

Curriculum Vitae

Personal Data

Name: Andor Lukács.
Work Address: Babeş-Bolyai University,
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Research Interests

Specific Interests: dendroidal sets, operads and their applications to higher category theory, weak n -categories.
General Interests: algebraic topology, category theory, fixed point theory in distance spaces.

Education

Oct. 2011. – March 2013. postdoctoral researcher, Babeş-Bolyai University, Cluj-Napoca, Romania.
Oct. 2010. Ph.D. in mathematics, under the supervision of Prof. Dr. Ieke Moerdijk, Utrecht University, Utrecht, The Netherlands.
2005. – 2010. Ph.D. student, Utrecht University, Utrecht, The Netherlands.
Sept. 2004. M.Sc. in mathematics, under the supervision of Prof. Dr. Ieke Moerdijk and Prof. Dr. Andrei Mărcuş (two diplomas).
2003. – 2004. Master student on the topic "Noncommutative Geometry", Utrecht University.
2003. – 2004. Master student on the topic "Algebra and Geometry", Babeş-Bolyai University.
July 2003. B.Sc. in mathematics, under the supervision of Prof. Dr. Andrei Mărcuş.
1999. – 2003. Undergraduate student in mathematics, Babeş-Bolyai University.

Positions and Work Experience

April 2014. – Teacher's assistant, Babeş-Bolyai University, Cluj-Napoca, Romania.
Oct. 2012. – March 2014. Associate lecturer, Babeş-Bolyai University, Cluj-Napoca and Târgu-Secuiesc, Romania.
Oct. 2011. – April 2013. Postdoctoral Researcher, Babeş-Bolyai University, Cluj-Napoca, Romania.
April 2011. – Feb. 2012. Mathematician at Uniqa-Raiffeisen Software Service SRL, Cluj-Napoca, Romania.

Publications

Articles

- [1] *Fixed point theorems for various types of F -contractions in complete b -metric spaces*, with S. Kajántó, under review at Fixed Point Theory, 2015.
- [2] *Model structure and Boardman-Vogt resolution for cyclic operads*, preprint, 2015.
- [3] *Dendroidal weak 2-categories*, arXiv:1304.4278 [math.AT], 2013.
- [4] *On operads in terms of finite pointed sets*, Studia Univ. Babeş-Bolyai Math. 58(4), pp 511-521, 2013.
- [5] *Dold-Kan correspondence for dendroidal abelian groups*, with I. Weiss and J.J. Gutiérrez, Journal of Pure and Applied Algebra 215(7), pp 1669-1687, 2011.
- [6] *Convex n -Gons: 10936*, with Sz. András and N.D. Cahill, The American Mathematical Monthly 110(6), pp 545-546, 2003.

Books

- [7] *Cyclic operads, dendroidal structures, higher categories*, Ph.D. Thesis, Ed. Ridderprint BV, Utrecht University, Utrecht, 2010.
- [8] *Exercises in number theory (in Hungarian)*, with A. Bege and A. Demeter, Ed. Sapientia, Cluj-Napoca, 2002.

Textbooks

- [9] *Solutions of the problems of the IX. grade highschool mathematics textbook (in Hungarian)*, with Sz. András, H. Csapó, A. Demeter, P. Petru, J. Szilágyi, Zs. Szilágyi and G. Zsombori, Ed. Státus, Miercurea Ciuc, 2005.
- [10] *Solutions of the problems of the X. grade highschool mathematics textbook (in Hungarian)*, with Sz. András, H. Csapó, I. Mihály, Á. Róth, J. Szilágyi, Zs. Szilágyi and G. Zsombori, Ed. Státus, Miercurea Ciuc, 2003.
- [11] *Mathematics textbook for XII. grade highschool students (in Hungarian)*, with Sz. András and H. Csapó, ed. Státus, Miercurea Ciuc, 2002.

Selected Talks

- Nov. 2014.* *Bar-cobar resolution of cyclic operads*, MTNE, Cluj-Napoca, Romania.
- July 2013.* *Dendroidal sets and higher categories*, Young Topologists' Meeting, Lausanne, Switzerland.
- April 2013.* *Abstract homotopy theory for cyclic operads*, Algebra Symposium, Cluj-Napoca, Romania.
- Nov. 2012.* *Weak higher categories and dendroidal sets*, MTNE, Cluj-Napoca, Romania.
- July 2010.* *Dendroidal weak n -categories*, Day on Higher Category Theory, Utrecht, The Netherlands.
- March 2010.* *Operads and Dendroidal Sets*, Staffcolloquium, Utrecht, The Netherlands.
- May 2008.* *Dendroidal sets*, Young Topologists' Meeting, Le Chatelard, Switzerland.

Teaching

2015. – 2016. **Teacher's assistant, Babeş-Bolyai University, Cluj-Napoca, Romania:**
Mathematics for economists, course and exercises class.
Functional Analysis, course and exercise class.
Mathematical modeling, exercise class.
Partial differential equations, course and exercise class.
Dynamical Systems, exercise class and lab.
Number theory, exercise class.
Analysis for computer science students and physics students, exercises class.
2014. – 2015. **Teacher's assistant, Babeş-Bolyai University, Cluj-Napoca, Romania:**
Ordinary differential equations, course and exercise class.
Partial differential equations, course and exercise class.
Mathematical modeling, course and exercise class.
Mathematics for elementary school and preschool teachers (distance learning), course and exercise class.
Algebra for computer science students and physics students, exercise class.
Analysis for computer science students and physics students, exercises class.
Functional Analysis, exercise class.
Mathematics for geology students, exercise class.
2013. – 2014. **Associate lector, Babeş-Bolyai University, Cluj-Napoca, Romania:**
Mathematical didactics for elementary school and preschool teachers, course and exercise class.
Curves and surfaces, course.
Geometry I, course.
Number theory, exercise class.
Algebra I – Linear algebra, exercise class.
Algebra for physics students, exercise class.
Analysis for computer science students, exercise class.
Mathematics for geology students, exercise class.
Partial differential equations, course and exercise class.
2012. – 2013. **Associate lector, Babeş-Bolyai University, Cluj-Napoca, Romania:**
Mathematics for elementary school and preschool teachers, course and exercise class.
Mathematical didactics for elementary school and preschool teachers, course and exercise class.
Number theory, exercise class.
Algebra 1 – Linear algebra, exercise class.
Geometry for computer science students, course and exercise class.
Dynamical Systems, exercise class and lab.
2011. – 2012. **Babeş-Bolyai University:**
Introduction to algebraic topology, facultative course for Ph.D. students.
2005. – 2008. **Teaching assistant, Utrecht University, Utrecht, The Netherlands:**
2007. – 2008. Exercise classes for the courses on *Functions and series* and *Analysis 2*.
2006. – 2007. Exercise classes for the courses on *Linear algebra* and *Analysis 1*.
2005. – 2006. Exercise classes for the courses on *Group theory*, *Analysis 2* and *Rings and Galois Theory*.
2004. – 2005. Teaching Assistant, Babeş-Bolyai University, Cluj-Napoca, Romania:
Exercise classes for the courses on *Linear Algebra* and *Logic and Set Theory*.

Scholarships

- Oct. 2011. – March 2013.* *POSDRU 60189 postdoctoral scholarship*, Babeş-Bolyai University, Cluj-Napoca, Romania.
- Oct. 2003. – June 2004.* *Masterclass scholarship*, Mathematical Research Institute, Utrecht, The Netherlands.
- Oct. 1999. – June 2003.* *Merit scholarship for students*, Babeş-Bolyai University, Cluj-Napoca, Romania.
- March 2002. – April 2002.* *CEEPUS scholarship*, Eötvös Lóránd University, Budapest, Hungary.
- Oct. 2000. – June 2001.* *Apáczai Foundation's scholarship for exceptional students*, Budapest, Hungary.

Language skills

- Hungarian:* native.
- English:* fluent (CEF C2).
- Romanian:* fluent (CEF C2).
- Dutch:* intermediate (CEF B2).