Piotr Magnuszewski

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Professional preparation

Position, Institution	Major/area	Degree, dates
Undergraduate, Wroclaw University of Technology	Mathematics	M. Sc., 1995
Undergraduate, Bristol University-Tempus Program	Mathematics	1993
Graduate, Wroclaw University of Technology	Physics	Ph. D., 1999
Professional facilitation	Facilitation	2007– 2014

Appointments

President, dGCS REBIS, Software Company, Wroclaw, Poland	1996 – 1998
Assistant Professor, Institute of Physics, Wroclaw University of Technology	1998
Adjunct Professor, Institute of Physics, Wroclaw University of Technology	2000 – 2009
Research Scholar, International Institute of Applied Systems Analysis, Austria	2005 – 2010
Program Leader, Centre for Systems Solutions, Wroclaw, Poland	2006 – present
Head of the Sendzimir Foundation Board	2009 – present
Senior Associate, AtKisson Group, International	2010 – present
Research Scholar, International Institute of Applied Systems Analysis, Austria	2012 – present

Main Publications

Magnuszewski, P., Sendzimir, J., Kronenberg, K. 2005 Conceptual modeling for adaptive environmental assessment and management in the Barycz valley, lower Silesia, Poland . Int. J. Environ. Res. Public Health. Vol. 2, No. 2, pp. 194-203.

J. Sendzimir, P. Magnuszewski, P. Balogh, A. Vari, Adaptive management to restore ecological and economic resilience in the Tisza river basin in: Voss, J. P., D. Bauknecht, et al. (2006). Reflexive Governance for Sustainable Development, Edward Elgar.

Martin, L., Magnuszewski, P., Sendzimir, J., Rydzak, F., Krolikowska, K., Komorowski, H., Lewandowska-Czarnecka, A., Wojanowska, J., Lasut, A., Magnuszewska, J., Goliczewski, P. 2007. Microworld gaming of a local agricultural product chain in Poland. Simulation and Gaming. 38 (2) 211-232.

Krolikowska, K., Kronenberg, J., Maliszewska, K., Sendzimir, J., Magnuszewski, P., Dunajski, A., Slodka, A. 2007 Role-Playing Simulation as an educational tool for sustainable development - Karkonosze Mountains case study. Simulation and Gaming. 38 (2): 195-210.

Sendzimir, J., Magnuszewski, P., Balogh, P., Vari, A. 2007 Anticipatory modeling of biocomplexity in the Tisza river basin: First steps to establish a participatory adaptive framework. Environmental Modeling and Software 22 (5): 599-609.

Sendzimir, J., P. Magnuszewski, Z. Flachner, P. Balogh, G. Molnar, A. Sarvari, and Z. Nagy. 2008 Assessing the resilience of a river management regime: informal learning in a shadow network in the Tisza River Basin. Ecology and Society 13(1): 11.

Krolikowska, K., A. Dunajski, Magnuszewski, P., Sieczka, M. 2009 Institutional and environmental issues in land reclamation systems maintenance. Environmental Science & Policy 12(8): 1137-1143

Ostasiewicz, K., Magnuszewski P., Agricultural sustainability in a simple social-ecological system, Operations Research and Decisions 20, 2010, p.81-94.

Stefanska, J., P. Magnuszewski, J. Sendzimir, P. Romaniuk, T. Taillieu, A. Dubel, Z. Flachner, P. Balogh. 2011. „A Gaming Exercise to Explore Problem-Solving versus Relational Activities for River Floodplain Management”. Environmental Policy and Governance 21 (6): 454-471.

Sendzimir, J., C. P Reij, P. Magnuszewski. 2011. „Rebuilding resilience in the Sahel: regreening in the Maradi and Zinder regions of Niger”. Ecology and Society 16 (3): 1. (the article won the Ralf Yorque Memorial Competition for "Novel Approaches of Integrative Science for the Future")

Walsh, A., P. Magnuszewski, A. Slodka-Turner. 2012. „Can Banks Self-Regulate? Voluntary Agreements, Intrinsic Motivation and Games”. Economic Affairs 32 (3): 58–64.

Costanza, R., Chichakly, K., Dale, V., Farber, S., Finnigan, D., Grigg, K., Herbert S., Kubiszewski I.,Lee H.,Liu S., Magnuszewski P., … & Ziegler, C. R. (2014). Simulation games that integrate research, entertainment, and learning around ecosystem services. Ecosystem Services, 10, 195-201.

Magnuszewski, P., Ostasiewicz, K., Chazdon, R., Salk, C., Pajak, M., Sendzimir, J., & Andersson, K. (2015). Resilience and Alternative Stable States of Tropical Forest Landscapes under Shifting Cultivation Regimes. *PloS one*, *10*(9), e0137497.

Other publications

Radosz, A.; Ostasiewicz, K.; Magnuszewski, P.; Machnikowski, P., (2002). Thermodynamics of Molecular Chains with a Local Asymmetric Double-Well Potential, Phase Transitions **75**(7): 869-877.

Radosz, A.; Ostasiewicz, K.; Magnuszewski, P.; Damczyk, J.; Radosinski, L.; Kusmartsev, F. V.; Samson, J. H.; Mitus, A. C.; Pawlik, G., Radosz, (2006). Thermodynamics of entropy-driven phase transformations, Physical Review E **73**(2): 26127.

Ostasiewicz, K., Tyc, M. H., Goliczewski, P., Magnuszewski, P., Radosz, A., Sendzimir, J (2008). Multistability of impact, utility and threshold concepts of binary choice models; Physica A, 387, (6337-6352)

P. Hetman, P. Magnuszewski, J. Stefańska, L. Bujkiewicz, K. Ostasiewicz (2008); How nodes and groups properties influence assortativity in social networks?; Acta Physica Polonica A. Vol. 114, No 3.

Janutka, A., P. Magnuszewski. 2010. Opinion structure changes in non-equilibrium model of social impact. Complexity 15 (6): 27–33.

Projects
- Sustainable Regional Development in the Odra Catchment; Project funded by DBU and WWF; 2003
- Dynamics of Sustainable Development – Environmental Conflicts Resolution in Karkonosze Mountains and Odra Valley; 2003
- Strategy for Development of Environmentally Friendly Local Products in Barycz Valley; 2004
- CAVES (Complexity, Agents, Volatility and Scale); EU 6th Framework Project – Coordinator of the Work Package; 2006-2009.
- NeWater (New Approaches to Adaptive Water Management under Uncertainty); EU 6th Framework Project; 2005-2009.
- SCENES (Water Scenarios for Europe and for Neighboring States); EU 6th Framework Project; 2006-2010.
- Development and running of computer model-supported, interactive games for farmers, local government officials, and water managers, applied in Hungary, Poland, Belgium, Spain, Netherlands and Germany; 2007-2011.
- PSI-Connect (Policy Science Interaction: connecting science and policy through innovative knowledge brokerage); EU 7th Framework Project – Coordinator of the Work Package; 2009-2012.
- CNH: The Emergence of Adaptive Governance Arrangements for Tropical Forest Ecosystems; Project funded by National Science Foundation (USA) – leadership and coordination of the experimental design; 2011-…
- Many participatory projects focusing on management of linked social-ecological systems. Examples: designing local agricultural production chain, role-playing games in the community dialogue, adaptive management of river basins, resolving conflicts about water resources.
- ICT related projects: development of multi-player simulation games, designing and running social networking websites, development of advanced modelling software.
- Design and development of the Internet multi-player simulation game "Green&Great", that explores business transition towards sustainability.
- Catalyzing Green Infrastructure – Pathfinder project within the Climate Knowledge and Innovation Community – work package coordinator; 2013-2014
- Water Futures and Solutions Initiative – coordination of the work package on stakeholder engagement; 2012-…
- Sustainable Management of Water and Fish Resources in Burkina Faso – analysis of project results using concept maps; April-July 2014
- Equitable Governance of Common Goods, IIASA EEP-RPV cross-cutting project – development of an experimental game exploring the management of common goods from the Cultural Theory perspective; 2014-…
- Flood Resilience project (Zurich Flood Resilience Partnership), Development of conceptual framework and stakeholder processes, 2014 - …

Research Interests

System Dynamics, Simulation and Games, Resilience Theory, Qualitative and Quantitative Modelling, Institutions, Sustainable Development, Strategy and Policy Development, Knowledge Brokering, Public Participation, Effective Collaboration.

Synergistic activities

International Courses - Coordinator and Lecturer
- Computer Modeling of Ecological Systems (workshops in many Polish Universities); 2001 – 2003, 2011
- Ecological Economics and Systems Thinking, University of Lodz, Poland; 2003
- Computer Modeling of Complex Systems (in co-operation with IIASA), Wroclaw, Poland; 2003, 2004
- Dynamics of Sustainable Development, Wroclaw, Poland; 2003, 2004, 2010
- Dynamic Balanced Scorecard – Modeling for Business Performance Systems (in cooperation with IBM Business Consulting Services), Wroclaw, Poland; 2003
- System Dynamics and Energy Modeling – course organized for European Commission - Joint Research Centre, Institute for Energy - Clean Energies Unit, Petten, Netherlands; September 2005
- National Science Foundation Integrative Graduate Education and Research (IGERT) – series of workshops with simulation games exploring complexity of coupled social-ecological systems; September-November 2013

International Courses - Lecturer
- Business Dynamics - Modeling and Simulations (Karel de Grote - Hogeschool, Antwerp); 2002, 2003, 2004
- Challenges of Sustainable Development (Organized by the Sendzimir Foundation, University of Florida and University of Metallurgy and Mining Cracow); 2002 - 2014
- The Integrated Assessment Society Summer School: Stakeholder Participation and Modeling in Sustainable Resource Management; Osnabrück, Germany; 4 July - 13 July 2005;
- Master Class in Sustainability Change Agentry, Stockholm, Sweden, 2009, 2010; Reykjavik, Iceland, 2010
- Exploring floodplain management through gaming, course organized for IIASA for the group of PhD students from University of Nebraska, November 2011, Wroclaw.
- Dutch Water Sector Intelligence – Serious Gaming; Utrecht; April 2013.

Important workshops – facilitator/lecturer/instructor
- Introducing systems thinking; workshop during the "Smart CSOs Conference"; March 2011, London.
- Sustainable Business Models: Enhancing, Incubating and Fostering Sustainable Entrepreneurship; workshop during the "Future of Sustainable Lifestyles and Entrepreneurship" conference, May 2011, Cologne.
- How to connect policy and science for an improved water management; workshop organized by PSI-connect Project together with International Sava River Basin Commission, Global Water Partnership – Mediterranean and UNESCO; November 2011, Zagreb.
- Synergy between Corporate Social Responsibility and CSR – workshops and simulation game organized for UNDP Poland and Global Compact members, November, December, 2011.
- Knowledge Brokering: how to better connect policy and science; workshop during the conference "The future of science-policy connections" co-organized by the PSI-connect project and UNESCO office in Venice; 2012; Venice.
- The Emergence of Adaptive Governance Arrangements for Tropical Forest Ecosystems; Colloquium Roundtable The Ostrom Workshop in Political Theory and Policy Analysis, Indiana University; June 2012.
- Effective Multi-Party Collaboration, workshop organized together with Goethe Institut, Washington D.C.; June 2014
- Training Course on Ecosystem Services – session on group model building application; workshop within the The Journey programme, Climate Knowledge and Innovation Community; July 2014
- Decisions Under Uncertainty; seminar delivered together with Peter Todd (Indiana University) and Reinhard Mechler (IIASA) at the International Albach Forum; August 2014