

Dominik Kwietniak

CONTACT INFORMATION	Assistant Professor (adiunkt) Faculty of Mathematics and Computer Science Jagiellonian University in Kraków ul. Łojasiewicza 6 30-348 Kraków POLAND	<i>E-mail:</i> dominik.kwietniak@uj.edu.pl <i>WWW:</i> Personal Homepage
RESEARCH INTERESTS	Entropy and chaos in dynamical systems. Ergodic theory and its applications to algebra, combinatorics and number theory. One-dimensional dynamics. Symbolic dynamics. Topology and its applications. Properties of the Web (WWW) graph, PageRank algorithm and its applications. Data mining and time series analysis.	
ACADEMIC APPOINTMENTS	Assistant Professor (adiunkt) Assistant Professor (asystent) Faculty of Mathematics and Computer Science Jagiellonian University in Kraków	February 2009 to present October 2006 to January 2009
DEGREES	Jagiellonian University in Kraków, Poland	
	Ph.D. in Mathematics,	November 2006
	<ul style="list-style-type: none">• Thesis: <i>Devaney chaos and its variants vs. topological entropy</i> (in Polish)• Advisor: Roman Szrednicki	
	Master of Science in Mathematics with honours,	June 2002
	<ul style="list-style-type: none">• Thesis: <i>Persistence in Dynamical Systems</i> (in Polish)• Advisor: Krzysztof Ciesielski	
EDUCATION	Jagiellonian University in Kraków, Poland	
	Ph.D. Studies in Mathematics,	2002-2006
	Individual interdisciplinary Studies in Mathematics and Natural Sciences	
	<ul style="list-style-type: none">• Mathematics• Computer Science	1997-2002 1997-2001
	V Liceum Ogólnokształcące im. Augusta Witkowskiego w Krakowie	1993-1997
	High school. Special (university) profile: mathematics and physics.	
REFEREED JOURNAL PUBLICATIONS	[1] Fryderyk Falniowski, Marcin Kulczycki, Dominik Kwietniak, Jian Li <i>Two results on entropy, chaos, and independence in symbolic dynamics</i> Discrete Cont. Dyn. Sys. B, 20 (2015), no. 10, pp. 3487–3505. arXiv:1502.03981v1 [math.DS], 2015.	
	[2] Bernardo Carvahlo, Dominik Kwietniak <i>On almost specification and average shadowing properties</i> J. Math. Anal. Appl. 420 (2014), no. 1, 801-813. arXiv:1402.0674v1 [math.DS]	
	[3] Grzegorz Harańczyk, Dominik Kwietniak, Piotr Oprocha, <i>Topological structure and entropy of mixing graph maps</i> Ergodic Theory Dynam. Systems 34 (2014) no. 5, 1587-1614. http://dx.doi.org/10.1017/etds.2013.6	
	[4] Marcin Kulczycki, Dominik Kwietniak, Piotr Oprocha <i>On almost specification and average shadowing properties</i> Fund. Math. 224 (2014), no. 3, 241–278.	

- [5] Dominik Kwietniak,
Topological entropy and distributional chaos in hereditary shifts with applications to spacing shifts and beta shifts
Discrete Contin. Dyn. Syst. **33** (2013), no. 6, 2451–2467.
- [6] Dominik Kwietniak, Martha Ubik
Topological entropy of compact subsystems of transitive real line maps
Dyn. Sys. **28** (2013), no. 1, 62–75.
- [7] Marcin Kulczycki, Dominik Kwietniak,
Shadowing vs distality for actions of R^n
Dyn. Sys. **27** (2012), no. 2, 205–211.
- [8] Dominik Kwietniak, Piotr Oprocha,
On weak mixing, minimality and weak disjointness of all iterates
Ergodic Theory Dynam. Systems **32** (2012), no. 5, 1661-1672.
- [9] Dominik Kwietniak, Piotr Oprocha,
A note on the average shadowing property for expansive maps
Topology Appl. **159** (2012), no. 1, 19–27.
- [10] Grzegorz Harańczyk, Dominik Kwietniak, Piotr Oprocha,
A note on transitivity, sensitivity and chaos for graph maps
J. of Diff. Eq. and Appl. **17** (2011), no. 10, 1549–1553.
- [11] J.L. García Guirao, D. Kwietniak, M. Lampart, P. Oprocha, A. Peris,
Chaos on hyperspaces
Nonlinear Anal. **71** (2009), no. 1–2, 1-8.
- [12] Grzegorz Harańczyk, Dominik Kwietniak,
When lower entropy implies stronger Devaney chaos
Proc. Amer. Math. Soc. **137** (2009), no. 6, 2063-2073.
- [13] Dominik Kwietniak, Piotr Oprocha,
Teoria chaosu w ujęciu matematycznym (Chaos Theory from the Mathematical Viewpoint)
Mat. Stosow. **9** (2009), 1–45.
- [14] Dominik Kwietniak, Piotr Oprocha,
Topological entropy and chaos for maps induced on hyperspaces
Chaos Solitons Fractals **33** (2007), no. 1, 76-86.
- [15] Dominik Kwietniak, Michał Misiurewicz,
Exact Devaney chaos and entropy
Qual. Theory Dyn. Syst. **6** (2005), no. 1, 169-179.
- ACCEPTED FOR PUBLICATION [16] Marcin Kulczycki, Dominik Kwietniak, Jian Li
Entropy of subordinate shift spaces
American Mathematical Monthly, to appear, [arXiv:1401.5969v3](https://arxiv.org/abs/1401.5969v3) [math.DS], 2014.
- [17] Dominik Kwietniak, Martha Łącka, Piotr Oprocha
A panorama of specification-like properties and their consequences
Contemporary Mathematics, to appear, [arXiv:1503.07355](https://arxiv.org/abs/1503.07355) [math.DS], 2015.
- [18] Dominik Kwietniak, Piotr Oprocha, Michał Rams
On entropy of dynamical systems with almost specification
Israel Journal of Mathematics, to appear, [arXiv:1411.1989v1](https://arxiv.org/abs/1411.1989v1) [math.DS], 2015.
- [19] Jakub Byszewski, Fryderyk Falniowski, Dominik Kwietniak
Transitive dendrite map with zero entropy
Ergodic Theory Dynam. Systems, to appear, [arXiv:1503.03035v1](https://arxiv.org/abs/1503.03035v1) [math.DS], 2015.

SUBMITTED
JOURNAL
PUBLICATIONS

- [20] Katrin Gelfert, Dominik Kwietniak
The (Poulsen) simplex of invariant measures
submitted, [arXiv:1404.0456v1](https://arxiv.org/abs/1404.0456v1) [math.DS], 2014.
- [21] Jeremias Epperlein, Dominik Kwietniak, Piotr Oprocha
Mixing properties in coded systems
submitted, [arXiv:1503.02838v1](https://arxiv.org/abs/1503.02838v1) [math.DS], 2015.
- [22] Dominik Kwietniak, Jian Li, Piotr Oprocha, Xiangdong Ye
Multi-recurrence and van der Waerden systems
submitted, [arXiv:1501.01491v1](https://arxiv.org/abs/1501.01491v1) [math.DS], 2015.

EXPOSITORY
ARTICLES

- [23] Dominik Kwietniak, *Szkoły Matematyki Poglądowej zapraszają*
Delta nr 9, wrzesień (2012).
- [24] Dominik Kwietniak, *Ultrafiltry*
MSN 48 (2012) pp. 32–38.
- [25] Dominik Kwietniak, *Dwa do nieskończoności*
MSN 39 (2008) pp. 21–25.
- [26] Marek Kordos, Dominik Kwietniak, Małgorzata Mikołajczyk, Marcin Preisner,
Magdalena Siankowska, *Ćwiczenia ze wstążką (Möbius and his band)*
mmm nr 1 (22) January 2008.

GRANTS

- National Science Centre grant Sonata bis
Ergodic theory and its applications in dynamics, arithmetic, and algebra
- PI: Dominik Kwietniak
 - Duration: 2013-2018
 - Research performed at: Jagiellonian University in Kraków
 - Function: principal investigator
- National Science Centre grant Maestro
Invariant measures, entropy and other parameters of growth in classical and non-classical dynamical systems
- PI: Tomasz Downarowicz
 - Duration: 2013-2018
 - Research performed at: Institute of Mathematics, Polish Academy of Sciences
 - Function: investigator, research team member
- Polish Ministry of Science and Higher Education grant Iuventus Plus IP 2011 028771
Topological and ergodic properties of generalized spacing shifts and dynamical systems with positive entropy, and/or generalized specification property
- PI: Dominik Kwietniak
 - Duration: 2012-2013
 - Research performed at: Jagiellonian University in Kraków
 - Function: principal investigator
- Polish State Committee for Scientific Research (KBN) grant NN 206 2723 33
Distributional chaos, the specification property and the size of chaotic sets
- PI: Piotr Oprocha
 - Duration: 2007-2009
 - Research performed at: AGH University of Science and Technology, Kraków
 - Function: investigator, research team member
- Polish State Committee for Scientific Research (KBN) grant NN 201 2700 35
Dynamics of distal pseudogroups and foliations
- PI: Robert Wolak
 - Duration: 2008–2010
 - Research performed at: Jagiellonian University in Kraków

- Function: investigator, research team member

EU Operational Program Innovative Economy, project R & D for Interia.pl S.A.

Development of the architecture of a new generation mass mail system with scalability flexible enough to be offered worldwide

- PI: Paweł M. Idziak
- Duration: 2008
- Research performed at: Jagiellonian University in Kraków
- Function: investigator, research team member

STUDENT
ADVISING

Karolina Malec Graduated: 2015

- Master of Science in Mathematics
- Thesis: **Hidden Markov models and their applications**

Andrzej Bedychaj Graduated: 2015

- Master of Science in Mathematics
- Thesis: **The Ornstein-Weiss Theorem and its application to the estimation of the entropy of the Polish language**

Mikołaj Frączyk Graduated: 2014

- Master of Science in Mathematics
- Thesis: **Difference sets in amenable and general groups**
- (*) awarded 2nd prize in the Marcinkiewicz's Student's Competition for the Best Master's Thesis in Mathematics of the Polish Mathematical Society

Justyna Łakomska Graduated: 2014

- Master of Science in Mathematics
- Thesis: **Support Vector Machines**

Krzysztof Brania Graduated: 2014

- Master of Science in Mathematics
- Thesis: **The Application of Hidden Markov Models in Financial Time Series Analysis**

Martha Łącka Graduated: 2014

- Master of Science in Mathematics
- Thesis: **On Invariant Measures of Dynamical Systems with Specification-like Properties**
- Honourable mention in the Marcinkiewicz's Student's Competition for the Best Master's Thesis in Mathematics of the Polish Mathematical Society

Tomasz Frankowski Graduated: 2013

- Master of Science in Mathematics
- Thesis: **Van der Waerden's theorem and its polynomial generalization**

Wojciech Ganczarek Graduated: 2013

- Master of Science in Mathematics
- Thesis: **Mathematical models for epidemic spreading on complex networks***
- (*) awarded 3rd prize in the Student Competition for Best Master's Thesis in Probability and Applications of Mathematics (organized by the Polish Mathematical Society).

Kamil Stępień Graduated: 2013

- Master of Science in Mathematics
- Thesis: **Random Graphs**

- Kamila Bara** Graduated: 2012
- Master of Science in Applied Mathematics
 - Thesis: **Frobenius-Perron theorem and its application in PageRank algorithm**
- Katarzyna Kozieł** Graduated: 2012
- Master of Science in Applied Mathematics
 - Thesis: **Continuous-time Markov chains and their applications in queuing theory**
- Karol Gryszka** Graduated: 2011
- Master of Science in Applied Mathematics
 - Thesis: **Lagrangian points in the three-body problem**
- Agnieszka Kościelniak** Graduated: 2011
- Master of Science in Financial Mathematics
 - Thesis: **Applying Hidden Markov Models to study crises in financial markets**
- Kamila Gąszcz** Graduated: 2011
- Master of Science in Computational Mathematics
 - Thesis: **The diagnosis of osteoporosis based on the analysis of medical images of the vertebrae**
- Dariusz Czarnecki** Graduated: 2011
- Master of Science in Computational Mathematics
 - Thesis: **The evaluation of mechanical endurance of bones on the basis of tomograms**
- Michał Kotuła** Graduated: 2011
- Master of Science in Mathematics
 - Thesis: **Properties of weak mixing and mixing in G -shifts**
- Michał Jastrzębiec-Bobrowski** Graduated: 2010
- Master of Science in Mathematics
 - Thesis: **Topological entropy of maps with horizontal gaps**
- Paweł Feliks** Graduated: 2010
- Master of Science in Mathematics
 - Thesis: **Transitive dynamical systems**
- Łukasz Wojtala** Graduated: 2010
- Master of Science in Mathematics
 - Thesis: **Interval maps of Sharkovski type 2^∞ and their properties**
- Magdalena Kielek (Nowak)** Graduated: 2010
- Master of Science in Applied Mathematics
 - Thesis: **Geometry of Fractal Limit Sets**
- Piotr Kamiński** Graduated: 2010
- Master of Science in Mathematics
 - Thesis: **Approximation of entropy of circle maps using horseshoes**
- Krystian Jacek** Graduated: 2008
- Master of Science in Applied Mathematics
 - Thesis: **Perron-Frobenius theorem and its application in the PageRank algorithm used by Google search engine**
 - Co-advisor: Jerzy Ombach

TEACHING
EXPERIENCE

Jagiellonian University in Kraków

Lectures

- Applied Linear Algebra WMI.IM-SM/s.a.l
- Ergodic Theory
- Ergodic Number Theory
- Fractals, chaos and dynamical systems WMI.IM-SM/f.c.u.d
- Linear Algebra and Geometry 1 & 2 WMI.IM-OL/I/alg.2/ek
- Qualitative Theory of Differential Equations WMI.IM-BL/Q.T.D.E
- Smooth Dynamical Systems
- Time Series Analysis and Forecasting WMI.IM-PPSC-SM.fs

Teaching Assistant (Exercises sessions)

- A transition to higher mathematics
- An introduction to logic & Set Theory
- An introduction to mathematical analysis
- An introduction to probability
- Applied Linear Algebra
- Chaos in Dynamical Systems
- Computer Laboratory
- Differential Equations 1 & 2
- Differential Geometry
- Discrete Mathematics
- Elementary Geometry
- Ergodic Theory
- Graduate Seminar
- Linear Algebra
- Partial Differential Equations
- Qualitative Theory of Differential Equations
- Smooth Dynamical Systems
- Topology

Other teaching

- Popular lectures on mathematics for high school students (2-6 per year since 2006).
- Mathematical Circle in II Liceum Ogólnokształcące in Kraków (high school), September 2009 – June 2013.
- Lecturer at Workshops of the Polish Children's Fund for exceptionally gifted pupils (*Topology* March 26, 2011 and *Geometry* March 2015).
- Lecture *Szachownice, kafelki i matematyka* during *IV Konferencja Modych — Kalejdoskop Matematyczny* (pod patronatem Elżbiety Łęcznarowicz) Kraków, June 10, 2010

PROFESSIONAL
SERVICE

Referee Service

- *Acta Mathematica Universitatis Comenianae*
- *Annales Polonici Mathematici*
- *Arab Journal of Mathematical Sciences*
- *Bulletin of the Malaysian Mathematical Sciences Society*
- *Bulletin of the Polish Academy of Sciences Mathematics*
- *Chaos, Solitons & Fractals*
- *Colloquium Mathematicum*
- *Discrete and Continuous Dynamical Systems Series A*
- *Dynamical Systems: An International Journal*
- *Ergodic Theory and Dynamical Systems*
- *Fundamenta Mathematicae*
- *International Journal of Bifurcations and Chaos*
- *Journal of Difference Equations and Applications*

- *Nihonkai Mathematical Journal*
- *Nonlinear Analysis: Theory, Methods & Applications*
- *Reports on Mathematical Physics*
- *Science in China*
- *Topological Methods in Nonlinear Analysis*
- *Topology and its Applications*
- *Transactions of the American Mathematical Society*

Conference Service

- Co-organizer of the Wandering seminar “Ergodic Theory and Dynamical Systems”, Faculty of Applied Mathematics AGH-UST, November 20–23, 2014.
- Co-organizer of Special Session *Ergodic Theory and Dynamical Systems* during joint DMV-PTM Mathematical Meeting, Poznań, September 17–20, 2014.
- Co-organizer of the Wandering seminar “Ergodic Theory and Dynamical Systems”, Institute of Mathematics Polish Academy of Sciences, April 24–27, 2014.
- Main organizer of the Wandering seminar “Ergodic Theory and Dynamical Systems”, Jagiellonian University in Kraków, January 23–26, 2014.
- Member of the scientific committee of the 16th International Workshop for Young Mathematicians “Ergodic Theory and Dynamical Systems”
- Organizer/member of the organizing and scientific committee of the Schools of Illustrative Mathematics cycle of conferences:
 - XL Visual Mathematics, Grzegorzewice, winter 2008.
 - XLI Practice and Abstract, Grzegorzewice, summer 2008.
 - XLII Proofs and Counterexamples, Grzegorzewice, winter 2009.
 - XLIII Against Intuition, Grzegorzewice, summer 2009.
 - XLIV But what is it good for? Sulejw, winter 2010.
 - XLV What do I like? Jachranka, summer 2010.
 - XLVI Nonstandard Approach, Warszawa-Miedzeszyn, winter 2011.
 - XLVII Extremes, Nadarzyn, summer 2011.
 - XLVIII Association and Analogy, Otwock, winter 2012.
 - XLIX Exceptions, Nadarzyn, summer 2012.
 - L (In)dependence, Nadarzyn, winter 2013.
 - LI Models, Nadarzyn, summer 2013.
 - LII Mathematics and Arts, Białobrzegi, summer 2014.
 - LIII What is...?, Kraków, autumn 2015.

CONFERENCE TALKS

The Sixth Visegrad Conference Dynamical Systems

Prague, Czech Republic, July 6–10, 2015.

Title: *On invariant measures of hereditary shifts*

Dubrovnik VIII — Geometric Topology, Geometric Group Theory & Dynamical Systems

Inter-University Centre Dubrovnik, Croatia, June 22–26, 2015.

Title: *Dynamically defined pseudometrics and the construction of generic points*

2015 Joint Mathematics Meetings (JMM) MAA–AMS

San Antonio, USA, January 10–13, 2015.

Title: *On intrinsic ergodicity of subordinate and almost specified shift spaces*

Workshop on Symbolic Dynamics on finitely presented Groups

CMM, Santiago de Chile, Chile, December 15–19, 2014.

Title: *On intrinsic ergodicity of weakly specified, almost specified and subordinate shift spaces*

New Perspectives in Discrete Dynamical Systems

Tossa de Mar, Catalonia, October 2–4, 2014.

Title: *Entropy and independence in symbolic dynamics with connections to number theory*

18th Czech-Slovak Workshop on Discrete Dynamical Systems

Malenovice, Czech Republic, September 8–12, 2014.

Title: *On consequences of specification-like properties*

The ICM 2014 Satellite Conference on Dynamical Systems and Related Topics

Chungnam National University, Daejeon, South Korea, August 8–12, 2014.

Title: *Specification-like properties and invariant measures*

Probability in Dynamics at IM-UFRJ

IM-UFRJ, Rio de Janeiro, Brasil, May 26–30, 2014

Title: *On dynamical systems with specification-like properties*

Topological Methods in Differential Equations

Conference in Honour of the 60th Birthday of Roman Srzednicki

Jagiellonian University in Kraków, Poland, May 23–24, 2014

Title: *On dynamical systems with specification-like properties* [in Polish]

48th Spring Topology and Dynamics Conference

University of Richmond, Richmond, Virginia, USA, March 13-15, 2014

Title: *Entropy and independence in symbolic dynamics*

Ergodic Optimization and Related Topics

USP, São Paulo, Brasil, December 9–13, 2013

Title: *When is the simplex of invariant measures Poulsen?*

Visegrad Conference on Dynamical Systems

UWM, Olsztyn, Poland, September 2–6, 2013

Title: *When is the simplex of invariant measures Poulsen?*

28th Summer Conference on Topology and Its Applications

Nipissing University North Bay, Ontario, Canada July 23–26, 2013

Title: *Chaos and dynamics of dendrite maps*

Thermodynamic Formalism and Applications

PUC, Santiago, Chile July 8–12, 2013.

Title: *When is the simplex of invariant measures Poulsen?*

9th AIMS Conference on Dynamical Systems, Differential Equations and Applications

Orlando, Florida, USA July 1–5, 2012

Title: *On almost specification and average shadowing properties*

16th Czech-Slovak Workshop on Discrete Dynamical Systems

Pustevny, Beskydy mountains, Czech Republic, June 11-15, 2012

Title: *On almost specification and average shadowing properties*

Ergodic Methods in Dynamics

Będlewo, Poland, April 23–27, 2012

Title: *Properties of systems with the generalized shadowing or specification property*

46th Spring Topology and Dynamics Conference

Univerisidad Nacional Autonoma de Mexico (UNAM) Mexico City, D. F., Mexico, March 22–24, 2012

Title: *Topological entropy and distributional chaos in hereditary shifts*

26th Summer Conference on Topology and its Applications

The City College of New York, CUNY, Nowy Jork, USA, July 26–29, 2011

Title: *Poincaré recurrence and topological entropy of spacing shifts*

Low-dimensional dynamics

IM PAN Warszawa, November, 15–19 2010

Title: *Dynamics of spacing shifts*

Czech-Slovak-Spanish Workshop on Discrete Dynamical Systems

La Manga del Mar Menor, Spain, September 20–24, 2010

Title: *On applications of spacing shifts*

25th Summer Conference on Topology and its Applications

Kielce, Poland, July 25–30, 2010

Title: *On transitivity, sensitivity and chaos for maps of graphs and other spaces*

12th Czech-Slovak Workshop on Discrete Dynamical Systems

The Visegrad conference Dynamical Systems Jeseníky, Czech Republic, September 6–13, 2009

Title: *Intermediate entropy over subsystems*

12th Czech-Slovak Workshop on Discrete Dynamical Systems

Pustevny, Czech Republic, September 14–20, 2008

Title: *Specification property and entropy for mixing graph maps*

International Conference on Dynamical Systems

in honour of Michał Misiurewicz on his 60th birthday

Będlewo, Poland, June 30 - July 5, 2008

Title: *A simple map inducing complicated dynamics*

First Joint International Meeting AMS-PTM

Warszawa, July 31–August 3, 2007

Title: *When lower entropy implies stronger Devaney chaos*

11th Czech-Slovak Workshop on Discrete Dynamical Systems

Visegrad Conference on Dynamical Systems — High Tatras

Štrbské Pleso, Slovakia, June 17–23, 2007

Title: *On the topological entropy of mixing circle maps*

10th Czech-Slovak Workshop On Discrete Dynamical Systems

Praděd, Czech Republic June 25-July 1, 2006

Title: *Topological entropy of totally chaotic one-dimensional maps*

9th Czech-Slovak Workshop On Discrete Dynamical Systems

Malenovice, Czech Republic, September 4–11, 2005

Title: *Exact Devaney chaos and topological entropy*

CONFERENCES
ATTENDED

Global dynamics beyond uniform hyperbolicity

Olmué, Chile, August 31–September 11, 2015.

2nd Workshop on Combinatorics, Number Theory and Dynamical Systems

IMPA, Rio de Janeiro, Brazil, August 2015.

School and Conference on Dynamical Systems

International Centre for Theoretical Physics, Trieste, Italy, July 20–August 7, 2015

Workshop on dynamical systems and continuum theory

University of Vienna, Austria, June 29–July 3, 2015

Ergodic Theory and Dynamical Systems — Toruń 2014

Nicolaus Copernicus University, Toruń, Poland, May 12–16, 2014

Workshop on Dynamical Systems and Related Topics

University of Maryland, College Park, MD, USA, April 11–13, 2014

Ergodic Theory Workshop

UNC Chapel Hill, NC, USA, April 3–6, 2014

Ergodic Theory with Connections to Arithmetic

Heraklion, Greece, June 3–7, 2013

2013 STAR Workshop Probability and Numbers

TU Delft, The Netherlands, April 2–4, 2013

International Conference Beyond Uniform Hyperbolicity

Będlewo, Poland, May 27–June 7, 2013

Ergodic Theory and Dynamical Systems: Perspectives and Prospects

University of Warwick, April 16–20, 2012

<http://www2.warwick.ac.uk/fac/sci/math/research/events/2010-2011/sympo>

Dynamical Systems and Randomness

Institut Henri Poincaré, Paris, France, May 11–15, 2009

<http://ergodic2009.math.cnrs.fr/>

INVITED LECTURES Mini-course: *Specification and shadowing properties*

A week on Dynamical Systems at IM-UFRJ

Rio de Janeiro, Brazil, January 21–25, 2013

TALKS AT
SEMINARS

Dynamics Seminar at PUC Rio de Janeiro

Rio de Janeiro, Brazil, October 27, 2015

Title: *Invariant measures of B-free shifts*

Dynamical Systems Seminar at University of Houston

Houston, Texas, USA, January 15, 2015

Title: *On intrinsic ergodicity of almost specified dynamical systems*

Max Planck Institute for Mathematics “Dynamics and Numbers”

Bonn, June 20, 2014

Title: *Entropy and independence in symbolic dynamics with connections to number theory*

Dynamical Systems Seminar at University of Houston

Houston, Texas, USA, April 9, 2014

Title: *On dynamical systems with specification-like properties*

Dynamical Systems Seminar at UFBA in Salvador

Salvador, Brasil, December 5, 2013

Title: *A combinatorial approach to entropy and independence of shifts*

Arbeitsgemeinschaft: Sofic Entropy

MFO, Oberwolfach, Germany, October 6–11, 2013

Title: *Combinatorial independence and sofic entropy*

Dynamical Systems Seminar

Polish Academy of Sciences, Warszawa, March 18, 2013

Title: *Generalized specification properties and their consequences*

Arbeitsgemeinschaft: Ergodic Theory and Combinatorial Number Theory

MFO, Oberwolfach, Germany, October 7–13, 2012

Title: *Sumset phenomenon*

Dynamical Systems Seminar at Silesian University in Opava

Opava, Czech Republic, October 30-31, 2012

Title: *Sumset phenomenon part 1 & 2*

Dynamical Systems Seminar at IUPUI

Indianapolis, Indiana, USA, October 17, 2011

Title: *Generalized specification vs. generalized shadowing*

Dynamical Systems Seminar

University of Murcia, Murcia, Spain, May 2010

Topics in Dynamics of Foliations

Applied Mathematics Seminar of the Polish Mathematical Society

Kraków, November 2009

Title: *Chaos as a mathematical notion*,

Dynamical Systems Seminar

Polish Academy of Sciences, Warszawa, November 24, 2008

Title: *Topological entropy and specification property for mixing graph maps*

Dynamical Systems Seminar, Matej Bel University, Banská Bystrica, Slovakia,
February 2008

Title: *Chaos for mixing graph maps*

Dynamical Systems Seminar

Warsaw University, November 17, 2006

Title: *Devaney chaos, its variants and topological entropy*

Ergodic Theory Seminar

Wrocław University of Technology, January 5, 2006

Title: *Chaos w sensie Devaneya i jego odmiany a entropia topologiczna*

POPULAR LECTURES ON MATHEMATICS PROFESSIONAL MEMBERSHIPS

Cantor's Hydra

Student's Inter-University Mathematical Session, Kraków, November 22–24, 2013.

- Polish Mathematical Society
- American Mathematical Society
- Mathematical Association of America
- Stowarzyszenie na rzecz Edukacji Matematycznej (Society for Mathematical Education)

RESEARCH VISITS

- University of Exeter, Exeter, Great Britain, November 2015
- University of Houston, Houston, Texas, USA, January 2015
- Max Planck Institute of Mathematics, *Dynamics and Numbers*, Bonn, Germany, June 2014
- University of Houston, Houston, Texas, USA, April 2014
- Universidade Federal da Bahia, Salvador, Brazil, December 2013
- Universidade Federal do Rio de Janeiro, Brazil, January 2013
- Matej Bel University of Banská Bystrica, Slovakia, November 2012
- Silesian University in Opava, Czech Republic, October 2012
- Matej Bel University of Banská Bystrica, Slovakia, February 2008
- University of Murcia, Spain, May 2010

SOFTWARE SKILLS Computer Programming:

- C, C++, Python (good) SQL, MySQL (basic)

Mathematical and statistical software:

- Mathematica, Maple, R (good), Statistica (basic)

Typography:

- T_EX (L^AT_EX, B_IB_TE_X, P_STricks) (good)

Operating Systems:

- Microsoft Windows family (good), Linux (Unix family) (basic)

AWARDS

- Michał Jakub Łysek Memorial Award for the best young mathematician at the Jagiellonian University in Kraków, 2006.
- Award at the Competition for Conference Grants of the Polish Science Foundation (1st edition for the year 2011).
- Polish Minister of National Education Scholarship for Outstanding Students for the year 2001/02.
- Medal of the Commission of National Education (Medal Komisji Edukacji Narodowej) for contributions to mathematical education awarded in 2011.

- Jagiellonian University in Kraków Rector's Team Award for 2009, 2010, 2011 and 2012.
- Hugo Kołłątaj Award (given by the Rector of the Jagiellonian University for those who distinguish themselves in the field of popularizing knowledge by the means of cooperation with secondary schools; by inspiring educational aspirations among youths and adults; by writing books on methods of teaching and innovativeness in the area of teaching aids) in 2013.
- Jagiellonian University in Kraków Rector's Award for scientific achievements in 2014.
- Jagiellonian University in Kraków Rector's Award for scientific achievements in 2015.

REFERENCES

Prof. Michał Misiurewicz (e-mail: mmisiure@math.iupui.edu)

- Professor, Department of Mathematical Sciences, IUPUI

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