Sergei Yu. SCHREIDER

Rutgers Business School,
Rutgers – The State University of NJ
E-mail: Sergei.Schreider@business.rutgers.edu

Education:

PHD in Resource Management, the Australian National University.

Graduate Diploma in Economic Studies (Economics), Monash University.

MSC (**Diploma**) in Mathematics, Faculty of Mechanics and Mathematics, Moscow State University.

Present Appointment:
Associate Professor of Professional Practice at RBS, Department of Management and Information Systems, Rutgers Business School (since July 2021)

Previous Appointments:

Assistant Professor of Professional Practice at RBS, Department of Management and Information Systems, Rutgers Business School (since 2017)

Associate Professor, Senior lecturer, Lecturer (tenure), RMIT University (Melbourne), School of Science (since 2004)

Research Fellow, The Australian National University, Canberra, and Monash University, Melbourne (since 1997)

Teaching at RBS:

Analytics for Business Intelligence, Data Analysis and Decision Making, Business Forecasting, Stochastic processes, Business Statistics, Information Technology Strategies

Teaching portfolio (RMIT):

ECON1166 "Probability and Optimization Models in Finance", postgraduate subject;
ECON1167 "Econometrics and regression", postgraduate subject;
MATH1082 "Mathematics for Geospatial Scientist", 2nd year subject;
MATH1288 "Operation Research Models 1", 2nd year subject;
MATH1121A "Mathematics and Statistics for Electrical and Computer Engineers", 2nd year subject, Statistics module only;
MATH1282 "Statistical Analysis 2", 2nd year subject;
MATH1160/MATH2151 "Natural Resource Modelling", 3rd year subject;
MATH2112 "Mathematics and Statistics for Food Science", 1st year subject;
MATH2099 "Statistics for Chemical Engineers", 3rd year subject;
MATH2199 "Probability and Statistics", 2nd year subject;
MATH1276 "Statistical Computing", 1st year subject;
PROC2081 "Data Collection and Analysis", 2nd year subject;
MATH1238 "Statistics and Epidemiology", 1st year subject;
MATH2200 "Statistics 1", 1st year subject
MATH2219 "Systems simulation", postgraduate subject
MATH2123 "Statistics and Probability", 1st and 2d year subject

MATH1278 "Statistics for Psychologists", 1st and 2d year subject

Supervision of postgraduate students: Currently supervise three PhD students at the RMIT University. Nine of my PhD students and one MSc student have already graduated.

Visiting Positions:

> **Visiting Associate Professor,** Rutgers Business School, Rutgers – The state University of New Jersey, New Brunswick, USA (August 2015 – January 2016).

> **Visiting Associate Professor,** Rutgers Centre for Operations Research (RUTCOR), Rutgers – The state University of New Jersey, New Brunswick, USA (August – November 2010, January-February 2013, August – December 2015).

> **Visiting Scientist,** Department of Mathematics, TECHNION, Haifa, Israel (December 2010 – January 2011)

> **Visiting Academic** in the Centre of Policy Studies, Faculty of Business and Economics, Monash University (2005-2013)

Memberships:

> Australian Mathematical Society (Accredited Member)
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> Modelling and Simulation Society of Australia and New Zealand (Fellow)

Academic Awards:

> 2002 Fellowship in Organisation for Economic Co-operation and Development (OECD)
>
> 2006 The RMIT University Research Award
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> 2017 Fellow, Modelling and Simulation Society of Australia and New Zealand (MSSANZ)

Australian Research Council Grants (NSF analogue in Australia):

- Water derivatives: conceptualisation, price modelling and economic impacts. ARC Discovery Grant from 2009 to 2011, Chief Investigator.
- Construction of utility functions from observations of consumer behaviour with application to resource modelling and water management strategies. ARC Discovery Grant from 2006 to 2009, Chief Investigator.
- Combining Hydrological Information with a Multi Regional Computable General Equilibrium Model. ARC Linkage Grant from 2006 to 2009, Chief Investigator

Publications: Total number of publications is 142, including 49 peer reviewed journal papers, 9 book chapters and 42 peer reviewed conference paper. Citation: Total -1700+, h – index 23, i10-index 36 (Google scholar). The publications since 2012 are:

Journal papers:
1. Lee, Keun Hee and Akhavan-Abdollahian, Malihe and **Schreider, Sergei,** 2022, Utilising Machine Learning Approaches to Develop Price Optimisation and Demand Prediction Model for Multiple Products with Demand Correlation, International Journal of Production Economics (in press) Available at SSRN: https://ssrn.com/abstract=4131179 or

http://dx.doi.org/10.2139/ssrn.4131179

2. Roozbahani, R., Abbasi, B., **Schreider, S.** and Iversen, J. 2021, Dam Location-Allocation under Multiple Hydrological Scenarios, Water Resources Management 35 (3), 993-1009. DOI: https://doi.org/10.1007/s11269-021-02765-y

3. McInnes, D., Miller, B., Miller, G. and **Schreider, S.**, 2020, Towards tensor representation of controlled coupled Markov chains, Mathematics, 8(10), 1712, DOI: https://doi.org/10.3390/math8101712.

4. McGree, S., **Schreider, S.**, Kuleshov, Y. and Prakash B., 2020, On the use of mean and extreme climate indices to predict sugar yield in western Fiji, *Weather Clim. Extrem.*, 29, 100271, DOI: https://doi.org/https://doi.org/10.1016/j.wace.2020.100271.

5. Ranga Prabodanie, R. A., **Schreider, S.,** Gazelles, B. and Stone, L. 2020, Coherence of dengue incidence and climate in the wet and dry zones of Sri Lanka, *Science of The Total Environment,* Vol. 724, DOI: https://doi.org/10.1016/j.scitotenv.2020.138269.

6. Ranga Prabodanie, R. A., Stone, L. and **Schreider**, S. 2020, Spatiotemporal patterns of dengue outbreaks in Sri Lanka, *Infection Diseases*, 2020, DOI: http://dx.doi.org/10.1080/23744235.2020.1725108.

7. Roozbahani, R., Abbasi, B., **Schreider, S.,** Hosseinifard, Z. 2020, A basin-wide approach for water and dams location-allocation, *Annals of Operations Research*, 287 (1), 323-349, https://doi.org/10.1007/s10479-019-03345-5.

8. McGree, S., N. Herold, L. Alexander, **S. Schreider**, Y. Kuleshov, E. Ene, S. Finaulahi, K. Inape, B. Mackenzie, H. Malala, A. Ngari, B. Prakash, and L. Tahani, 2019, Recent Changes in Mean and Extreme Temperature and Precipitation in the Western Pacific Islands. *Journal of Climate (JCLI)*, 32, 4919–4941, https://doi.org/10.1175/JCLI-D-18-0748.1

9. Roozbahani, R., Abbasi, B. and **Schreider, S.** 2017, Determining location and capacity of dams through economic and environmental indicators, *Water Resources Management,* 31 (14), 4539-4556.

10. McGree, S., **Schreider, S.** and Kuleshov, Y. 2016, Trends and variability in droughts in the Pacific Islands and northern Australia, Journal of Climate (JCLI), 29 (23), 8377-8397.

11. O'Neil, K., Schreider, M., McArthur, L. and **Schreider, S.** 2015, Changes in the water quality characteristics during a macroalgal bloom in a coastal lagoon, *Ocean and Coastal Management*, 118, pp. 32-36.

12. Plummer, J. and **Schreider, S.** 2015, Predicting Inter-Season Price Jumps in the Market for Temporary Water Allocation, *Journal of Hydrology*, 525, pp. 676-683.

13. Roozbahani, R., Abbasi, B. and **Schreider, S.** 2015, Optimal allocation of water to competing stakeholders in a shared watershed, *Annals of Operations Research*, DOI: 10.1007/s10479-015-1806-8.

14. Roozbahani, R., **Schreider, S.** and Abbasi, B. 2015, Water allocation through a compromise between environmental, social, and economic preferences, *Environmental Modelling and Software*, 64, pp. 18-30.

15. **Schreider, S.**, Plummer, J., McInnes, D. and Miller, B. 2015, Sensitivity analysis of gas supply optimization models, *Annals of Operations Research*, 226(1), pp. 565-588.

16. Roozbahani, R., Abbasi, B., **Schreider, S.** and Ardakani, A. 2014, A multi-objective approach for transboundary river water allocation, *Water Resources Management*, 28 (15), pp. 5447-5463.

17. Gurvich, V. and **Schreider, S**. 2014, Stable families of coalitions for network resource allocation problems, *Stat., Optim. Inf. Comput.*, 2 (1), pp. 1-9.

18. Roozbahani, R., **Schreider, S.** and Abbasi, B. 2013, Economic Sharing of Basin Water Resources

between Competing Stakeholders, *Water Resources Research*, 27, 2965-2988.

19. **Schreider, S**., Zeephongsekul, P., Abbasi, B. and Fernandes, M. 2013, Game Theoretic Approach for Fertilizer Application: Looking for the Propensity to Cooperate, *Annals of Operations Research*, 206 (1), pp. 385-400.

Refereed conference papers:

1. McInnes, D., Miller, B. and **Schreider, S.** Optimisation of gas flows in South Eastern Australia via controllable Markov chains, In Proceedings of Australian Control Conference, Newcastle, 03-04 November 2016, pp. 341-346.

2. **Schreider, S.** and Plummer J. 2015, Sensitivity Analysis of Gas Supply Models for South-Eastern Australia. In Weber, T., McPhee, M.J. and Anderssen, R.S. (eds) MODSIM2015, 21st International Congress on Modelling and Simulation. Modelling and Simulation Society of Australia and New Zealand, December 2015, pp. 1841-1847. ISBN: 978-0-9872143-5-5.

3. Roozbahani, R., Huston, C., Dunstall, S., Abbasi, Babak, Ernst, A. and **Schreider, S.** 2015, Minimizing Bushfire Risk Through Optimal Powerline Assets Replacement and Improvement. In Weber, T., McPhee, M.J. and Anderssen, R.S. (eds) MODSIM2015, 21st International Congress on Modelling and Simulation. Modelling and Simulation Society of Australia and New Zealand, December 2015, pp. 1834-1840. ISBN: 978-0-9872143-5-5.

4. McArthur, L., Dunn, J., and **Schreider, S**. 2013, Modelling the Spread and Growth of Caulerpa Ttaxifolia in Closed Waterways in Southern Australia Using Cellular Automata, In Piantadosi, J., Anderssen, R.S. and Boland, J. (eds), Adapting to change: the multiple roles of modelling, MODSIM2013, 20h International Congress on Modelling and Simulation. Modelling and Simulation Society of Australia and New Zealand, December 2013, Adelaide, Australia, ISBN: 978-0-9872143-2-4, pp. 427 - 433.

5. O'Neill, K., Schreider, M., McArthur, L. and **Schreider, S.** 2013, Detecting the Iinfrastructural, Demographic and Climatic Changes on Macroalgal Blooms Using Cellular Automata Simulation, In Piantadosi, J., Anderssen, R.S. and Boland, J. (eds), Adapting to change: the multiple roles of modelling, MODSIM2013, 20th International Congress on Modelling and Simulation. Modelling and Simulation Society of Australia and New Zealand, December 2013, Adelaide, Australia, ISBN: 978-0-9872143-2-4, pp. 441 - 447.

6. Plummer, J., **Schreider, S.,** and McInnes, D. 2013, Optimisation Modelling for Gas Supply in Eastern Australia, In Piantadosi, J., Anderssen, R.S. and Boland, J. (eds), Adapting to change: the multiple roles of modelling, MODSIM2013, 20th International Congress on Modelling and Simulation. Modelling and Simulation Society of Australia and New Zealand, December 2013, Adelaide, Australia, ISBN: 978-0-9872143-2-4, pp. 448 - 454.

7. Roozbahani, R., **Schreider, S.** and Abbasi, B. 2013, Multi-objective Decision Making for Basin Water Allocation, In Piantadosi, J., Anderssen, R.S. and Boland, J. (eds), Adapting to change: the multiple roles of modelling, MODSIM2013, 20th International Congress on Modelling and Simulation. Modelling and Simulation Society of Australia and New Zealand, December 2013, Adelaide, Australia, ISBN: 978-0-9872143-2-4, pp. 2973 - 2979.

Editorial work:

Member of the editorial board of International Congress on Modelling and Simulation in 1997, 2003 and 2005 (MODSIM1997, MODSIM2003, MODSIM2005 and MODSIM2017)

Guest Editor of Special Issue of the Journal of Environmental Management (2005, 77(4)).

Journal reviewer:

Sergei Schreider is an active reviewer for the following Journals:
- Annals of Operation Research
- Journal of Hydrology (distinguished reviewer)
- Water Resource Management
- Water
- Environmental Modeling and Assessment
- Environmental Modelling and Software.

Service at RBS:

Member of the a search committee (MSIS, RBS) 2022 - ongoing. Responsibility includes reviewing new NTT job applications and interviewing the candidates.

Member of the Faculty Diversity Committee (RBS) 2020-2021, The committee focuses on the recruitment of a diverse faculty body within the school.

Member of the Department's Committee on AIM concentration, focusing on development of concentration courses and requirements, 2019-2021.

Representation of the MIS Department on the Open House days in Spring 2018, Spring 2019 and Spring 2020 (online).

Service at RMIT University:

Member of the School Program committee (2008-2012). This committee was concentrated on the development of new undergraduate and graduate programs for the Mathematical Discipline within the school of mathematical and geospatial sciences.

Member of PhD committee (2008-2014). This committee reviewed all PhD submission within the College of Science, Engineering and Health.

Head of School's research committee, at School of Mathematical and Geospatial Sciences (2005-2010).