

CURRICULUM VITAE

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Fellow of Royal Society of Canada

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IMPACTS OF ACADEMIC CONTRIBUTIONS OF SLOBODAN P. SIMONOVIC

Awards and Honors

For valuable contributions to research, mentoring and service, Simonovic has received 60 awards and recognitions including:

- **Fellowship in the Royal Society of Canada** – for “exceptional contributions to Canadian intellectual life”.
- **Fellowship in the Canadian Academy of Engineering** - for “distinguished service and contribution to society, to the country and to the profession”.
- **Significant International Recognition** - Named to the Reuters Hot List of the world's top 1,000 climate scientists
- **Notable Chinese recognition** – China Institute for Water Resources and Hydropower Research (IWHR) (i) award for contribution to international collaboration and (ii) honorary professorship.
- **High European recognition** – European Water Resources Association (EWRA) award for outstanding contribution to the field of water resources management.
- **Key international hydrology award** - American Society of Civil Engineers Ven Te Chow Award for lifetime achievements in the field of hydrologic engineering and significant contributions in research, education and practice.
- **Important Japanese award** - Japanese Society of Hydrology and Water Resources, the International Award for significant contribution to progress in the field of hydrology and water resources (first recipient).
- **Distinguished Scholarship award** – Brazilian School of Advanced Studies of Water and Society Under Change, University of Sao Paulo, Brazil.
- **Significant international recognition** - Honorary member of the Milutin Milankovic Society, Belgrade, Serbia for contribution to climate change research; Gold Medal in celebration of one hundred years of Milankovic’s theory of climate change 1920 – 2020.
- **Top prize in water resources research** - Diplomate, Water Resources Engineer (Hon.D.WRE) from the American Academy of Water Resources Engineers within the American Society of Civil Engineers (ASCE).
- **High international professional recognitions** - Task Group on Disaster Risk Management, World Federation of Engineering Organizations; and Red River Basin Task Force, International Joint Commission.
- **Fellow of 3 professional societies** – Canadian Society for Civil Engineering; American Society of Civil Engineers (Life member); and International Water Resources Association.
- **Canada’s highest professional recognitions** - Canadian Society for Civil Engineering Camille A. Dagenais Award for outstanding contribution to the development and practice of hydrotechnical engineering in Canada.
- **Canada’s most important prize in engineering practice** - Canadian Consulting Engineering Award of Excellence, Category: International – for ‘Sihu Basin Flood Management.’
- **Canada’s recognitions for international work** - Vice President, Sectoral Commission on Natural and Social Sciences, Canadian Commission for UNESCO; Canadian National Representative, International Commission on Water Resources Systems (ICWRS), International Association of Hydrological Science (IAHS); Chairman of the Canadian National Committee of UNESCO International Hydrologic Program (IHP); Chairman of the Canadian National Committee of

International Water Resources Association (IWRA); and Chairman of the Canadian delegation at the UNESCO IHP Intergovernmental Council.

- **Teaching awards** - Graduate Students' Association Award for Excellence in Graduate Teaching, The University of Manitoba; and Faculty of Engineering Award for Superior Academic Performance, The University of Manitoba.

Other Contributions and Impacts

- **Highly-cited leading-edge research** – 3 books, 31 edited books, 254 journal papers, 189 conference articles and 127 technical reports; high Hirsh Index of 59, i10 Index of 217, and 12,012 citations.
- **Dissemination of research results to broader community** – Publication of “Water Resources Research Reports,” 111 volumes, downloaded over **103,068** times from the Western University Library. Public access: <https://ir.lib.uwo.ca/wrrr/>.
- **Practical tools for professional engineers** – developed a number of tools for the application of systems approach to water and disaster management (distributed together with the textbooks), public access: <http://www.slobodansimonovic.com>; developed three tools for downscaling climate data, public access: <https://github.com/FIDS-UWO/climate>; developed a public web-based decision support tool that rapidly estimates the resilience of urban infrastructure to flooding, public access: <http://resilimt-uwo.ca> ; developed a web-based intensity-duration-frequency tool to update and adapt local extreme rainfall statistics to climate change in Canada, public access with registration: <http://www.idf-cc-uwo.ca> , over 3,450 registered and active users; and developed a public web-based tool for evaluation of impacts of global change, public access: <http://www.globalchange-uwo.ca>, based on the ANEMI model that ANEMI simulates system dynamics to offer information on Earth's dynamic processes and the behaviours that instigate change, public access: <https://github.com/FIDS-UWO/anemi> .
- **Mentoring students** – 24 PhD and 44 Master's students have graduated; mentored 21 Postdoctoral Fellows, 12 Visiting Scholars; taught over 3,000 students in Canada and more than 1,000 overseas.
- **Curriculum development** – 5 undergraduate and 4 graduate university courses including the design, teaching and authoring 2 textbooks; and 12 short courses for professional engineers including the design, teaching and authoring support course material.
- **Internationalization of university education** – established successful exchange agreements with Japan, China, and Brazil; and presented courses in 13 countries.
- **International leadership on flood risk management** – Chairman, Ad Hoc committee on the ongoing International Conference on Flood Management, ICFM, (life time position – second after the founder). ICFM8 will be held in Iowa City, Aug 2021. Information at www.icfm.world.
- **National leadership positions** - Advisory Committee on the Environment, City of London, Ontario; Lakes and Rivers Improvement Act Advisory Panel, Ministry of Natural Resources, Ontario; The Committee for Review of the Lake Ontario-St. Lawrence River Studies, The National Academy of Sciences, Washington, USA; and Chair, Hydrotechnical Division, Canadian Society for Civil Engineering; Expert Panel on Flood Mitigation, Environment Canada, Atmospheric Environment Service, Canada.

IMPACTS OF NONACADEMIC CONTRIBUTIONS OF SLOBODAN P. SIMONOVIC

Serving water resources engineering needs of Canada and the World since 1997 through the consulting business *Slobodan P. SIMONOVIC Consulting, Ltd.* Drawing upon broad experience in all aspects of water resources, including evaluation, engineering, and capacity building, *Slobodan P. SIMONOVIC Consulting,*

Ltd. constructs teams of water experts to work side-by-side with clients on large, complex projects in developing innovative solutions to meet specific client needs. Up today the company has completed 59 engineering and 31 capacity building projects for 41 national and 45 international clients.

RESEARCH INTERESTS

Slobodan P. Simonovic is globally recognized for his unique interdisciplinary research in Systems Analysis and the development of deterministic and stochastic simulation, optimization, and multi criteria analysis decision-making methodologies for addressing challenging system of systems problems lying at the confluence of society, technology and the environment. His research has been applied with a sustainable development perspective in water resources management, hydrology, flooding, energy, climate change and public infrastructure. His main contributions include modelling risk and resilience of complex systems. Professor Simonovic has influenced academia, industry and government via university teaching, publication of leading-edge research, mentoring of young people, delivering stimulating research seminars at institutions around the world, carrying out joint research projects, and consulting work. He has received more than 50 awards for excellence in teaching, research and outreach. Dr. Simonovic has published over 570 professional publications. He has been inducted to the Canadian Academy of Engineering in June of 2013 and the Royal Society of Canada in September of 2020.

NATIONAL AWARDS

- 2020 Fellow of the Royal Society of Canada
- 2013 Fellow of the Canadian Academy of Engineering.
- 2008 Fellow of the Canadian Society for Civil Engineering.
- 2005 Canadian Society for Civil Engineering Camille A. Dagenais Award.
- 2000 Manitoba Network for Science & Technology (MindSet) Achievement Award.
- 1998 Recognition for valuable contribution towards sustainable development, Round Table for Sustainable Development, Province of Manitoba.

PROFESSIONAL ENGINEERING AWARDS

- 2003 Showcase Award of Excellence, International Project Category, Consulting Engineers of Alberta.
- 2003 Canadian Consulting Engineering Award of Excellence, Category: International.

INTERNATIONAL AWARDS

- 2021 Reuters Hot List of the world's top 1,000 climate scientists
- 2020 Life Member of the American Society of Civil Engineers.
- 2020 China Institute for Water Resources and Hydropower Research (IWHR), Honorary Professor.
- 2018 China Institute for Water Resources and Hydropower Research (IWHR) Award.
- 2017 European Water Resources Association (EWRA) Award.
- 2013 American Society of Civil Engineers Ven Te Chow Award.
- 2009 Diplomate, Water Resources Engineer.
- 2005 Fellow of the American Society of Civil Engineers.
- 2001 Japanese Society of Hydrology and Water Resources, the International Award.
- 2000 Fellow of International Water Resources Association.

UNIVERSITY AWARDS

- 1997 Outreach Award, The University of Manitoba.

- 1994 Faculty of Engineering Award for Superior Academic Performance, The University of Manitoba.
 1994 Graduate Students' Association Award for Excellence in Graduate Teaching, The University of Manitoba.

INTERNATIONAL RESEARCH FELLOWSHIPS

- 2019 Distinguished Scholar at the Brazilian School of Advanced Studies of Water & Society Under Change, Sao Paulo, Brazil.
 2017 Visiting Professor, College of Hydrology and Water Resources, Hohai University, Nanjing, China.
 2014 Research Scientist, Academia Sinica, Taipei, Taiwan.
 2001 Disaster Prevention Research Institute (DPRI), Kyoto University, Japan.
 1996 Asian Institute of Technology, Bangkok, Thailand.
 1990 Centro IDEA, University of Bologna, Bologna, Italy.
 1988 IIASA Visiting Scientist, Vienna, Austria.
 1974 UNDP Scholarship, Los Angeles, California, USA.

PUBLICATION AWARDS

1. Simonovic, S.P. and P. A. Breach (2020) "The Role of Water Supply Development in the Earth System", *Water*, Special Issue - Feature Papers of Water Resources Management, Policy and Governance, 12, 3349; doi:10.3390/w12123349, open access, <https://www.mdpi.com/2073-4441/12/12/3349/pdf>. (**Editor's Choice award**).
2. Simonovic, S.P. (2020) "Systems Approach to Management of Water Resources – Toward Performance Based Water Resources Engineering", *Water*, Special Issue Application of the Systems Approach to the Management of Complex Water Systems, 12, 1208; doi: 10.3390/w12041208, open access, <https://www.mdpi.com/2073-4441/12/4/1208/pdf> (**Editor's choice award**).
3. Agrawal, N., M. Elliott, S. P. Simonovic (2020) "Flood risk and resilience: A case study of perception versus reality", *Water*, Special Issue Application of the Systems Approach to the Management of Complex Water Systems, 12, 1254; doi:10.3390/w12051254, open access, <https://www.mdpi.com/2073-4441/12/5/1254/pdf> (**Editor's choice award**).
4. Tanaka, K., Y. Fujihara, F. Topaloglu, S.P. Simonovic, and T. Kojiri, Chapter 5. Impacts of Climate Change on Basin Hydrology and Availability of Water Resources, in Watanabe T., S. Kapur, M. Ayuding, R. Kanber and E. Akca editors, *Climate Change Impacts on Basin Agro-ecosystems*, pp. 71 – 97, ISBN: 978-3-030-01036-2, Elsevier (2019). (**Publication award for 2020 of JSIDRE - Japanese Society of Irrigation, Drainage and Rural Engineering**).
5. Gaur, A., A. Gaur, and S.P. Simonovic, (2019) "Future changes in the hazard and risk of flooding in Canada's most populated cities and flow regulation infrastructure", *Water*, (**Feature paper award**), the Special Issue on Extreme Floods and Droughts under Future Climate Scenarios: 11(1), 63; doi:10.3390/w11010063., open access <http://www.mdpi.com/2073-4441/11/1/63/pdf>.
6. Gaur, A., A. Gaur, and S.P. Simonovic, (2019) "Future changes in the hazard and risk of flooding in Canada's most populated cities and flow regulation infrastructure", *Water*, (**Feature paper award**), the Special Issue on Extreme Floods and Droughts under Future Climate Scenarios: 11(1), 63; doi:10.3390/w11010063., open access <http://www.mdpi.com/2073-4441/11/1/63/pdf>.
7. Agam, N., and S.P. Simonovic, (2014), "Development of Inundation Maps for the Vancouver Coastline under a Changing Climate", *Proceedings, IDRiM 2014 Conference - Building Disaster Resilient Communities*, 30 October – 1 November 2014, Western University, London, Ontario, Canada. (**Award for the best conference paper**).

8. Simonovic, S.P., (1996) "Decision Support Systems for Sustainable Management of Water Resources 1. General Principles ", *Water International*, 21(4): 223-232 (**Award for the best paper in 1996**).
9. Simonovic, S.P., (1996) "Decision Support Systems for Sustainable Management of Water Resources 2. Case Studies ", *Water International*, 21(4): 233-244 (**Award for the best paper in 1996**).
10. Simonovic, S.P. (1992), "Challenges of the Changing Profession", *ASCE Journal of Professional Issues in Engineering*, 118(1): 1-9 (**Award for the best paper in 1992**).
11. Reznicek, K.K., S.P. Simonovic and C.R. Bector (1990), "Complex Short-term Operation of a Single Multipurpose Reservoir - A Goal Programming Approach", *ASAC*, Vo. 11, Part 2, pp. 49-60, Whistler (**Award for the best conference paper**).

EDITORSHIPS (Current)

Career total is 16.

1. Member of Editorial Board, *Water Resources Management Journal*, 1994–present
2. Member of Editorial Board, *International Journal of Environment and Climate Change*, 2012-present
3. Member of Editorial Board, *Water*, 2020 - present
4. Associate Editor, *Modeling Earth Systems and Environment*, 2014 – present
5. Associate Editor, *Water*, 2019 - present
6. Member of Editorial Board, *Advances in Climate Change Research*, 2018 – 2022
7. Member of Editorial Board, *Water Sector of Russia Journal*, 2020 - present

PROFESSIONAL AFFILIATIONS

1. Canadian Academy of Engineering (CAE)
2. Professional Engineers, Ontario, Canada (PEO)
3. Association of Professional Engineers of the Province of Manitoba, Canada (APEM)
4. Canadian Society of Civil Engineers (CSCE)
5. Canadian Geophysical Union (CGU)
6. Canadian Water Resources Association (CWRA)
7. American Society of Civil Engineers (ASCE)
8. American Geophysical Union (AGU)
9. International Water Resources Association (IWRA)

ACADEMIC APPOINTMENTS AT THE UNIVERSITY OF MANITOBA

- | | |
|-------------|--|
| 2000 – 2003 | Adjunct Professor, Department of Civil and Geological Engineering, University of Manitoba, Winnipeg, Canada |
| 2000 – 2003 | Adjunct Professor, Natural Resources Institute, University of Manitoba, Winnipeg, Canada |
| 1996 - 2000 | Director and Professor, Natural Resources Institute, The University of Manitoba, Winnipeg, Manitoba, Canada. |
| 1992 - 2000 | Professor, Department of Civil and Geological Engineering, The University of Manitoba, Winnipeg, Manitoba, Canada. |
| 1987 - 1992 | Associate Professor, Department of Civil and Geological Engineering, The University of Manitoba, Winnipeg, Manitoba, Canada. |
| 1987 - 1988 | Lecturer, City Planning Department, The University of Manitoba, Winnipeg, Manitoba, Canada. |

1986 - 1987 Visiting Associate Professor, Department of Civil Engineering, The University of Manitoba, Winnipeg, Manitoba, Canada.

ACADEMIC APPOINTMENTS AT THE UNIVERSITY OF WESTERN ONTARIO

2019 – **present** Professor Emeritus, Department of Civil and Environmental Engineering, The University of Western Ontario, London, Ontario, Canada.
2019 – **2022** Adjunct Professor, Department of Civil and Environmental Engineering, The University of Western Ontario, London, Ontario, Canada.
2005 – **present** Director Engineering Studies, The Institute for Catastrophic Loss Reduction, The University of Western Ontario, London, Ontario, Canada.
2000 – 2019 Professor, Department of Civil and Environmental Engineering, The University of Western Ontario, London, Ontario, Canada.
2000 – 2005 Engineering Research Chair, The Institute for Catastrophic Loss Reduction, The University of Western Ontario, London, Ontario, Canada.

OTHER ACADEMIC APPOINTMENTS

2020 – **present** Honorary Professor, China Institute for Water and Hydropower Research, Beijing, China.
2019 – 2021 Distinguished Visiting Professor, The University of Sao Paulo, Brazil.
2017 Visiting Professor, College of Hydrology and Water Resources, Hohai University, Nanjing, China.
2017 – **present** Visiting Professor, Department of Civil Engineering, Shanghai Normal University, Shanghai, China.
2017 – **present** Visiting Professor, Department of Civil Engineering, The University of Belgrade, Belgrade, Serbia.
2017 Visiting Professor, College of Hydrology and Water Resources, Hohai University, Nanjing, China.
2014 – 2015 Adjunct Professor, Graduate Program in Disaster and Emergency Management, York University, Toronto, Ontario, Canada.
2009 – 2012 Adjunct Professor, Department of Civil and Environmental Engineering, University of Waterloo, Waterloo, Ontario, Canada.
2001 Center of Excellence Visiting Professor, Disaster Prevention Research Institute, Department of Civil Engineering, Kyoto University, Kyoto, Japan.
1996 Visiting Professor, Water Engineering and Management Program, School of Civil Engineering, Asian Institute of Technology, Bangkok, Thailand.

DEGREES

University of Belgrade, Yugoslavia

B.Sc. Civil Engineering (Water Resources Engineering), 1974

M.Sc. Interdisciplinary Studies (Water Resources Systems), 1977

University of California, Davis, California, USA

Ph.D. Engineering (Water Resources Systems Engineering), 1981

RESEARCH PUBLICATION SUMMARY

(Status as of March 5, 2021)

In English

In mother tongue (Serbian)

Books and monographs	34	
Journal papers	229	25
Discussion papers and invited commentaries	33	
Refereed papers in conference proceedings	87	10
Conference papers refereed by abstracts	89	3
Technical reports	115	12
Journal papers submitted for review	10	

Research publications under the above categories are not all listed in this document. Instead, *representative publications* are classified according to research topics with a focus on journal papers.

RESEARCH TOPICS

In this section, **selected refereed** journal papers, encyclopedia articles, conference papers and books are categorized according to research topics.

Management of Water Resources – Systems Approach

Books

1. Simonovic, S.P., **Managing Water Resources: Methods and Tools for a Systems Approach**, UNESCO, Paris and Earthscan James & James, London, pp.576, ISBN 978-1-84407-554-6, 2009, (translated into Farsi).

Encyclopedia Articles

1. Simonovic, S.P., Water Resources Systems Analysis, **Encyclopedia of Water: Water Quality and Resource Development**, Wiley Interscience, edited by J.H. Lehr, pp.683-688, 2005.

Edited Books

1. Simonovic, S.P., **Application of the Systems Approach to the Management of Complex Water Systems**, MDPI St. Alban-Anlage 66 4052 Basel, Switzerland, pp.303, ISBN 978-3-03943-769-6 (Hbk); ISBN 978-3-03943-770-2 (PDF), open access <https://doi.org/10.3390/books978-3-03943-770-2>, 2020.
2. Marino, M.A., and S.P. Simonovic, **Integrated Water Resources Management**, Red Books, IAHS Publication No. 272, IAHS Press, Wallingford, 2001.
3. Takeuchi, K., M. Hamlin, Z.W. Kundzewicz, D. Rosbjerg, and S.P. Simonovic, **Sustainable Reservoir Development and Management**, Red Books, IAHS Publication No. 251, IAHS Press, Wallingford, 1998.
4. Simonovic, S.P., Z.W. Kundzewicz, D. Rosbjerg, E.K. Takeuchi, **Modelling and Management of Sustainable Basin-Scale Water Resource Systems**, IAHS Publication No. 231, IAHS Press, Wallingford, 1995.
5. Simonovic, S.P., et. al., **Water Resource Systems Application**, Friesen, Winnipeg, Canada, 1990.

Journal Papers

1. Simonovic, S.P. (2021) "Water resources management – towards performance based approach", *Water Sector of Russia: Problems, Technologies, Management*, No.2, 84-94.
2. Simonovic, S.P. and P. A. Breach (2020) "The Role of Water Supply Development in the Earth System", *Water*, Special Issue - Feature Papers of Water Resources Management, Policy and Governance, 12, 3349; doi:10.3390/w12123349, open access, <https://www.mdpi.com/2073-4441/12/12/3349/pdf>. (**Editor's Choice award**).

3. Jiang, H., S. P. Simonovic, Z. Yu and W. Wang (2020) "An integrated model of the social-economic-environmental system for flood management of Three Gorges Reservoir", *ASCE Journal of Water Resources Planning and Management*, 146(7) - 05020009.
4. Jiang, H., Z. Yu, S. P. Simonovic, and W. Wang (2020) "A System Dynamics Simulation Approach for Environmentally Friendly Operation of a Reservoir System", *Journal of Hydrology*, Volume 587, August 124971, available online <https://doi.org/10.1016/j.jhydrol.2020.124971>
5. Simonovic, S.P. (2020) "Systems Approach to Management of Water Resources – Toward Performance Based Water Resources Engineering", *Water*, Special Issue Application of the Systems Approach to the Management of Complex Water Systems, 12, 1208; doi: 10.3390/w12041208, open access, <https://www.mdpi.com/2073-4441/12/4/1208/pdf> .
6. Bhatia, N., J.M. Sojan, S.P. Simonovic, and R. Srivastav (2020) "Role of Cluster Validity Indices in Delineation of Precipitation Regions", *Water*, 12, 1372; doi:10.3390/w12051372, open access, <https://www.mdpi.com/2073-4441/12/5/1372/pdf>
7. King, L., and S.P. Simonovic, (2020) "A Deterministic Monte Carlo simulation framework for dam safety flow control assessment", *Water*, 12:505; doi:10.3390/w12020505, open access, <https://www.mdpi.com/2073-4441/12/2/505/pdf>
8. Gaur, A., A. Schardong, and S.P. Simonovic, (2020) "Gridded Intensity – Duration - Frequency estimates across Canada", *ASCE Journal of Hydrologic Engineering*, 25(6): 05020006 .
9. Mandal, S., R Arunkumar, P. A Breach, and S.P. Simonovic, (2019) "Reservoir operation under changing climate conditions: a system dynamic simulation approach", *ASCE Journal of Water Resources Planning and Management*, 145(5): - , available online <https://ascelibrary.org/doi/10.1061/%28ASCE%29WR.1943-5452.0001061>.
10. King, L.M., A. Schardong, and S. P. Simonovic, (2019) "A combinatorial procedure to determine the full range of potential operating scenarios for a dam system", *Water Resources Management*, 33(4):1451-1466; <https://doi.org/10.1007/s11269-018-2182-3> , available online at <https://rdcu.be/bfxpZ>
11. Stojkovic, M., and S.P. Simonovic (2019) "System dynamics approach for assessing the behavior of the Lim reservoir system (Serbia) under changing climate conditions", *Water*, 11:1620; doi:10.3390/w11081620, available online, <https://www.mdpi.com/2073-4441/11/8/1620/pdf> .
12. Akhtar, M.K., S.P. Simonovic, J. Wibe, and J. MacGee, (2018) "Future realities of climate change impacts: An integrated assessment study of Canada, *International Journal of Global Warming*, 17(1):59-88.
13. Breach, P. A., and S.P. Simonovic, (2018) "Wastewater treatment energy recovery potential for adaptation to global change: an integrated assessment", *Environmental Management*, 61:624-636.
14. King, L.M., S.P. Simonovic, and D.N.D. Hartford, (2017) "Using system dynamics simulation and dynamic resilience as an improved approach to assessment of hydropower system safety", *Water Resources Research*, 53(8): 7148-7174. DOI:10.1002/2017WR020834,
15. King, L.M., S., Keech, S.P., Simonovic, (2016) "An Investigation of the Factors and Components Involved in Dam Safety Flow Control Incidents, *Journal of Dam Engineering*, XXVII (1):1-19.
16. Nikolic, V., and S.P. Simonovic, (2015) "Multi-method Modeling Framework for Support of Integrated Water Resources Management", *Environmental Processes Journal*, 2:461-483, DOI 10.1007/s40710-015-0082-6, available online.
17. Neuwirth, C., A. Peck, and S.P. Simonovic, (2015) "Modeling structural change in spatial system dynamics: A Daisy world example", *Environmental Modelling & Software*, 65:30-40, available online <http://www.sciencedirect.com/science/article/pii/S1364815214003521>

18. Akhtar, M.K., J., Wibe, S. P. Simonovic, and J., MacGee, (2013) "Integrated Assessment Model of Society-Biosphere-Climate-Economy-Energy System", *Environmental Modelling & Software*, 49:1-21.
19. Schardong, A., S. P. Simonovic, and A. Vasan (2013) "A Multi-objective Evolutionary Approach to Optimal Reservoir Operation", *ASCE Journal of Computing in Civil Engineering*, 27(2):139-147.
20. Davies, E.G.R, and S.P. Simonovic, (2011) "Global water resources modeling with an integrated model of the social-economic-environmental system", *Advances in Water Resources*, 34:684-700.
21. Davies, E.G.R, and S.P. Simonovic, (2010) "ANEMI: A New Model for Integrated Assessment of Global Change", the *Interdisciplinary Environmental Review* special issue on Climate Change, 11(2/3):127-161.
22. Prodanovic, P. and S.P. Simonovic, (2010) "An Operational Model for Integrated Water Resources Management of a Watershed", *International Journal Water Resources Management*, 24(6):1161-1194, online publication August 2009, DOI 10.1007/s11269-009-9490-6.
23. Simonovic, S.P., and V. Rajasekaram, (2004) "Integrated Analyses of Canada's Water Resources: A System Dynamics Model ", *Canadian Water Resources Journal*, 29(4):223-250.
24. Nandalal, K.D.W., and S.P. Simonovic, (2003) "Resolving conflicts in water sharing: A systemic approach", *Water Resources Research*, 39(12):1362-1373.
25. Teegavarapu, R.S.V., and S.P. Simonovic, (2002) "Optimal Operations of Multiple Reservoirs Using Simulated Annealing", *Water Resources Management Journal*, 16:401-428.
26. Simonovic, S.P., (2002) "World Water Dynamics: Global Modeling of Water Resources", *Journal of Environmental Management*, 66(3):249-267.
27. Li, L., and S.P. Simonovic, (2002) "System Dynamics Model for Predicting Floods from Snowmelt in North American Prairie Watersheds", *Hydrological Processes Journal*, 16:2645-2666.
28. Simonovic, S.P., (2002) "Global Water Dynamics: Issues for the 21st Century", *Journal of Water Science and Technology*, 45(8):53-64.
29. Simonovic, S.P. (2001) "WorldWater: A Tool for Global Modeling of Water Resources", *Canadian Civil Engineer*, 18(3): 6-12.
30. Simonovic, S.P. and K. Juliano, (2001) "The role of Wetlands During Low Frequency Flooding Events in the Red River Basin", *Canadian Water Resources Journal*, 26(3): 1- 21.
31. Ahmad, S., and S.P. Simonovic, (2000) "Modeling Reservoir Operations for Flood Management Using System Dynamics", *ASCE Journal of Computing in Civil Engineering*, 14(3): 190-198.
32. Ilich N., S.P. Simonovic, and M. Amron, (2000) "The benefits of computerized real-time river basin management in the Malahayu reservoir system", *Canadian Journal of Civil Engineering*, 27: 55-64.
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Risk, Fuzzy Sets Analysis and Resilience

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TECHNICAL REPORTS

Technical reports related to S.P. Simonovic's work are published by his laboratory, Facility for Intelligent Decision Support (FIDS), as "Water Resources Research Reports" known also as "Blue Books". Up to now 111 volumes are published and available through the FIDS web site or from 2011 through the University Library web site. These publications are attracting a lot of attention. Since the University Library took over the distribution, over 103,000 (as of up today) downloads have been recorded from 181 countries around the world. Public access: <https://ir.lib.uwo.ca/wrrr/>

RESEARCH SUPERVISION

Up to date, S.P. Simonovic has supervised 24 PhD and 44 Master's students (currently supervising 1) who have successfully completed their graduate degrees and now hold meaningful employment in industry, academia and government. Usually, Simonovic is mentoring about 6 - 10 researchers consisting of PhD and Master's students as well as Post-Doctoral Fellows and Visiting Scholars. Additionally, he has supervised 12 Visiting Scholars and 21 Post-Doctoral Fellows (currently supervising 1). He is the recipient

of the **Award of Excellence in Graduate Teaching** from the University of Manitoba (nomination signed by the largest number of graduate students since the award has been introduced).

RESEARCH FUNDING

Since 1986, S.P. Simonovic has continuously held a Natural Sciences and Engineering Research Council (NSERC) of Canada Discovery Grant including the current one entitled “Water Resources Management Capacity Building in the Context of Global Change” for the five-year period from April 1st, 2016 to March 31st, 2021. Simonovic was the Principal Investigator for the NSERC Strategic Project Grant entitled “An Integrated System Dynamics Model for Analyzing Behaviour of the Social-Economic-Climatic System” (2008-2010). From over 70 research grants Simonovic received, more than half were NSERC Collaborative Research and Development Grants with industrial partners. Simonovic was the recipient of the largest Social Sciences and Humanities Research Council of Canada grant through Community University Research Alliance (CURA) program (2000-2003). Evolving Opportunities for Knowledge Application Grant by the Canadian Water Network was used for the work on the “Computerized Tool for the Development of Intensity-Duration-Frequency Curves under Climate Change” (2013-2015) which is available publicly and currently used by over 2,500 registered and active users in Canada (as up today).

EXTERNAL EXAMINER

External Examiner for PhD and Master's theses for universities in the India, Brazil, Canada, Denmark, UK, The Netherlands, Austria, Italy, Serbia and the United States.

TEACHING

Academic Courses

Simonovic has been teaching basic engineering, hydrology, hydraulics, systems, and engineering case studies courses at undergraduate and graduate level. Courses were well received by the students. In recognition of the high quality of his teaching, Simonovic is recipient of the Faculty of Engineering Award for Superior Academic Performance at the University of Manitoba in 1995.

Professional Training

Simonovic is actively providing training to professional engineers in Canada and abroad through the presentation of short courses for practicing engineers. He has delivered these courses for UNESCO, many Universities and government organizations in Canada, US, Austria, Italy, Egypt, Brazil, Japan, China, and Taiwan.

KEYNOTE AND OTHER MAJOR ADDRESSES

S.P. Simonovic has presented 308 keynote, special guest, and invited lectures around the World (5 in 2021). He delivered 60 keynote addresses at international conferences held in Canada, Serbia, Brazil, Germany, Japan, Morocco, Nepal, China, Italy, the United Kingdom, the United States of America, the Netherlands, India, Czech Republic, Austria, Hungary, Turkey, Cuba, Greece, Spain, and Taiwan. In conjunction with being the recipient of **the International Award for significant contribution to progress in the field of hydrology and water resources by Japanese Society of Hydrology and Water Resources**, and **Award for Contribution to International Collaboration by China Institute for Water Resources and Hydropower Research (IWHR)**, Simonovic delivered invited research seminars at many national and international universities. In 2010 he delivered a **National Lecture Tour** organized by the Canadian Society for Civil Engineering.

CONFERENCE ORGANIZATION

S.P. Simonovic has been the *main organizer* of eight international conferences (1986, 1989, 1990, 1997, 2001, 2004, 2013 co-organizer, 2014 co-organizer) and been an active *Member* of the scientific planning committee of more than 85 other conferences, many of which involved the planning and chairing of special tracks of sessions. Simonovic is currently the leader of a very significant **International Conference of Flood Management** (organized every 3 years). The ICFM8 will be held in Iowa City in 2021. Simonovic is the recipient of **Canadian Society for Civil Engineering (CSCE) Camille A. Dagenais Award** for outstanding contribution to the development and practice of hydrotechnical engineering in Canada, **American Society of Civil Engineers Ven Te Chow Award** for lifetime achievements in the field of hydrologic engineering and significant contributions in research, education and practice and **European Water Resources Association (EWRA) Award** for outstanding contribution to the field of water resources management presented to him at major CSCE, ASCE and EWRA conferences.

CONSULTING

Carried out consulting activities through his consulting company *Slobodan P. SIMONOVIC, Consulting Ltd.* and serving water resources engineering needs of Canada and the World since 1997. Drawing upon his broad experience in all aspects of water resources, including evaluation, engineering, and capacity building, *Slobodan P. SIMONOVIC Consulting, Ltd.* constructs teams of water experts to work side-by-side with clients on large, complex projects in developing innovative solutions to meet specific client needs. Company's primary strength is in the application of systems approach to, and development of the decision support tools for, management of complex water and environmental systems. The company has undertaken applied research projects that integrate the mathematical modelling, data-base management, geographic information systems and intelligent interface development into decision support tools for water resources decision makers. Up to now, the company has completed 89 projects on behalf of the organizations that include: Food and Agriculture Organization of the United Nations, FAO, Amman, Jordan; US Environmental Protection Agency, Systems Exposure Division, Las Vegas, USA; National Research Council, Ottawa, Canada; Ontario Power Generation, Toronto, Canada; APEGBC, Vancouver, Canada; Academia Sinica, Taipei, Taiwan; AECOM, London, Canada; Delcan Corporation, Canada; City of London, London, Canada; Insurance Bureau of Canada, Toronto, Canada; Welland River Floodplain Association, Canada; UNESCO International Hydrologic Programme, Paris, France; Upper Thames River Conservation Authority, London, Canada; Canadian Council of Professional Engineers, Ottawa, Canada; Research Institute for Humanity and Nature, Kyoto, Japan; World Meteorological Organization, Associate Programme on Flood Management, Geneva, Switzerland; European Commission, Research Directorate-General, Brussels, Belgium; Emergency Preparedness Canada, Ottawa; Lyonnaise des Eaux, ASTRAN, Kuala Lumpur, Malaysia; Science Applications International Corporation, Virginia, USA; Golder Associates, Calgary; International Joint Commission, Ottawa; CIDA and S-N-C Lavalin Eng., Montreal; CIDA and Agra Earth & Environment, Ltd., Calgary; Manitoba Hydro, Department for Planning Energy Generation, Winnipeg; INGEMA, Rabat, Morocco; ENEL-CRIS, Mestre, Italy; International Development Research Center, Ottawa; KGS group, Consulting Engineers, Winnipeg; TEMPUS program of the European Communities, Wageningen, The Netherlands; ISMES consulting, Milan, Italy; COMETT program of the European Communities, Belgium; UNESCO, International Research and Training Center for Urban Drainage, Belgrade, Yugoslavia; and Yugoslav Chamber of Commerce.

ADMINISTRATIVE DUTIES, UNIVERSITY OF MANITOBA

For 14 years, S.P. Simonovic has served his colleagues at the University of Manitoba in numerous capacities at the departmental, faculty and university levels. For instance, he served as the Director of the

Natural Resources Institute and a Member of numerous committees such as the Promotions and Tenure Committee, Dean's Selection Committee, and Faculty and Department Nominating Committees.

ADMINISTRATIVE DUTIES, THE UNIVERSITY OF WESTERN ONTARIO

For 20 years, S.P. Simonovic has served his colleagues at the University of Western Ontario in various capacities at the departmental and faculty levels. For example, he has served as a Member of the ICLR Advisory Committee, Civil Engineering Department Chair-selection Committee, Appointments Committee, Promotions and Tenure Committee, Nominating and Outreach Committees among others.