

CURRICULUM VITAE

Laurențiu Leuștean

PERSONAL DATA

- Birth Date:
January 16, 1971, Drobeta-Turnu Severin, Romania
- Nationality:
Romanian
- Family status:
Married: Ioana Leuștean (since July 15, 1995)
Three children: Maria (born on August 1, 2000),
Andrei (born on July 7, 2004),
Ștefan (born on November 10, 2005)
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AFFILIATION

Scientific Researcher

"Simion Stoilow" Institute of Mathematics of the Romanian Academy, Bucharest,
Romania

P.O. Box 1-764, RO-014700, Bucharest, Romania

EDUCATION

- 16.10.2009:
Habilitation in Mathematics, Technische Universität Darmstadt, Germany,
Habilitation Thesis: Proof mining in metric fixed point theory and ergodic theory
- 19.05.2004:
PhD in Mathematics, University of Bucharest, Romania
PhD Thesis: Representations of many-valued algebras
PhD Supervisor: Prof. George Georgescu
- 1995 - 1996:
Master in Computer Science, Faculty of Mathematics and Computer Science, University of Bucharest, Romania
- 1990-1995:
Undergraduate Studies in Computer Science, Faculty of Mathematics and Computer Science, University of Bucharest, Romania

EMPLOYMENT

- October 1, 2003 - present:
Scientific Researcher, "Simion Stoilow" Institute of Mathematics of the Romanian Academy, Bucharest, Romania
- April 1, 2004 - October 31, 2009:
Postdoctoral Position (Wissenschaftlicher Mitarbeiter), Department of Mathematics, Technische Universität Darmstadt, Germany
- June 1, 2000 - September 31, 2003:
Researcher, National Institute for Research and Development in Informatics (ICI), Bucharest, Romania
- November 1, 1996 - May 31, 2000:
Programmer, National Institute for Research and Development in Informatics (ICI), Bucharest, Romania

AWARDS/FELLOWSHIPS

- October 16, 2008 - February 13, 2009 and September 14 - October 31, 2009:
Oberwolfach Leibniz Fellowship, Mathematisches Forschungsinstitut Oberwolfach, Germany
- April 27-29, 2006:
Horizons of Truth: Logics, Foundations of Mathematics, and the Quest for Understanding the Nature of Knowledge. Gödel Centenary 2006. An International Symposium Celebrating the 100th Birthday of Kurt Gödel, Vienna, Austria
Young Scholar Competition, chosen between the 10 scholars (out of 63 applicants) to attend the meeting and present their project proposals
- July 7 - September 14, 2003:
NASA Ames/RIACS 2003 Summer Student Research Program (Second Year), organized by NASA Ames Research Center and the Research Institute for Advanced Computer Science (RIACS), Moffet Field, CA, USA
- June 10 - August 16, 2002:
NASA Ames/RIACS 2002 Summer Student Research Program, organized by NASA Ames Research Center and the Research Institute for Advanced Computer Science (RIACS), Moffet Field, CA, USA
- January 8 - June 7, 2002:
Marie Curie Fellowship (mobility research training grant from the European Community) at BRICS (Basic Research in Computer Science) International PhD School, University of Aarhus, Denmark

RESEARCH GRANTS

- Director of the Grant IDEI:
Proof mining in metric analysis, geometric group theory and ergodic theory
CNCS Romania, PN-II-ID-PCE-2011-3-0383, 2011-2014

- Member of Deutsch-Südafrikanisches Kooperationsprojekt:
From continuity to computability
DFG (Deutsche Forschungsgemeinschaft), 2007-2009
- Member of Deutsch-Russisches Kooperationsprojekt:
Berechnungen über nicht diskreten Strukturen: Modelle, Semantik, Komplexität
DFG (Deutsche Forschungsgemeinschaft), 2006-2008
- Member of INTAS (The International Association for the Promotion of Cooperation with Scientists from the New Independent States (NIS) of the Former Soviet Union) Project 00-397: *Data Mining Technologies and Image processing: Theory and Applications*, Task 4: *The prognosis of harvest and the base of the weather- and geo-monitoring of a region*, 2001 - 2002

VISITING POSITIONS

- May 25 - June 14, 2010:
Department of Mathematical Analysis, University of Seville, Spain (invited by Prof. Genaro Lopez)
- March 1 - April 15, 2007:
Max Planck Institute for Mathematics, Bonn, Germany (participation at the Trimestre on Methods of Proof Theory)
- February 16 - 28, 2001:
Dipartimento di Matematica e Informatica, Università di Salerno, Italy (invited by Prof. Antonio Di Nola)

PROFESSIONAL ACTIVITIES

- Member of:
 - American Mathematical Society (AMS) (2003 -)
 - Deutsche Vereinigung für Mathematische Logik und für Grundlagenforschung der Exakten Wissenschaften (DVMLG) (2010 -)

- Reviewer for Mathematical Reviews (2007 -) and Zentralblatt MATH (2010 -)
- Organizing Committee Member:
 - ”Algebra and Probability in Many-Valued Logics”, International Workshop on Logical and Algebraic aspects of Many-Valued Reasoning, May 14-16, 2009
Technische Universität Darmstadt, Germany
 - “Logic and applications” Workshop, January 9, 2004,
”Simion Stoilow” Institute of Mathematics of the Romanian Academy, Bucharest, Romania
 - Weekly Seminar ”Alexandru Brezuleanu” (1997-2004),
University of Bucharest, Romania
 - Commemorative Symposium “Grigore C. Moisil”, June 16, 2003,
University of Bucharest, Romania
 - Weekly Seminar ”Fuzzy sets: theory and applications”(1998-2003),
National Institute for Research and Development in Informatics (ICI), Bucharest, Romania
 - The Romanian Computer Science and Logic Winter Meeting 2002 (RCSLW02), December 23, 2002,
University of Bucharest, Romania
 - Anniversary Symposium “Sergiu Rudeanu”, February 9, 2000,
University of Bucharest, Romania
 - “Recent researches in fuzzy logic” Workshop, November 13, 1999,
University of Bucharest, Romania
 - “Many-valued Logic” Session, The 4th International Symposium of Economic Informatics, May 6 - 9, 1999,
ASE Bucharest, Romania
 - Communication Session “Grigore C. Moisil”, June 19, 1998,
University of Bucharest, Romania
- Refereeing for Journals or Publishers: Acta Applicandae Mathematicae, Annals of Pure and Applied Logic, Computers and Mathematics with Applications, Fixed Point Theory and Applications, International

Journal of Mathematics and Mathematical Sciences, Journal of Mathematical Analysis and Applications, Journal of Multiple-Valued Logic and Soft Computing, Nonlinear Analysis, Proceedings of the Romanian Academy, Soft Computing - A Fusion of Foundations, Methodologies and Applications, Computer Science Logic'05, '06

TALKS

Talks at Conferences, Workshops

- *Recent developments in proof mining* (Invited talk), Oberwolfach Workshop 1145: Mathematical Logic: Proof Theory, Type Theory and Constructive Mathematics, Mathematisches Forschungsinstitut Oberwolfach, Germany, November 6-12, 2011
- *Proof mining in metric fixed point theory*, ICFPTA 2009 (The 9th International Conference on Fixed Point Theory and its Applications), Changhua, Taiwan, July 16 - 22, 2009
- *Recent applications of proof mining in ergodic theory*, Colloquium Logicum 2008, Darmstadt, Germany, September 10-13, 2008
- *Logical methods in nonlinear analysis*, WCNA (World Congress of Nonlinear Analysis) 2008, Orlando, USA, July 2-11, 2008
- *Logical methods in nonlinear analysis* (Invited talk), Conference on Nonlinear Analysis and Optimization (in celebration of Alex Ioffe's 70th and Simeon Reich's 60th birthdays), Technion, Haifa, Israel, June 18-24, 2008
- *Recent results in proof mining* (Invited talk), Oberwolfach Workshop 0815: Mathematical Logic: Proof Theory, Constructive Mathematics, Mathematisches Forschungsinstitut Oberwolfach, Germany, April 6-12, 2008
- *Proof mining in nonlinear analysis*, Domains VIII and Computability Over Continuous Data Types, Novosibirsk, Russia, September 11 - 15, 2007

- *Logical methods in fixed point theory*,
ICFPTA 2007 (The 8th International Conference on Fixed Point Theory and Applications), Chiang Mai, Thailand, July 17-22, 2007
- *Recent uses of proof mining* (Invited talk),
Conference “Methods of Proof Theory in Mathematics”, Max-Planck Institute for Mathematics, Bonn, Germany, June 4-9, 2007
- *Proof mining in $CAT(0)$ -spaces and \mathbb{R} -trees* (Invited talk),
AMS-MAA Joint Mathematics Meetings, AMS-ASL Special Session on Logical Methods in Computational Mathematics, New Orleans, USA, January 5-8, 2007
- *Proof mining in \mathbb{R} -trees and hyperbolic spaces*,
13th Workshop on Logic, Language, Information and Computation (WoLLIC’2006), Stanford, CA, USA, July 18-21, 2006
- *Proof mining in functional analysis, hyperbolic geometry and group theory* (Invited talk),
Horizons of Truth: Logics, Foundations of Mathematics, and the Quest for Understanding the Nature of Knowledge. Gödel Centenary 2006. An International Symposium Celebrating the 100th Birthday of Kurt Gödel, Vienna, Austria, Young Scholar Competition, April 27, 2006
- *Proof mining in $CAT(0)$ -spaces* (Invited talk),
MAP (Mathematics, Algorithms, Proofs) 2006, Castro Urdiales, Spain, January 9-13, 2006
- *The approximate fixed point property in product spaces* (Invited talk),
Oberwolfach Workshop 0512: Mathematical Logic: Proof Theory, Type Theory and Constructive Mathematics, Mathematisches Forschungsinstitut Oberwolfach, Germany, March 20-26, 2005
- *Approximate fixed points of nonexpansive functions in product spaces* (Invited talk),
Dagstuhl Seminar 05021: MAP (Mathematics, Algorithms, Proofs), Internationales Begegnungs- und Forschungszentrum (IBFI), Schloss Dagstuhl, Germany, January 09-14, 2005

- *Proof mining in fixed point theory* (Invited talk),
Workshop on Proof Theory and Algorithms, ICMS (International Center for Mathematical Sciences), Edinburgh, United Kingdom, March 22-29, 2003
- *Liquid flow time series prediction using feed-forward neural networks and SuperSAB learning algorithm*,
CONTI'2002 - The 5th International Conference on Technical Informatics, Timișoara, Romania, October 18-19, 2002
- *Applications of feed-forward neural networks to ecological phenomena forecasting*,
ITCPA'2000, Bucharest, Romania, October 18-20, 2000
- *Three-valued dynamic propositional logic*,
The 4th International Symposium of Economic Informatics, Academy of Economical Studies, Bucharest, May 6-9, 1999
- *Applications of neural networks to some ecological phenomena forecasting*,
The 3rd International Symposium of Economic Informatics, Academy of Economical Studies, Bucharest, May 6-9, 1997

Colloquium Talks, Guest Lectures and Seminar Talks

- *Uniform (approximate) fixed point property*,
Department of Mathematical Analysis, University of Seville, Spain, June 13, 2010
- *Effective methods in metric fixed point theory and ergodic theory*,
Department of Mathematical Analysis, University of Seville, Spain, June 14, 2010
- *Growth of groups and Gromov's theorem* (Antrittsvorlesung),
Department of Mathematics, Technische Universität Darmstadt, Germany, May 7, 2009
- *Proof mining in metric fixed point theory and ergodic theory*,
Oberseminar mathematische Logik, Universität Bonn, Germany, October 19, 2009

- *Ergodic Ramsey Theory* (Habilitationvortrag),
Department of Mathematics, Technische Universität Darmstadt, Germany, October 16, 2009
- *Proof mining in metric fixed point theory and ergodic theory*,
Department of Mathematics, Technische Universität Darmstadt, Germany, November 28, 2008
- *Proof mining in ergodic theory and fixed point theory*,
Logic Seminar, Department of Mathematics, Technische Universität Darmstadt, Germany, June 27, 2008
- *Logical methods in nonlinear analysis*
Seminaire de l'Equipe de Mathématiques Appliquées, Université Paul Verlaine-Metz, France, February 14, 2008
- *Proof mining in fixed point theory*
Logic Seminar, Department of Mathematics, Technische Universität Darmstadt, Germany, May 25, 2007
- *Approximate fixed points of nonexpansive mappings*
Max-Planck Institute for Mathematics, Bonn, Germany, March 21, 2007
- *Proof mining in fixed point theory*
Max-Planck Institute for Mathematics, Bonn, Germany, March 8, 2007
- *Proof mining in functional analysis*,
University of Bucharest, Romania, September 21, 2006
- *Representations of many-valued algebras*,
AG1 Seminar, Department of Mathematics, Technische Universität Darmstadt, Germany, June 11, 2004
- *Recursion Theory*, University of Bucharest, Romania, November - December 2003
- *Detecting inconsistencies in domain theories*,
NASA Ames/RIACS 2003 SSRP (Summer Student Research Program) Seminar, NASA Ames Research Center and Research Institute for Advanced Computer Science (RIACS), Moffet Field, California, USA, September 2, 2003

- *Boolean products of BL-algebras*,
Weekly Seminar "Alexandru Brezuleanu", University of Bucharest, Romania, January 23, 2003
- *Compact representations of BL-algebras*,
Weekly Seminar "Alexandru Brezuleanu", University of Bucharest, Romania, January 16, 2003
- *Proof mining in fixed point theory*,
ASE, Bucharest, Romania, September 17, 2002
- *Proof mining in fixed point theory*,
Mathematical Logic Seminar, Stanford University, CA, USA, August 6, 2002
- *Certifying Kalman filters*,
NASA Ames/RIACS 2002 SSRP (Summer Student Research Program) Seminar, NASA Ames Research Center and Research Institute for Advanced Computer Science (RIACS), Moffet Field, California, USA, August 1, 2002
- *Compact representations of BL-algebras*,
Logic and Semantics Seminar, BRICS (Basic Research in Computer Science), University of Aarhus, Denmark, May 15, 2002
- *MV-algebras and McNaughton functions*,
Series of talks, Weekly Seminar "Fuzzy sets: theory and applications", National Institute for Research and Development in Informatics (ICI), Bucharest, Romania, October-December 2001
- *Sheaf representations of BL-algebras*,
Communication Session "Alexandru Brezuleanu", University of Bucharest, Romania, May 5, 2001
- *Boolean products of BL-algebras*,
Anniversary Symposium "Sergiu Rudeanu", University of Bucharest, Romania, February 9, 2000
- *Predicate calculus for many-valued logics*,
Weekly Seminar "Alexandru Brezuleanu", University of Bucharest, Romania, January 14, 2000

- *First-order fuzzy logic*,
Workshop "Recent researches in fuzzy logic", University of Bucharest,
Romania, November 13, 1999
- *Model theory for first-order logic*,
Series of talks, Weekly Seminar "Alexandru Brezuleanu", University of
Bucharest, Romania, October-December 1998
- *Canonical models and filtrations in three-valued modal propositional
logic*,
Communication Session "Grigore C. Moisil", University of Bucharest,
Romania, June 19, 1998
- *Sheaves in universal algebra*,
Series of talks, Weekly Seminar "Alexandru Brezuleanu", University of
Bucharest, Romania, February-March, 1998

TEACHING RECORD

Courses Taught

- *Ergodic Ramsey Theory*, Department of Mathematics, SNSB (Școala
Normală Superioară București), Winter Term 2010/2011.
- *Analysis II* for MCS (Mathematics with Computer Science), Depart-
ment of Mathematics, Technische Universität Darmstadt, Germany,
Summer Terms 2006 and 2007.
- *Analysis I* for MCS (Mathematics with Computer Science), Depart-
ment of Mathematics, Technische Universität Darmstadt, Germany,
Winter Term 2006/2007.

Scientific Seminars

- *Effective methods in (nonlinear) ergodic theory*, Department of Math-
ematics, SNSB (Școala Normală Superioară București), Summer Term
2011

Assistant for Undergraduate Courses

- *Linear Algebra II*, Department of Mathematics, Technische Universität Darmstadt, Germany, Germany, Summer Term 2009
- *Analysis II* for MCS (Mathematics with Computer Science), Department of Mathematics, Technische Universität Darmstadt, Germany, Germany, Summer Terms 2004, 2005 and 2008
- *Analysis I* for MCS (Mathematics with Computer Science), Department of Mathematics, Technische Universität Darmstadt, Germany, Germany, Winter Term 2004/2005 and 2005/2006
- *Fuzzy logics*, 4th year, Department of Fundamentals of Computer Science, Faculty of Mathematics and Computer Science, University of Bucharest, Romania, 2000/2001.
- *Logic and combinatorics*, 1st year, Computer Science College, Faculty of Mathematics and Computer Science, University of Bucharest, Romania, 2000/2001
- *Procedural programming languages*, 2nd year, Computer Science College, Faculty of Mathematics and Computer Science, University of Bucharest, Romania, 1996/1997

Assistant for Graduate Courses

- *Model theory for non-classical logics*, 5th year (Master), Department of Fundamentals of Computer Science, Faculty of Mathematics and Computer Science, University of Bucharest, Romania, 2000/2001