RNDr. Petr Glivický, Ph.D.

Curriculum vitae – updated 2018/01/12

Academic experience

February 2016 – present

University of Economics, Prague, Czech Republic
Faculty of Informatics and Statistics
Department of Mathematics

assistant professor
research in model theory, Peano arithmetic and nonstandard methods
teaching courses of mathematics for economy and mathematics for computer science

February 2016 – present

Charles University, Prague, Czech Republic
Faculty of Mathematics and Physics
Departments of Applied Mathematics, Theoretical Computer Science and Mathematical Logic and Didactics of Mathematics

external lecturer
teaching courses of logic, set theory and nonstandard methods

October 2015 – January 2016

Charles University, Prague, Czech Republic
Faculty of Mathematics and Physics
Department of Theoretical Computer Science and Mathematical Logic

Researcher/Teacher
research in model theory, Peano arithmetic and nonstandard methods
teaching logic and set theory courses

December 2014 – July 2015

City University of New York, New York City, USA
Graduate Center

Fulbright Visiting Scholar
work in the New York logic group
research in models of arithmetics and model theory

January – November 2014

Academy of Sciences of the Czech Republic, Prague, Czech Republic
Institute of Mathematics

Postdoctoral Researcher
ERC advanced grant "Feasibility, logic and randomness in computational complexity"
research in models of fragments of arithmetics

October – December 2013

Charles University, Prague, Czech Republic
Faculty of Mathematics and Physics
Department of Theoretical Computer Science and Mathematical Logic

Researcher/Teacher
research in model theory and Peano arithmetic
teaching logic and set theory courses

Education

2009 – 2013 **Ph.D. – Algebra, number theory and mathematical logic**
Charles University in Prague
Faculty of Mathematics and Physics
dissertation: Study of arithmetical structures and theories with regard to representative and descriptive analysis
advisor: doc. RNDr. Josef Mlček, Csc.

2007 – 2009 **Mgr. (Master) – Mathematical structures**
Charles University in Prague
Faculty of Mathematics and Physics
thesis: Models of arithmetical and rich theories

2004 – 2007 **Bc. (Bachelor) – General mathematics**
Charles University in Prague
Faculty of Mathematics and Physics
thesis: Weak arithmetical theories and their models

Other notable mathematical training

2014 **Workshop (summer school): Model Theory in Geometry and Arithmetic**
Berkeley, CA, USA

2012 **Summer school: Model Theory in Algebra, Analysis and Arithmetic**
Cetraro, Italy

2011 **Winter school: Model Theory of Difference Fields and Applications**
Orsay, France

2010 **Graduate Summer School in Logic**
Singapore

Awards and prizes

2007 **Bernard Bolzano Prize of the Charles University in Prague**
for an extraordinary research work made by students
for the bachelor's thesis Weak arithmetical theories and their models

2007 **SVOČ, shared 1st place**
Czech and Slovak competition of student research works in mathematics
for the work The Fermat's Last Theorem in arithmetics with axiomatically defined exponentiation

2013 **Succesful grant project**
chosen as one of the projects to be presented at the celebrations of 20 years of the Grant Agency of the Charles University
project: Representative and descriptive analysis of structures and theories

2016 **The best exercise class**
according to the official students' feedback at the Faculty of Mathematics and Physics, Charles University
exercise class: Propositional and predicate logic

Teaching experience

University level:

2016	**Nonstandard methods in Ramsey-type combinatorics** Charles University in Prague *lecture*
2010 – 2017	**Logic and set theory** Charles University in Prague *lecture*
2016 – present	**Mathematics for economy** University of Economics *lecture and exercise class*
2017 – present	**Mathematical foundations of computer science** University of Economics *exercise class*
2016 – present	**Mathematics for computer science** University of Economics *exercise class*
2009 – present	**Propositional and predicate logic** Charles University in Prague *exercise class*
2012 – present	**Non-standard seminar** Charles University in Prague *co-organizer*
2015	**Definability in linear fragments of Peano arithmetic** City University of New York *lecture series*

Other:

2007 – present	**private teaching of mathematics** *all levels (elementary school, high school, university)*
2009 – present	**preparatory courses for *Scio NSZ* (national comparative exams)** *teaching of mathematics and "analytical thinking"*
2006 – 2009	**Slovenská elementary school** *teaching of mathematics and computer labs*

Other work with students

2016	**"topic supervisor" at Spring School of Combinatorics** *supervising a small group of graduate and undergraduate students who prepare and present a series of lectures on a given topic*
2012 – 2015	**regular "topic supervisor" at spring and fall Schools of Algebra** *supervising a small group of graduate and undergraduate students who prepare and present a series of lectures on a given topic*
2012	**unofficial mathematical logic seminar** *for undergraduate students interested in mathematical logic and non-standard methods*

Research interests

Arithmetical structures and theories (with J. Mlček, P. Pudlák and J. Glivická)

- *local properties of models of Peano arithmetic*
- *model theory of linear arithmetics and discretely ordered modules*
- *model constructions for weak arithmetics*

Nonstandard methods (with J. Mlček)

- *nonstandard methods in Ramsey combinatorics*
- *general theory of nonstandard methods*

Weak exponential arithmetics (with V. Kala)

- *consistency of number-theoretical problems in weak exponential arithmetics*

Non-Euclidean rings (with J. Šaroch)

- *quasi-Euclidean and k-stage Euclidean rings*

Model theory (with J. Mlček)

- *model theory of fragments of Peano arithmetic*

List of publications

(1) Petr Glivický and Pavel Pudlák, *Wild models of linear arithmetics*, Mathematical Logic Quarterly 63 (2017), no. 6, 501–508, https://arxiv.org/abs/1602.03083

(2) Petr Glivický and Vítězslav Kala, *Fermat's Last Theorem and Catalan's conjecture in weak exponential arithmetics*, Mathematical Logic Quarterly 63 (2017), no. 3–4, 162–174, https://arxiv.org/abs/1602.03580

(3) Petr Glivický and Jan Šaroch, *Quasi-Euclidean subrings of* $\mathbb{Q}[x]$, Communications in Algebra 41 (2013), no. 11, 4267–4277, http://arxiv.org/abs/1410.6746

(4) Petr Glivický, *A note on the problem of prisoners and hats*, to appear in 17th Conference on Applied Mathematics, APLIMAT 2018 – Proceedings (2018), https://arxiv.org/abs/1801.01184

(5) Jana Glivická and Petr Glivický, *Shepherdson's theorems for fragments of open induction*, 16th Conference on Applied Mathematics, APLIMAT 2017 – Proceedings (2017), 583–589, https://arxiv.org/abs/1701.02001

Grants

2014 – 2015 **Fulbright-Masaryk Award**
project: A local approach to the study of arithmetical structures and theories
realized at: City University of New York, New York, NY, USA

2010 – 2012 **GA UK (Grant agency of the Charles University) grant**
project: Representative and descriptive analysis of structures and theories

Invited lectures

July 7th, 2015 **Linear fragments of Peano arithmetic**
JAF 2015
City University of New York, New York City, USA

Language qualification

Czech:	●●●●●●●●●	(*native*)
English:	●●●●●●●●○	(*fluent*)
German:	●●●●●○○○○	(*passively*)

Other achievements

Programming

2017	**Google scholarship: Android development course** *at udacity.com*
2013	**BerkeleyX course: Software as a service (CS169.1x)** *certified succesful completion*

Sport

2017	**Winner of the *Vaše liga* table tennis amateur league** *1st place in the season 2016/17 in the Prague league*
2016	**Ascent of *Stok Kangri (6153m)*** *the highest peak of the Stok Range, Indian Himalayas*
2006	**Champion of the *Charles University* in table tennis** *winner of the university-wide Rector's Sports Day tournament*

Personal interests

sport

- *rock and mountain climbing*
- *hiking*
- *badminton*
- *running*
- *table tennis*

programing

- *web applications*

wikipedist

- *mainly mathematical articles on the Czech Wikipedia*