

Scientific Recognition: Advanced Systems Analysis

Awards

Matthias Jonas

- Paper Jones et al (2016) was among Highlights of 2016 of *Environmental Research Letters*

Elena Rovenskaya

- Paper Gephard et al (2016) was among Highlights of 2016 of *Environmental Research Letters*

Stefan Thurner

- Austrian Scientist of the Year 2017. Elected by the Club of Austrian Education and Science Journalists

Invited lectures

Sergey Aseev

- Maximum principle and optimal control problems in economics. Applied Mathematics Day Workshop, Moscow, Russia, September 2017
- An optimal economic growth model with a renewable resource and adjoining issues of optimal control theory for infinite horizon problems. Steklov Mathematical Institute Seminar, Moscow, Russia, June 2017

Alexey Davydov

- Singularities of Parametric Optimization and Optimal Control of Cyclic Processes. International Conference in Memory of John Mather on Singularity Theory and Dynamical Systems, Sanja, China, December 2017
- Existence of stationary solutions in populations dynamic and their optimization. The 8th International Conference on Differential and Functional Differential Equations, Moscow, Russia, August 2017
- Optimization of Stationary Solutions in Populations Dynamic. International Conference dedicated to the 90th birthday of Academician R.V. Gamkrelidze on Mathematical Theory of Optimal Control, Moscow, Russia, June 2017
- On the theory of nonlocal normal forms of mixed type PDE's on the plane. International Conference on Partial Differential Equations, Beijing, China, April 2017

Yuri Ermoliev

- Global changes and systemic catastrophic risk. Kick-off meeting on Integrated robust management of food-energy-water-land use nexus for sustainable development in Ukraine, Kiev, Ukraine, September 2017
- Integrated management of food-energy-water nexus under systemic risks and security targets. Kick-off meeting on Integrated robust management of food-energy-water-land use nexus for sustainable development in Ukraine, Kiev, Ukraine, September 2017
- Systemic risks and robust solutions. Kick-off meeting on Integrated robust management of food-energy-water-land use nexus for sustainable development in Ukraine, Kiev, Ukraine, September 2017
- Challenges of Modern Advanced Systems Analysis problems. Norwegian-Ukrainian Summer School on Vulnerability Assessment of Critical Infrastructure in the Post-Soviet era: Case Ukraine, Kaniv, Ukraine, August 2017
- Downscaling and nonparametric estimation for decision support models. Norwegian-Ukrainian Summer School on Vulnerability Assessment of Critical Infrastructure in the Post-Soviet era: Case Ukraine, Kaniv, Ukraine, August 2017
- How to make decisions under uncertainty? Advanced methodology delivers robust solutions for improving energy efficiency of technological portfolios. Norwegian-Ukrainian Summer School on Vulnerability Assessment of Critical Infrastructure in the Post-Soviet era: Case Ukraine, Kaniv, Ukraine, August 2017
- Linkage of stochastic integrated assessment models and probabilistic robust downscaling methods for integrated water, food, energy security management under uncertainty and risk: Local and Global Scales. Norwegian-Ukrainian Summer School on Vulnerability Assessment of Critical Infrastructure in the Post-Soviet era: Case Ukraine, Kaniv, Ukraine, August 2017
- Planning sustainable regional economic developments: Linking distributed sectorial models under uncertainty and asymmetric information. Norwegian-Ukrainian Summer School on Vulnerability Assessment of Critical Infrastructure in the Post-Soviet era: Case Ukraine, Kaniv, Ukraine, August 2017

Brian Fath

- Ecosystem dynamics, thermodynamics, and complex adaptive cycles: learning to flourish within limits. Beijing, China, December 2017
- Ecological Network Analysis: comparative or benchmark metrics? Workshop on Use of coastal and estuarine food web models in politics and management: The need for an entire ecosystem approach, Sylt, Germany, September 2017
- Application of systems thinking and ecological models to reduce environmental fragmentation. International Society for Ecological Modelling Biennial Global Conference, Keynote presentation, Jeju, Korea, September 2017
- Systems ecology and ecological growth and development: How nature flourishes under constraints. Alternative Economic and Monetary Systems Summer School BOKU, Laxenburg, Austria, August 2017
- Locus iste: co-evolution of place and culture to avert fragmentation across and within landscapes. 5th Viennese Talks on Resilience and Networks, Keynote presentation, Vienna, Austria, May 2017
- Ecological insights to promote regenerative economics. New York, New York, USA, April 2017
- Ecological insights to promote regenerative economics. Cambridge, Massachusetts, USA, April 2017

Gustav Feichtinger

- How many old people have ever lived? International Union for the Scientific Study of Population XXVIII International Population Conference 2017, Cape Town, South Africa, October-November 2017
- How many old people have ever lived? Deutsch-Österreichisch-Schwedisches Demographentreffen DACH 2017, Neuchatel, Switzerland, October 2017
- Optimal Control of Deviant Behavior. Jahrestagung 2017 der Deutschen Gesellschaft für Operations Research, Berlin, Germany, September 2017

Leena Ilmola

- Integrated systems method – identification of policy options for a complex wicked problem. Annual Conference on Decision Making Under Deep Uncertainty, Oxford, UK, November 2017
- Drivers of digital economy and Digitalization and un-captured GDP. A Special Workshop by the Prime Minister's Office, Helsinki, Finland, October 2017
- Anticipating Alternative Futures for the Platform Economy. XXVIII ISPIM Innovation Conference, Vienna, Austria, June 2017
- How to build resilient business models. International Global X-Network Conference, Hamburg, Germany, April 2017

Ali Kharrazi

- Resilience Research Empirical Applications for Social, Environmental, and Economic Systems. School of Business, East China University of Science and Technology, Shanghai, China, November 2017
- Network structure impacts global commodity trade growth and resilience. Expert Group Meeting on Channeling Trade and Investment into Sustainable Development. Trade, Investment, and Innovation Division, United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP), Bangkok, Thailand, August 2017

Mathieu Leduc

- Networked Markets and Relational Contracts. Marseille, France, December 2017
- Networked Markets and Relational Contracts. Budapest, Hungary, November 2017
- Pricing and Referrals in Diffusion on Networks. Budapest, Hungary, November 2017
- Networked Markets and Relational Contracts. Paris, France, October 2017
- Networked Markets and Relational Contracts. Cambridge, UK, March 2017
- Pricing and Referrals in Diffusion on Networks. Toulouse, France, February 2017

Tapio Palokangas

- Labor Market Regulation, International Trade and Property Rights. The 22nd International Conference on Dynamics, Economic Growth and International Trade, Paris, France, September 2017
- Emission Permit Trading with Global Externality Problems. First IIASA Summer Workshop on Green Growth Modeling, Laxenburg, Austria, July 2017
- Fertility, Mortality, Saving and Optimal Taxation. International Workshop on Economic Growth, Macroeconomic Dynamics, and Agents Heterogeneity, St. Petersburg, Russia, May 2017

Sebastian Poledna

- Economic forecasting with an agent-based model. The 11th Workshop on Economic Complexity, Sophia Antipolis, France, November 2017
- Economic forecasting with an agent-based model. International Conference on statistical physics (SigmaPhi), Corfu, Greece, July 2017

Elena Rovenskaya

- Systems Dynamics for Participatory Modelling. Institute of Energy and Climate Research Systems Analysis and Technology Evaluation (IEK-STE) Conference on Management of Natural Resources from the Perspective of Sustainable Development, Bonn, Germany, September 2017
- Optimal Resource Allocation. Summer School on Water Informatics: Science and Systems, Lahore, Pakistan, May 2017
- Network Dynamics and Systemic Risks: From financial systems to trade to supply chains. Madison, Wisconsin, USA, April 2017
- Systems Dynamics for Wicked Problems. Community Workshop for Synthesis Studies of the Pan-Arctic/Earth System on System-level currencies (energy, water, carbon and nutrients) and their role in an evolving Arctic, Washington, DC, USA, April 2017

Anastasia Stepanova

- Improving economic relations in the OSCE area in the context of the Eurasian integration. First Preparatory Meeting of the 25th OSCE Economic and Environmental Forum in Session II on Building Economic Partnerships in the OSCE area, Vienna, Austria, January 2017

Stefan Thurner

- Behavioral Finance und systemisches Risiko: Lehren und Politikempfehlungen. Promotionskolleg Makroökonomik bei beschränkter Rationalität: Dynamik, Stabilisierung und Verteilung, Bamberg, Germany, November 2017
- Quantification of systemic risk from overlapping portfolios in the financial system. Second Conference on Network Models and Stress Testing for Financial Stability, Mexico City, Mexico, September 2017
- Systemic risk management by restructuring financial networks. Conference on Complex Systems 2017, Satellite-Complex Financial Networks and Systemic Risk, Cancun, Mexico, September 2017
- How statistics appears in path dependent processes - all of it - from Zipf to Gauss. Workshop on Complex Networks: from socio-economic systems to biology and brain, Lipari, Italy, September 2017
- Towards a statistics of innovation - how statistics appears from noisy search processes - all of statistics - from Gauss to Zipf. KREYON Conference 2017: Unfolding the Dynamics of Creativity and Innovation, Rome, Italy, September 2017
- What if you know everything? What we learn about the homo sapiens from a computer game. Aalto-IBSEN Workshop on Computational Science, Helsinki, Finland, September 2017
- The three faces of entropy for complex systems – information, thermodynamics and the maxent principle. Summer Solstice Conference on Discrete Complex Systems, Catania, Italy, June 2017
- Big-Data driven 1-to-1 Simulations of Financial Systems for the Elimination of Systemic Risk. International Conference on Computational Science, Zurich, Switzerland, June 2017
- Big Data - Folgen für die Gesundheitsversorgung. Forum Gesundheitswirtschaft - Big Data, personalisierte Medizin und Digitalisierung: Welche Folgen für uns alle? Basel, Switzerland, May 2017
- What is a Complex System? Grafenegg, Austria, May 2017
- Complexity: physics beyond physics. Wigner Colloquia, Budapest, Hungary, April 2017
- Emergence of Power Laws. Nanyang Technological University Winter School, Nanyang, Singapore, March 2017
- How complexity weakens causality - emerging dangers - and ways out. Conference on Causality - Reality, Nanyang, Singapore, March 2017
- Understanding Co-Morbidity from Nation-Wide Medical Data. Sharing Seminar at Complexity Institute in Nanyang Technological University, Nanyang, Singapore, March 2017

Organized events**Alexey Davydov**

- The Second International Scientific Conference on Autumn Mathematical Readings in Adygea, Maykop, Russia, October 2017
- Conference on Singularities in Generic Geometry and its Applications: Valencia V, Mexico City, Mexico, July-August 2017
- The International Conference on Mathematical Control Theory and Mechanics, Suzdal, Russia, July 2017
- The International School of Young Scientists on Modelling and Optimization of Complex Systems (MOCS2017), Suzdal, Russia, July 2017

Katya Perez-Guzman

- Network Analysis Workshop, Vienna, Austria, August 2017

Leena Ilimola

- Workshop on Platform Strategies for Government, Helsinki, Finland, November 2017

- Workshop for government agencies and their stakeholders on Digitalization and Public Sector Revenue, Jyväskylä, Finland, November 2017
- Series of weekly workshops on Platform Strategies for Business, Helsinki, Finland, August-November 2017

Jurij Kofner

- Round table session at the Eurasian Week Business Forum on The Role of the expert community, scientific and educational institutions in the development of Eurasian economic integration, Astana, Kazakhstan, August 2017

Elena Rovenskaya

- IIASA high-level session at OSCE Ministerial Council: Connectivity, trade, and economic cooperation within a wider European and Eurasian space, Vienna, Austria, December 2017
- Future of Eurasian and European Integration: Foresight-2040, Laxenburg, Austria, December 2017
- Joint Workshop of the Working Group on Common Economic Space from Lisbon to Vladivostok (L2V) and IIASA Project on Challenges and Opportunities of Economic Integration within a wider European and Eurasian Space, Laxenburg, Austria, October 2017
- First IIASA Summer Workshop on Green Growth Modeling, Laxenburg, Austria, July 2017
- High-level Consultation on Eurasian Economic Integration, Laxenburg, Austria, June 2017
- Dynamic Vegetation Models: The Next Generation, Laxenburg, Austria, March 2017

Anastasia Stepanova

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- High-level Consultation on Eurasian Economic Integration, Laxenburg, Austria, June 2017

Editorships

Sergey Aseev

- Deputy Editor-in-Chief, Proceedings of the Steklov Mathematical Institute

Alexey Davydov

- Member, Editorial Board, *Journal of Dynamical and Control Systems*
- Member, Editorial Board, *Izvestia: Mathematics*

Yuri Ermoliev

- Member, Editorial Board, *Cybernetics and Systems Analysis Journal*
- Coeditor, Integrated modeling of food, energy and water security management for sustainable social, economic and environmental developments book
- Member, Editorial Board, *Economics and Forecasting Journal*

Brian Fath

- Editor-in-Chief, *Ecological Modelling Journal*
- Editor-in-Chief, *Encyclopedia of Ecology*
- Editor-in-Chief, Environmental Management Handbook
- Member, Editorial Board, *Ecological Indicators*
- Member, Editorial Board, *Environmental Accounting and Management*
- Member, Editorial Board, *Ecological Complexity*
- Member, Editorial Board, *Ecological Informatics*
- Member, Editorial Board, *The Scientific World Journal*
- Member, Editorial Board, *International Journal of Ecodynamics*
- Series Editor, Developments in Environmental Modelling Book

Katya Perez-Guzman

- Member, Editorial Board, *Encrucijada: Revista Electrónica del Centro de Estudios en Administración Pública Journal*

Matthias Jonas

- Guest Editor, *Quantifying Greenhouse Gas Emissions, Mitigation and Adaptation Strategies for Global Change Journal*

Tapio Palokangas

- Associate Editor, *Economics: Open-Access Open-Assessment E-Journal*

Gerald Silverberg

- Member, Editorial Board, *Biometrics Journal*
- Member, Editorial Board, *Journal of Economic Behavior and Organization*
- Member, Editorial Board, *Journal of Evolutionary Economics*
- Member, Editorial Board, *Structural Change and Economic Dynamics Journal*

Stefan Thurner

- Member, Editorial Board, *Scientific Reports Journal*
- Associate Editor, *Advances in Complex Systems, World Scientific Journal*
- Member, Editorial and Program Advisory Board, Springer Complexity Program
- Associate Editor, *Physica A Journal*
- Member, Editorial Board, *Entropy Journal*
- Member, Editorial Board, *Nature Journal*

Advisory Boards and Committees**Sergey Assev**

- Member, Scientific Council of the Research Program of Presidium of Russian Academy of Sciences, Mathematical Problems of Contemporary Control Theory, Russia
- Member, Technical Committee on Optimal Control (TC 2.4) of the International Federation of Automatic Control (IFAC), Russia
- Chair, Experts Committee for the Allocation of Sofia Kovalevskaya Award of Russian Academy of Sciences, Russia

Alexey Davydov

- Member, International Scientific Council, The Stefan Banach International Mathematical Center, Poland
- Head, Expert Mathematics Council, The Federal Agency for Scientific Organizations (FASO), Russia
- Member, Scientific Coordination Council, Mathematical Section of the Russian Academy of Sciences, Russia
- Member, Board of the Moscow Mathematical Society, Russia

Yuri Ermoliev

- Member, Committee for Systems Analysis, National Academy of Sciences, Ukraine
- Member, Organizing Committee, International Conference on Problems of Decision Making under Uncertainties, Ukraine
- Member, Organizing Committee, International School Course on Problems of Decision Making under Uncertainties, Ukraine
- Member, Organizing Committee, Workshop on Integrated modeling of food, water, energy security, Ukraine
- Member, Organizing Committee, Norwegian-Ukrainian Summer School on Vulnerability Assessment of Critical Infrastructure in the Post-Soviet era: Case Ukraine, Ukraine
- Member, Organizing Committee, Kick-off meeting on Integrated robust management of food-energy-water-land use nexus for sustainable development in Ukraine, Ukraine

Brian Fath

- Cochair, Ecosystem Dynamics, Focus Research Group, Community Surface Dynamics Modelling System
- Secretary General, International Society for Ecological Modelling
- Member, Scientific Advisory Board, International Society for Ecological Modelling Biennial Global Conference, Korea
- Cochair, 5th Viennese Talks on Resilience and Networks, Austria

Elena Rovenskaya

- Member, Associate Faculty, Complexity Science Hub Vienna, Austria