS

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Organizing and participating in bike trips, playing squash and football, reading books, learning new technologies, attending lectures and improving myself.