Department/School: Civil Engineering

May 31, 2022

CURRICULUM VITAE

a) NAME

NISTOR, Ioan, Professor (tenured)
Member of the Ottawa-Carleton Institute for Civil Engineering (OCICE)
Member of the Ottawa-Carleton Institute for Environmental Engineering (OCIENE)

b) DEGREES

PhD, *Civil Engineering, Architecture, and Marine Technology*, Department of Civil Engineering, Yokohama National University, Japan, 1998
Dipl. Eng., *Hydrotechnical Engineering*, Faculty of Hydrotechnical Engineering, Technical University of Iasi, Romania, 1991

c) EMPLOYMENT HISTORY (**to date**)

2015-present	**Professor**, Dept. of Civil Engineering, University of Ottawa
2018-2023	**Assistant Vice-Provost Graduate and Postdoctoral Studies**, University of Ottawa
2017-2018	**Vice-Dean Graduate Studies**, Faculty of Engineering, University of Ottawa
2016-2017	**Interim Dean**, Faculty of Engineering, University of Ottawa
2015-2016 (& 2010-2014)	V**ice-Dean Graduate Studies**, Faculty of Engineering, University of Ottawa
2014-2015 *(Sabbatical Leave)*	**Visiting Professor**, Dept. of Civil Engineering, Waseda University, Tokyo, Japan, Kajima Foundation Fellow (August-December 2014) **Al Yee Visiting Professor**, Dept. of Civil Engineering, University of Hawaii at Manoa, Honolulu, USA (January-April 2015) **Visiting Professor,** Laboratoire de constructions hydrauliques (LCH), École polytechnique fédérale de Lausanne (EPFL), Switzerland (May-June 2015)
2010-2015	**Associate Professor**, Dept. of Civil Engineering, University of Ottawa
2008-2010	**Associate Vice-Dean Research**, Faculty of Engineering, University of Ottawa
2004-2010	**Assistant Professor**, Dept. of Civil Engineering, University of Ottawa
2001-2004	**Consulting Engineer**, Earth Science Division, AECOM-TECSULT, Montréal
1998-2001	**Assistant Professor (tenured)**, Faculty of Hydrotechnical Engineering, Technical University of Iasi, Romania
1995-1998	**PhD Student (MONBUSHO Fellow)**, Dept. of Civil Engineering, Yokohama National University, Yokohama, Japan
1993-1995	**Lecturer**, Faculty of Hydrotechnical Engineering, Technical University of Iasi, Iasi, Romania
1991-1993	**Research Associate**, Faculty of Hydrotechnical Engineering, Technical University of Iasi, Iasi, Romania

c. ACADEMIC HONOURS (**lifetime**):

Awards & Citations

- 2021 "*G.S. Glinski" Award for Excellence in Research* of the Faculty of Engineering, University of Ottawa
- 2021 *Fellow* of the Canadian Academy of Engineering (CAE)
- 2020 *Outstanding Paper Award*, Coastal Engineering Journal (JSCE) for the paper "The 2018 Sulawesi Tsunami in Palu City as a result of several landslides and co-seismic tsunamis", Coastal Engineering Journal, JSCE, DOI: 10.1080/21664250.2020.1780719
- 2020 *Fellow* of the Engineering Institute of Canada (EIC)
- 2019 *Outstanding Paper Award*, Coastal Engineering Journal (JSCE) for the paper "Experimental study on the hydrodynamic impact of tsunami-like waves against impervious free-standing buildings", Coastal Engineering Journal, JSCE, 60: 3, 180-199, DOI: 10.1080/21664250.2018.1466676
- 2019 *Outstanding Associate Editor Award*, Canadian Journal of Civil Engineering (CSCE)
- 2018 *Certificate of Appreciation*, Canadian Society for Civil Engineering (CSCE) - National Chair of the 4th Canadian Coastal, Estuary and Offshore Engineering Specialty Conference, CSCE Montreal
- 2016, *Fellow* of the Canadian Society for Civil Engineering (CSCE)
- 2014 *Outstanding Paper Award*, Journal of Waterways, Ports, Coastal and Ocean Engineering, American Society of Civil Engineers (ASCE) for the paper "Smoothed-Particle Hydrodynamics Numerical Modeling of Structures Impacted by Tsunami Bores" St-Germain, P., Nistor, I., Townsend, R., and Shibayama, T., (2014) 140(1), 10.1061/(asce)ww.1943-5460.0000225, 66-81
- 2013 *Certificate of Appreciation*, Canadian Society for Civil Engineering (CSCE) - National Chair of the 4th Canadian Coastal, Estuary and Offshore Engineering Specialty Conference, CSCE Montreal
- 2013 *Outstanding Reviewer Award*, Journal of Waterways, Ports, Coastal and Ocean Engineering, American Society of Civil Engineers (ASCE)
- 2011 *Certificate of Appreciation*, Canadian Society for Civil Engineering (CSCE) for organizing and chairing the 20th Canadian Hydrotechnical Conference, Ottawa
- 2010 *Tsunami International Society Award* (Hawaii, USA) for "Outstanding and Original Contributions to Tsunami Research"
- 2010 *Excellence in Education Prize* of the University of Ottawa
- 2010 "*Outstanding Teaching*" Peer-reviewed Evaluation, University of Ottawa
- 2009 "*John V. Marsh" Award for Excellence in Teaching* of the Faculty of Engineering, University of Ottawa
- 2004 – 2016 Received *eleven (11) Commendation Letters* from the Dean of the Faculty of Engineering for a perfect score (100% "excellent" and "very good") since 2004
- 2007 *"Leonardo" Grand Prix de Génie-Conseil Québécois"* - Montréal (Quebec Great Prize of Consulting Engineering, Montreal) – Principal design engineer: "Restoration of Contaminated Sediments – Clark Island", TECSULT-AECOM, Montréal
- 2005 *Award of Excellence of the Ontario Ministry of Public Infrastructure Renewal*, Canadian Civil Engineering Conference, Canadian Society for Civil Engineering (CSCE). Award presented for paper presentation at the *1st Infrastructure Technologies, Management and Policy Speciality Conference*, Toronto, Canada
- 1997 *Excellent Presentation Award*, 52nd Annual Conf. of the Japan Society of Civil Engineers (JSCE), Tokyo, Japan
- 1996 *Excellent Presentation Award*, 51st Annual Conf. of the Japan Society of Civil Engineers (JSCE), Nagoya, Japan

Scholarships/Fellowships (lifetime)

- 2019 *Visiting Professor Fellowship*, Hiroshima University, Hiroshima, Japan
- *2018 Visiting Professor Fellowship*, College of Water Resources and Hydropower, Sichuan University, Chengdu, China
- 2018 *Visiting Professor Fellowship*, Hiroshima University, Hiroshima, Japan
- 2016 *Visiting Professor Fellowship*, College of Water Resources and Hydropower, Sichuan University, Chengdu, China
- 2017 *Visiting Professor Fellowship*, Hiroshima University, Hiroshima, Japan
- 2016 *Visiting Professor Fellowship*, Hiroshima University, Hiroshima, Japan
- 2015 *Visiting Professor Fellowship*, Laboratoire de Constructions Hydrauliques (LCH), École polytechnique fédérale de Lausanne (EPFL), Lausanne, Switzerland
- 2015 Al Yee *Visiting Professor Fellowship*, Dept. of Civil Engineering, University of Hawaii at Manoa, Honolulu, USA
- 2014 *Visiting Professor Fellowship* (award by Kajima Foundation*)*, Waseda University, Tokyo, Japan
- 2014 *Visiting Professor Fellowship*, Hiroshima University, Hiroshima, Japan
- 2014 *Visiting Professor Fellowship*, College of Water Resources and Hydropower, Sichuan University, Chengdu, China
- 2013 *Visiting Professor Fellowship*, Hiroshima University, Hiroshima, Japan
- 2010 *Visiting Professor Fellowship*, Waseda University, Tokyo, Japan
- 2010 *Visiting Professor Fellowship (Ministry of Education of Spain)*, University of Cantabria, Santander, Spain
- 2000-2001 *AUF (Agence Universitaire Francophone) Postdoctoral Scholarship*, University of Moncton, Edmunston Campus, Moncton, New Brunswick, Canada (supervisor: Prof. J. Barbalata)
- 2000 *DAAD (German Academic Exchange Foundation) Postdoctoral Scholarship*, Institute for Hydrotechnical Constructions and Water Engineering, Technical University of Braunschweig, Braunschweig, Germany (supervisor: Prof. Hocine Oumeraci)
- 2000 *NATO Postdoctoral Scholarship*, Dept. of Civil Engineering, Aristotle University of Thessaloniki, Greece (supervisor: Prof. Yannis Krestenitis)
- 1999 *SOCRATES Visiting Professor Scholarship*, Department of Organic Synthesis and Environmental Engineering, Université du Littoral, Calais, France
- 1999 *TEMPUS Visiting Researcher*, Dept. of Hydraulics and Environmental Engineering, University of Pavia, Pavia, Italy (supervisor: Prof. Andrea Capodaglio)
- 1995-1998 *MONBUSHO (Ministry of Education of Japan) Doctoral Fellowship*, Yokohama National University, Yokohama, Japan (Academic supervisor: Prof. Tomoya Shibayama)
- 1986-1991 "*Bursa de Merit*" (*Meritus Scholarship*), Faculty of Hydrotechnical Engineering, Technical University of Iasi, Iasi, Romania – Faculty's best overall academic performance for all years of study

Professional/Association/Technical Committees Membership

- Member of Ordre des ingénieurs du Québec – (no. 126905)
- Member of Canadian Society for Civil Engineering (CSCE) - 066191
- Voting Member of ASCE/SEI 7 Tsunami Loads and Effects Committee (ASCE) (2011-2016) and (2017-2022)
- Member of the Japan Society of Civil Engineers Tsunami Committee (Working Group 5 – Debris)
- Member of the Working Group TG2.13 "Design and assessment for tsunami loading" The International Federation for Structural Concrete - Fédération internationale du béton (*fib*).
- Society of Civil Engineers (ASCE) – 944195
- Member of Japan Society of Civil Engineers (JSCE) Tsunami Infrastructure Design and Protection Committee (2018-2023)

- Member of International Association for Hydro-Environment Engineering and Research (IAHR)
- Diplomate Member of Academy of Coastal, Ocean, Port & Navigation Engineers (ACOPNE)
- Member of Canadian Coastal Science and Engineering Association (CC-SEA)
- Member of International Tsunami Society, Hawaii, USA

External Committees (executive positions only, 2013-2022)

- (2021-2023) **Chair**, Working Group on Water Disaster, International Association of Hydro-Environment Engineering and Research (IAHR).
- (2019-2023) **Council Member** – Representative of North America on the Council of the International Association of Hydro-Environment Engineering and Research (IAHR).
- (2019-present) **President,** Canadian Association of Postdoctoral Administrators.
- (2017-present) **Past Chair,** Coastal and Maritime Hydraulics Committee of the International Association of Hydro-Environment Engineering and Research (IAHR).
- (2014-2017) **Chair,** Coastal and Maritime Hydraulics Committee of the International Association of Hydro-Environment Engineering and Research (IAHR).
- (2011-2014) **Vice-Chair,** Coastal and Maritime Hydraulics Committee of the International Association of Hydro-Environment Engineering and Research (IAHR).
- (2008–2014) **Chair,** Hydrotechnical Division, Can. Soc. for Civil Eng (CSCE)

d) SCHOLARLY AND PROFESSIONAL ACTIVITIES (**2013-20212**)

Journal Editorship

- (2013–Present) Editorial Board Member – *J. of Waterways, Port, Coastal and Ocean Eng.*, ASCE
- (2009–Present) Editorial Board Member – *Canadian Journal of Civil Eng.*, CSCE, Canada
- (2005–Present) Editorial Board Member – *Coastal Engineering Journal*, JSCE, World Scientific
- (2010–2014) Editorial Board Member – *Maritime Engineering*, ICE, UK

Keynotes/Invited Lectures

- (2022) **Invited Lecture**: "Tsunami Loading on Infrastructure", Marine Science Department, University of Southern Mississippi, February 4, Mississippi, USA
- (2022) **Invited Lecture**: "Debris entrainment during flood events", Department of Civil and Environmental Engineering, Utah State University, Utah, USA
- (2021) **Keynote Lecture**: "Debris impact associated to extreme hydrodynamic events", 2nd TJU Special Symposium on Coastal and Marine Engineering, December 16-17, Tianjin, China,
- (2021) **Keynote Lecture**: "Field Surveys and Experimental Modeling of Scour Induced by Turbulent Bores around Structures", 2nd International Symposium of Water Disaster Mitigation and Water Environment Regulation (WDWE2021, July 7-9, Chengdu, China
- (2021) **Invited Lecture**: "Extreme effects of tsunami on infrastructure", EarthFlows, June 3-4, Oslo, Norway
- (2020) **Invited Lecture**: "Tsunami-Induced Scour Effects around Structures", 8th International Conference on Physical Modelling in Coastal Engineering, IAHR, Ningbo, China, May 22-28, 2020
- (2019) **Keynote Lecture:** "Impact of Extreme Debris Loading during Tsunami", 11th South China Sea Tsunami Workshop, Hangzhou, China, October 27-28, 2019
- (2019) **Keynote Lecture:** "*Debris Impacts: Engineering Lessons from Field, Investigations"*, 15th

Int. Conference of Computational Civil Engineering, Iasi, Romania, May 30-31, 2019.

- (2019) **Keynote Lecture:** "*Extreme flood and debris loading on infrastructure: Field, Experimental and Numerical Modeling"*, Int. Workshop of Water Disaster Mitigation and Water Environment Regulation, Chengdu, China, April 24-26, 2019.
- (2019) **Invited Lecture:** "*Debris Loading during Extreme Flood Events*", American Concrete Institute Convention, Quebec City, QC, Canada, March 24-27, 2019.
- (2019) **Invited Lecture:** "*Tsunami and Coastal Flooding Events and Impacts on Infrastructure*", 1st Interdisciplinary Seminar in Smart Sustainable Infrastructure, Univ. of British Columbia, Vancouver, March 5, 2019.
- (2018) **Keynote Speaker:** "Debris impact and loading on infrastructure in extreme coastal flood events: field and experimental investigations*"*, ICOPMAS 2018, 713h International Conference on Coasts, Ports and Marine Structures, Tehran, Iran, November 26-28, 2018
- (2018) **Keynote Speaker:** "*Laboratory Facilities – new trends and future developments"*, CoastLab18, 7th International Conference on Physical Modelling in Coastal Engineering, IAHR, Santander, Spain, May 22-26, 2018
- (2018) **Invited Lecture:** "*Tsunami Loading – How can we mitigate?*", École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, January 2018
- (2017) **Invited Lecture:** "*Effects of extreme loading on coastal infrastructure and buildings*", Hannover University, Germany, November 2017
- (2017) **Invited Lecture:** "*Flood-induced debris motion within a built-in environment – an experimental and analytical study*", 2nd WAYCEM Seminar on Complex Disaster around the World, Waseda University, Tokyo, Japan, September 2017
- (2017) **Plenary Lecture:** "*Tsunami-induced debris and hydrodynamic loading on structures"* CSCE Annual Conference, Vancouver, BC, June 2017
- (2016) **Invited Lecture:** "*Experimental modeling of debris motion, impact and risks"* Department of Civil Engineering, Technical University of Delft, Netherlands, November 12, 2016
- (2016) **Keynote Speaker:** "*Tsunami-induced risks for ports – field, experimental and design lessons"*, 7th Int. Seminar of Port Engineering, SIOP, San Antonio, Chile, October 2016
- (2016) **Invited Lecture:** "*Tsunami Debris Impact Loading"* Department of Civil Engineering, Waseda University, Tokyo, Japan, June 23, 2016
- (2016) **Keynote Lecture:** "*Tsunami Impacts on Infrastructure"* Young Scientists and Coastal Engineering Conference - ASCE, Kingston, Canada, June 12-15, 2016
- (2015) **Invited Lectures:** "*Lessons Learned from Tsunami Forensic Investigations*", Clarkson University, Potsdam, New York, USA, November 2015
- (2015) **Invited Conference:** "*Tsunami Hydrodynamic Loading – Engineering Lessons from the 2011 Tohoku Tsunami Japan*", École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, May 2015
- (2015) **Invited Lectures:** (1) "*State-of-the-Art Tsunami Design Guidelines"* and (2) "*Lessons Learned from Three Tsunami Forensic Investigations*", University of Cantabria, Santander, Spain, March 2015
- (2014) **Keynote Lecture** "*Impact of Tsunamis on Infrastructure – Tsunami Design Guidelines and Lessons Learned from Tsunami Forensic Investigations*", 11th Int. Conf. of Coasts, Ports and Maritime Structures, ICOPMAS, Tehran, Iran, November 2014
- (2014) **Invited Lecture**: "*Field Flow and Sediment Measurements in Shippagan Gully, New Brunswick*", Workshop on Acoustic Tomography and its Applications, Hiroshima University, Hiroshima, Japan
- (2013) **Expert Lecture** "*Impact of Tsunamis on Structures – Lessons Learned from 3 Tsunami Forensic Investigations and State-of-the Art Tsunami Design Guidelines*", Pacem in Maribus XXXIV, International Forum on Sustainable Development of the Ocean, Bangkok, Thailand
- (2013) **Keynote Lecture** "*Tsunami Impact on Structures – Lessons from Post-Tsunami Surveys and*

Physical and Numerical Modeling of Extreme Hydrodynamic Forces", CANDU Owners Group Inc. External Hazards Workshop, Toronto, Canada

- (2013) **Invited Lecture** "*Field Investigations and Numerical Modeling of a Highly Dynamic Inlet in Shippagan, New Brunswick*", Waseda University, Tokyo, Japan

Conference organization

2021

- **Member- International Scientific Committee**, *International Conference in Ocean Engineering (ICOE 2021)*, July 5-9, Aachen, Germany.

2020

- **Member-Scientific Committee**, v*ICCE 2020*, October 6-9, http://icce2020.com/
- **Member-Scientific Committee**, *ICOPMAS2020*, Tehran, Iran, Nov.30-Dec.2, https://icopmas.pmo.ir/
- **Member-Scientific Committee**, *International Conference on Coastal Reservoirs (ICCR 2020)*, Hohai, China, 19-22 October, http://www.iacrr2020.com/

2019

- **Member-Scientific Committee,** *5th Int. Conference of Computational Civil Engineering*, Iasi, Romania, May 30-31, 2019
- **Member-Scientific Committee,** *Coastal Structures 2019*, Hannover, Germany, Sept. 30 – Oct. 3 2019 http://www.coastalstructures2019.com/

- **Session Organizer and Convener**, Session 8B: New Technologies and Instrumentation, *EERI Meeting*, Vancouver, BC, Canada, March 5-8, 2019 http://2019am.eeri-events.org/
- **Member-Scientific Committee**, *HydroSenSoft - International Symposium and Exhibition on Hydro-Environment Sensors and Software*, 26 Feb – 1 Mar 2019, Madrid, Spain, www.hydrosensoft.com

2018

- **Member-Scientific Committee**, *ICCE 2018*, Baltimore, USA, July 31 August 4, 2018 http://icce2018.com/
- **Co-Chair**, *6th Natural Hazards and Man-Induced Disaster Specialty Conference, Annual Conference of the Canadian Society for Civil Engineering*, CSCE, Fredericton, Canada, June 13-16, 2018, http://csce2018.ca/
- **Member-Scientific Committee, Session Chair** and **Keynote Speaker**, *CoastLab18, 7th International Conference on Physical Modelling in Coastal Engineering*, IAHR, Santander, Spain, May 22-26, 2018 http://coastlab2018.com/
- **Member-Scientific Committee**, *ICOPMAS2018*, Tehran, Iran, Nov.24-28, https://icopmas.pmo.ir/
- **Member-Scientific Committee**, *7th International Symposium on Hydraulic Structures*, Aachen, Germany, 15-18 May 2018, AAWRE-ASCE, http://www.aawre.org/news/ishs-2018-7th-international-symposium-hydraulic-structures

2017

- **Member-Scientific Committee**, *SCACR2017 – 8th International Short Course and Conference on Applied Coastal Research*, Oct. 3-6, 2017, Santander, Spain, scacr2017.ihcantabria.com
- **Session Chair –** *Coastal, Estuaries and Lake Management, 37th IAHR World Congress*, Kuala Lumpur, Malaysia, August 13-18, 2017 http://www.iahr2017.info/
- **Member-Scientific Committee**, *HydroSenSoft - International Symposium and Exhibition on Hydro-Environment Sensors and Software*, 28 Feb – 3 Mar 2017, Madrid, Spain, www.hydrosensoft.com

2016

- **Co-Chair**, *CoastLab16, 6th International Conference on Physical Modelling in Coastal Engineering*,

IAHR, Ottawa, Canada, May 10-13, 2016 http://www.coastlab2016.com/

2015

- **Member-Scientific Committee** and **Session Moderator**, *Coastal Structure and Solutions to Coastal Disasters Joint Conference***,** COPRI-ASCE, Boston, Massachusetts, USA, September 9-11, 2015 http://www.copricoastalconference.org/
- **Session Chair –** *COPRI Symposium Long Waves and Relevant Extremes*, *36th IAHR World Congress*, Hague, Netherlands, June 28-July 3, 2015 http://www.iahr2015.info/

2014

- **Session Chair–** Session B1 – *Wave-Structure Interaction*) for *International Conference of Coastal Engineering, ICCE 2014*, Seoul, Korea, June 15-20, 2014 http://icce2014.com/

2013

- **Session Organizer and Chair –** *Extreme Hydrodynamic Forces on Structures* Session, *35th IAHR World Congress*, Chengdu, China, September 8-13, 2013 http://www.iahr2013.org/
- **National Chair**, *4th Canadian Coastal, Estuary and Offshore Engineering Specialty Conference*, *Annual Conference of the Canadian Society for Civil Engineering*, CSCE, Montreal, Canada, May 29-June 1, 2013 http://csce2013.ca/home

e) GRADUATE STUDENT SUPERVISION

- Career (lifetime) numbers: **5 Postdoctoral fellows, 22 PhD, 49 MASc, 2 M.Eng.** (with Project) and **28 Research Undergraduate students** (USRA-NSERC, international visiting)
- Completed: **5 Postdoctoral Fellows**, **8 PhD**, **44 MASc, 2 MEng,** and **31 Undergraduate Research students**
- In-progress: **16 PhD and 6 MASc**

Invited international graduate courses (2013-2022)

- (2019) **Graduate Course**: "*Coastal and Environmental Engineering*", Department of Civil Engineering, Hiroshima University, Japan, August 2019
- (2018) **Graduate Course**: "*Coastal and Environmental Engineering*", Department of Civil Engineering, Hiroshima University, Japan, May 2018
- (2018) **Graduate Course**: "*Prevention and Mitigation of Natural and Man-Induced Hazards and Disasters in Hydraulic and Coastal Engineering - Engineering Lessons*", College of Water Resource and Hydropower, Sichuan University, Chengdu, China, June-July 2018
- (2017) **Graduate Course**: "*Coastal and Environmental Engineering*", Department of Civil Engineering, Hiroshima University, Japan, June 2017
- (2016) **Graduate Course**: "*Prevention and Mitigation of Natural and Man-Induced Hazards and Disasters in Hydraulic and Coastal Engineering - Engineering Lessons*", College of Water Resource and Hydropower, Sichuan University, Chengdu, China, June-July 2016
- (2016) **Graduate Course**: "*Coastal Engineering and Coastal Hazards*", Department of Civil Engineering, Hiroshima University, Hiroshima, Japan, June 2016
- (2015) **Graduate Course**: "*Wave Hydrodynamics*", Department of Civil Engineering, Hiroshima University, Japan, April 2015
- (2014) **Graduate Course**: "*Coastal Engineering*", Department of Civil Engineering, Waseda University, Tokyo, Japan, Fall 2014
- (2014) **Graduate Course**: "*Coastal Engineering and Coastal Hazards*", Department of Civil Engineering, Hiroshima University, Hiroshima, Japan, June 2014
- (2014) **Graduate Course**: "*Prevention and Mitigation of Natural and Man-Induced Hazards and*

Disasters in Hydraulic and Coastal Engineering - Engineering Lessons", College of Water Resource and Hydropower, Sichuan University, Chengdu, China, June-July 2014

- (2013) **Graduate Course**: "*Coastal Engineering and Coastal Hazards*", Department of Civil Engineering, Hiroshima University, Hiroshima, Japan, June 2013

f) PUBLICATIONS

1) **Life-time summary** (count) according to the following categories:

- Books.....**1**
- Refereed chapters in books.....**27**
- Papers in refereed journals **185**
- Paper and/or Poster Presentations in conference proceedings.....**220**
- Course manuals **2**
- Major invited contributions and/or technical reports.....**19**
- Industry (design and consulting) reports **28**
- Others (patents and innovation).....**3**

2) **2017-20212** for the categories below:

Refereed Chapters in Books

BC1. Kheirkhah Gildeh, H.**,** Mohammadian, A., and **Nistor, I**. (**2021**). "Mixing of inclined dense jets: a numerical modeling", *Water Engineering Modelling and Mathematic Tools* (Elsevier), 343-ISBN: 978-0-12-820644-7, 343-367.

BC2 Piche S., **Nistor, I.**, Murty T., (**2020**). "Modeling Tsunami Attenuation and Impacts on Coastal Communities", in "*Techniques for Disaster Risk Management and Mitigation*", Chapter 19, Editor: Dr. Prashant K Srivastava, *UN-DP*, United Nations, Wiley, 24pp. https://doi.org/10.1002/9781119359203.ch19

BC3 Stolle J., Goseberg N., **Nistor I.**, Shibayama T., (**2017**). "Debris Impacts and Effects on Structures", *Handbook of Coastal and Ocean Engineering*" 2nd Edition, Editor: Dr. Kim Young (UCLA), *World Scientific*, Singapore, 457-480

BC4 Nistor I., Palermo D., Nouri Y., Murty T., Saatcioglu M., (**2017**). "Tsunami forces on structures", *Handbook of Coastal and Ocean Engineering*" 2nd Edition, Editor: Dr. Kim Young (UCLA), *World Scientific*, Singapore, 211-239

Papers in Refereed Journals (**2017-2022**)

(Names of supervised students are underlined)

J1 Siriani, D., Valela, C., Rennie, C., **Nistor, I.**, Almansour, H., (**2022**). Effects of developing ice covers on bridge pier scour, *J. Hydr. Res.*, IAHR, (accepted, in press).

J2 Heyrani, M., Mohammadian A., **Nistor I.**, Dursun O.F., (**2022**) Application of numerical and experimental modeling to enhance the efficiency of Parshall flumes: a review of past studies. *Hydrology*, MDPI, (accepted, in press)

J3 Rajaie, M., Azimi A., **Nistor, I.**, Rennie, C., (**2021**). Experimental investigations on hydrodynamic characteristics of tsunami-like hydraulic bores impacting a square structure: *J. of Hydraulic Engineering*, ASCE, (accepted, in press)

J4 Valela, C., Whittaker C.N., Rennie, C., **Nistor, I.**, Melville B., (**2021**). Advanced riprap placement for improved bridge pier scour protection: *J. of Hydraulic Engineering*, ASCE, (accepted, in press)

J5 Iliopoulos, M., Onuki M., **Nistor I.**, Esteban M., (**2021**) "Expert assessment of prioritized determinants for a smarter grid through the lens of residential demand response: The case study of Ontario, Canada". *Int. J. of Sustainable Future for Human Security* (J-SustaiN), 8(1), 1-18.

J6 Heyrani, M., Mohammadian A., **Nistor I.**, (**2021**) "Numerical simulation of flow in Parshall Flume using selected nonlinear turbulence models". *Hydrology*, MDPI, 8(45), 151, https://doi.org/10.3390/hydrology8040151

J7 Takabatake, T., Stolle J., Hiraishi K., Kihara N., Nojima K., Shigihara Y., Arikawa T., **Nistor, I**., (**2021**). Inter-model comparison for tsunami debris simulation, *J. of Disaster Research*, JSCE, 16(7), 1-15, https://doi.org/10.20965/jdr.2021.p1030

J8 Kirby, K., Ferguson S., Rennie C., **Nistor, I.**, Cousineau J., (**2021**) Assessments of Available Riverine Hydrokinetic Energy: A Review", *Canadian J. of Civil Eng.*, CSCE, **(**accepted, in press)

J9 Razieh, M., H., **Nistor I**., Rennie C., (**2021**). "Scour Mechanics of a Tsunami-like Bore Around a Square Structure", *J. of Waterway, Port, Coastal and Ocean Engineering,* ASCE (accepted, in press).

J10 Kheirkhah, G., H., Mohammadian A., **Nistor I**. (**2021**). "Inclined Dense Effluent Discharge Modelling in Shallow Waters", *J. Environ. Fluid Mech.*, Springer, *21, 955–98, d*oi.org/10.1007/s10652-021-09805-6

J11 Falkenrich P., Wilson J., **Nistor I.,** Goseberg N., Cornett A, Mohammadian M., (**2021**). Nature-Based Coastal Protection by Large Woody Debris as compared to Seawalls: A Physical Model Study of Beach Morphology and Wave Reflection, *Water, MDPI,* 13(15), https://doi.org/10.3390/w13152020

J12 Murphy E., **Nistor I.,** Cornett A., Wilson J., Pilechi A., (**2021)** Fate and Transport of Coastal Driftwood: A Critical Review, *Marine Pollution Bulletin.* Elsevier, 170, 112649, https://doi.org/10.1016/j.marpolbul.2021.112649

J13 Kim, J., Takabatake, T., **Nistor, I.**, Shibayama, T., (**2021**) A Comparison between Agent-Based and GIS-Based Tsunami Evacuation Simulations: A Case Study for Tofino, BC, *Canadian J. of Civil Eng.*, CSCE, https://doi.org/10.1139/cjce-2020-0660

J14 Valela, C., Rennie, C., **Nistor, I.**, (**2021**). Improved Bridge Pier Collar for Reducing Scour: *Int. J. of Sediment Res.*, Elsevier, https://doi.org/10.1016/j.ijsrc.2021.04.004

J15 Cao, H., Mohareb, M., **Nistor, I.**, (**2021**) "Partitioned water hammer modelling using the block Gauss-Seidel algorithm", *J. of Fluids and Structures*, Elsevier, 103, 103260, https://doi.org/10.1016/j.jfluidstructs.2021.103260

J16 Kim, J., Murphy, E., **Nistor, I.**, Ferguson, S., Provan, M., (**2021**) "Numerical Investigation of Storm Surges in Canada's Western Arctic", *J. Mar. Sci. Eng., MDPI,* J. Mar. Sci. Eng 9, 326. https://doi.org/10.3390/jmse9030326

J17 Valela, C., Siriani, D., **Nistor, I.**, Rennie, C., Almansour, H., (**2021**). Bridge Pier Scour under Ice Cover, *Water*, MDPI, 13, 536. https://doi.org/10.3390/w13040536

J18 Cao, H., Mohareb, M., **Nistor, I.**, (**2021**) "Mechanical response of buried and covered pipes under water hammer". *Int. J. Pressure Vessels and Piping*, Elsevier, 190. 104310, https://doi.org/10.1016/j.ijpvp.2021.104310 .

J19 Heyrani, M., Mohammadian, A., **Nistor, I.**, Dursun, O. F., (**2021**) "Numerical Modeling of Venturi Flume". *Hydrology*, MDPI, 8(1), 27; https://doi.org/10.3390/hydrology8010027

J20 April-LeQuéré, P., **Nistor, I.**, Mohammadian, A., (**2021**). Effect of Lateral Spacing of Structures on Tsunami-Induced Scour, *J. Coastal Research*, 37(4), 813-826, https://doi.org/10.2112/JCOASTRES-D-20-00144.1

J21 von Häfen H., Stolle J., **Nistor I.,** Goseberg N., (**2021**). Side-by-Side Entrainment and Displacement of Cuboids due to a Tsunami-like Wave, *Coastal Engineering*, Elsevier, 164(103819) https://doi.org/10.1016/j.coastaleng.2020.103819

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Papers in abstract-refereed conference proceedings (2017-2021)

(Names of supervised students are underlined)

C1 Kirby K., Rennie C., Cousineau J., Ferguson S., **Nistor I.**, (**2021**), Riverine hydrokinetic energy extraction: investigation into a location's suitability for turbine deployment, *Annual Conference of the Canadian Society of Civil Engineering CSCE 2021* (virtual conference).

C2 Kim J., Murphy E., **Nistor I.**, Ferguson S., Provan M., (**2021**), Numerical Investigation of Storm Surges in the Beaufort Sea considering the ERA5 Reanalysis, Driftwood Lines, and Sea Ice Presence, Coastal Zone Canada 2021 Conference, Iqaluit, Canada.

C3 Markov A., Henteleff R., **Nistor I.**, Stolle, S., (**2021**), Sediment Transport and Controls on Coastal Marshes in a Changing Climate, Coastal Zone Canada 2021 Conference, Iqaluit, Canada.

C4 Wilson J., **Nistor I.**, Mohammadian A., Cornett A., **(2020)** Nature-based Coastal Protection using Large Woody Debris, Virtual Int. Conf. of Coastal Eng., **v***ICCE2020, ASCE-COPRI,* (virtual conference).

C5 Murphy E., Cornett A., **Nistor I.**, Baker S., **(2020)** Modelling Transport and Fate of Woody Debris in Coastal Waters, Virtual Int. Conf. of Coastal Eng., **v***ICCE2020, ASCE-COPRI,* (virtual conference).

C6 Stole J., Krautwald C., **Nistor I.**, Goseberg N., **(2020)** Structural Response of wood structures under hydraulic loading, Virtual Int. Conf. of Coastal Eng., **v***ICCE2020, ASCE-COPRI,* (virtual conference).

C7 Ghodoosipour B., Hmano G., Ishii H., Imura K., Takabatake T., **Nistor I.**, Mohammadian A., Shibayama T., **(2020)** Transient dambreak wave loading on pipelines, Virtual Int. Conf. of Coastal Eng., **v***ICCE2020, ASCE-COPRI,* (virtual conference).

C8 Rajaie M., Azimi A., **Nistor I.**, Rennie C., **(2020)** Turbulent Bores–Induced Scour and Pore Pressure Variation around a Vertical Structure, Virtual Int. Conf. of Coastal Eng., **v***ICCE2020, ASCE-COPRI,* (virtual conference).

C9 Wilson J., **Nistor I.**, Mohammadian A., Cornett A., **(2020)** Assessing the Legacy of Large Woody Debris as Coastal Protection in BC and Washington, *Salish Sea Ecosystem Conference, 2020,* Vancouver, BC, Canada.

C10 **Nistor I.**, **(2019)** Impact of Extreme Debris Loading during Tsunami", *11th South China Sea Tsunami Workshop*, Hangzhou, China, October 27-28, 10p

C11 Stolle, J., Goseberg, N., **Nistor, I.**, Petriu E., (**2019**). Probabilistic Investigations of Debris Impact Forces during Extreme Hydraulic Events, *IAHR World Congress 2019,* Panama-City, Panama, 10p.

C12 Mauti, G., Stolle J., **Nistor, I.**, Mohammadian A., (**2019**). Experimental Investigation of Debris Damming in Transient Flow Conditions, *IAHR World Congress 2019,* Panama-City, Panama, 10p.

C13 Rahman, A., **Nistor, I.**, Infante-Sedano J., (**2019**). A novel experimental technique for the planar breach outflow of an overtopped sand embankment using 2DV-PTV, *IAHR World Congress 2019,* Panama-City, Panama, 10p.

C14 Esteban M, Roubos J. J., Salet J. T., Ishii H., Hamano G., Iimura K., Takabatake T., Hofland B., Bricker J., Bowen M., Takagi H., **Nistor, I.**, Stolle J., Shibayama T., (**2019**). Role of Surface Roughness on Tsunami Bore Overtopping of Coastal Dykes, *IAHR World Congress 2019,* Panama-City, Panama, 10p.

C15 Valela, C., Rennie C., **Nistor, I.**, (**2019**). Validating a Novel Collar Design to Mitigate Bridge Pier Scour, *IAHR World Congress 2019,* Panama-City, Panama, 10p.

C16 Douglas, S., Eden D., Simpalean A., Kozlowski T., **Nistor, I.**, Cornett A., Anglin D., (**2019**). Experimental study of wave-induced loading on breakwater armour layers, *Coastal Structures 2019*, COPRI-ASCE, Hannover, Germany, 9p

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C18 Stolle J., **Nistor I.**, Goseberg N., Petriu E., (**2019**) Probabilistic Analysis of Debris Transport in Tsunami-Like Events, *Coastal Structures 2019, COPRI-ASCE, Hannover, Germany, 9p*

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C20 Esmaeeli Mohsenabadi S., Mohammadian M., **Nistor I.**, A. **(2019)** CFD Modelling of Near-Field Dam Break Flow, *Int. Conf. of Large Dams (ICOLD)*, Ottawa, ON, Canada.

C21 Rahman A., **Nistor I.**, Infante-Sedano J., (**2019**). Experimental Investigation on The Effect of the Non-Cohesive Embankment Geometry on the Breach Progress During Overtopping, *Hydrotechnical Specialty Conference*, CSCE, Laval, QC, Canada.

C22 Wilson J., Nistor I., Mohammadian M., **(2019)** Assessing the Efficacy of Nature-Based Coastal Protection using Large Woody Debris: Field Study Methodology and Preliminary Observations, *The Climate-Resilient Coastal Natural Infrastructure Workshop & ACCESS 2019*, Halifax, NS, Canada

C23 Ghodoosipour B., Stolle J., **Nistor I.**, Mohammadian M., Simpalean, A., (**2018**) Loading on Pipelines due to Extreme Hydrodynamic Conditions, *36th Int. Conf. of Coastal Eng.*, ICCE2018, ASCE, Baltimore, Maryland, USA

C24 Stolle J., **Nistor I.**, Goseberg N., Petriu E., (**2018**) Probabilistic Investigation of Debris Impact Velocities during Extreme Flooding Events, *36th Int. Conf. of Coastal Eng.*, ICCE2018, ASCE, Baltimore, Maryland, USA

C25 **Nistor I.**, Goseberg N., Stolle J., Shibayama T., Mikami T., (**2018**) Coastal Flooding-Induced Debris Motion, *36th Int. Conf. of Coastal Eng.*, ICCE2018, ASCE, Baltimore, Maryland, USA

C26 Jayaratne R., Nicholas M., Ghodoosipour B., **Nistor I.**, (**2018**) Tsunami-induced hydrodynamics and scour around structures, 36th Int. Conf. of Coastal Eng., ICCE2018, ASCE, Baltimore, Maryland, USA

C27 Goseberg N., Stolle J., **Nistor I.**, (**2018**) Multiple Impacts of Debris on a Vertical Obstacle, *36th Int. Conf. of Coastal Eng.*, ICCE2018, ASCE, Baltimore, Maryland, USA

C28 Stolle J, **Nistor I.**, Takabatake T., Goseberg N., Petriu E., Shibayama T., (**2018**). Debris Damming Loads and Effect in Tsunami-Like Events, *6th International Natural Disaster Mitigation Specialty Conference*, CSCE, Fredericton, NB, Canada

C29 Valela C., **Nistor I.**, Rennie C., (**2018**). Reduction of bridge pier scour through the use of a novel collar design, *6rh International Natural Disaster Mitigation Specialty Conference*, CSCE, Fredericton, NB, Canada.

C30 Stolle J., Takabatake T., **Nistor, I.**, Takahito M., Nishizaki S., Hamano G., Ishii H., Shibayama T., Goseberg, N., Petriu E., (**2018**). Debris transport over a sloped surface in tsunami-like flow conditions, *CoastLab18 Conference*, Santander, Spain, 10p

C31 Douglas S., Eden D., Simplean A., **Nistor, I.**, Logan S., Cornett A., V., Via-Estrem L., Latham J-P., (**2018**). Hydrodynamic Analysis of CoreLoc units via controlled drop tests, *CoastLab18 Conference*, Santander, Spain, 10p

C32 Esteban M., Takabatake T., Glasbergen T., Hofland B., Nishida Y., Nishiazaki S., Stolle J., **Nistor, I.**, Takagi H., Briker J., Shibayama T., (**2018**). Tsunami bore overtopping of coastal structures, *CoastLab18 Conference*, Santander, Spain, 10p.

C33 von Hafen H., Stolle J., Goseberg N., **Nistor I.** (**2018**). Lift and Swing Gate Modelling for Dam-break Generation with a Particle-Based Method. *7th Int, Symposium on Hydraulic Structures*, IAHR, Aachen, Germany, 10p.

C34 **Nistor I.**, Goseberg N., Matsuba R, Nakamura T, Mikami T. Shibayama T, Stolle J., (**2017**). Debris in Tsunami Events, *WASEDA-YNU Symposium*, Tokyo, Japan, 14p.

C35 **Nistor, I.**, Goseberg, N., and Stolle, J., (**2017**). Flood-Induced Debris Motion in a Built-in Environment. *IAHR World Congress 2017*, Kuala Lumpur, Malaysia, 10p.

C36 St-Germain P., Nistor I., Altomare C, Suzuki T., (**2017**). Numerical modeling of wave propagation in the surf zone and coastal structure-wave interaction using SPH and non-hydrostatic NLSW equations, *12th International SPHERIC Workshop SPHERIC 2017*, Ourense, Spain, June 13-15, 10p

C37 Stolle, J., Goseberg, N., Derschum, C., **Nistor, I.** (**2017**). Debris Dynamics and Associated Loads in Extreme Hydrodynamic Conditions. *IAHR World Congress 2017*, Kuala Lumpur, Malaysia, 10p.

C38 Conde D., Stolle, J., Goseberg, N., **Nistor, I.,** Ferreira L. M. (**2017**). Coupling a 2D Eulerian shallow-flow solver with a 3D Lagrangian rigid-body solver: application to debris transport by tsunamis. *EGU Annual Meeting, EGU2017*, Vienna, Austria, 8p.

C39 Goseberg, N., Stolle, J., **Nistor I.,** (**2017**). Swing Gate Generated Dam Break Waves. *IAHR World Congress 2017*, Kuala Lumpur, Malaysia, 10p.

C40 Latham J-P, Xiang J,. Via-Estrem L., Higuera P., Douglas S., Logan S., **Nistor I.**, Cornett A. and Baird W., (**2017**). Physics-based armour unit rubble mound stability simulator for armour layers, *Breakwaters*, ICE, Edinburgh, Scotland, UK, 10p.

C41 Goseberg, N., Heunecke M., Von Häfen H., Stolle, J., **Nistor, I.** (**2017**). DualSPHysics: Applications to Tsunami Engineering Problems. *DualSPHysics Symposium*, Parma, Italy, 8 p.

C42 Razieh, S., **Nistor, I.**, Rennie, C. (**2017**). Modeling supercritical flow-induced scour around structures, *23rd Canadian Hydrotechnical Conference*, CSCE, Vancouver, Canada, 10 p.

C43 Goseberg N., Heunecke M., Stolle J., **Nistor I**., (**2017**). Numerical modelling of shipping container transport over a horizontal bottom, *Int. Short Course and Conference on Applied Coastal Research 2017, SCACR2017*, Santander, Spain, 10 p.

C44 Derschum C., Goseberg N., Stolle J., **Nistor I**., (**2017**). Influence of wave-structure interaction on tsunami-driven debris impact, *Int. Short Course and Conference on Applied Coastal Research 2017, SCACR2017*, Santander, Spain, 10 p.

C45 **Nistor, I.**, (**2017**). Tsunami-Induced Debris Impact and Loading on Structures, *23rd Canadian Hydrotechnical Conference*, CSCE, Vancouver, Canada (**Plenary Talk**), 8p.

C46 Stolle, J., Goseberg, N., **Nistor, I.**, Petriu, E. (**2017**). Debris Entrainment Dynamics During Extreme Flooding Events. *23rd Canadian Hydrotechnical Conference*, CSCE, Vancouver, Canada, 10p.

C47 Ghodoosipour, B., **Nistor, I.**, Mohammadian, M. (**2017**). Experimental and numerical modeling of hydrodynamic loading on pipelines due to extreme hydrodynamic conditions, *23rd Canadian Hydrotechnical Conference*, CSCE, Vancouver, Canada, 10p.

Poster Papers (2017-2021)

(Names of supervised students are underlined)

PP1 Rajaieh M, Nistor, I., Rennie C., Azimi A., (**2020**). Experimental investigation on the effect of tsunami waves on pore pressure and scour around a structure - **2nd Prize – Civil Engineering Section** *Research Poster Competition – Faculty of Engineering Research Day,* University of Ottawa

PP2 Wilson J., **Nistor, I.,** Mohammadian M., (**2019**). Assessing the Efficacy of Nature-Based Coastal Protection using Large Woody Debris: Field Study Methodology and Preliminary Dike – ***Cold Regions Living Shorelines Community of Practice Symposium***, Dalhousie University, Halifax, NS

PP3 Rahman A., **Nistor, I.**, (**2019**). A Novel Technique To Evaluate The Breach Outflow Hydrograph During An Overtopping Planar Dike **–** *Research Poster Competition – Faculty of Engineering Research Day,* University of Ottawa

PP4 Ruoyao O., Mohammadian M., **Nistor, I.**, (**2019**). Numerical modeling of positive and negative submerged jets in crossflow**–** *Research Poster Competition – Faculty of Engineering Research Day,* University of Ottawa

PP5 Mohsenabadi., S., Mohammadian M., **Nistor, I.**, (**2019**). Numerical Modelling of Near-Field Dam Break Flow **–** *Research Poster Competition – Faculty of Engineering Research Day,* University of Ottawa

PP6 Douglas S., Simplean A., Eden D., **Nistor, I.**, Cornett A., (**2018**). Hydrodynamic Analysis of Breakwaters Constructed Using Core-Loc Armour Units **– 2nd Prize – Civil Engineering Section** *Research Poster Competition – Faculty of Engineering Research Day,* University of Ottawa

PP7 Valela C., **Nistor, I.**, Rennie C., (**2018**). Reduction of Bridge Pier Scour Through the Use of a Novel Collar Design **– 1st Prize – Civil Engineering Section** *Research Poster Competition – Faculty of Engineering Research Day,* University of Ottawa

PP8 Ghodoosipour, B., **Nistor, I.**, Mohammadian M., (**2017**). Numerical and Experimental Study of Extreme Flows Impacts on Pipes **– 1st Prize – Civil Engineering Section** *Research Poster Competition – Faculty of Engineering Research Day,* University of Ottawa

PP9 Razieh, B., **Nistor, I.,** Rennie, C., (**2017**). Tsunami-induced scour around structures – **3rd Prize – Civil Engineering Sectio**n *Research Poster Competition – Faculty of Engineering Research Day,* University of Ottawa

Research Reports and Professional Magazine Articles (2017-2021)

T1. Nistor I., (**2019**). Engineering Significance and Lessons from the 2011 Tohoku Tsunami – Impact on Structures, *CAEE Newsletter*. Canadian Association for Earthquake Engineering (CAEE), July 2019, 4, (3).

T2. Stolle J., Takabatake T., **Nistor I.,** and Petriu E. (**2018**). Designing Resilient Infrastructure for Coastal Disasters. *CIVIL - Building Tomorrow's Society*, CSCE, 25 – 28

T3. Cheff, I., **Nistor, I.** Palermo, D., (**2018**). The risk to British Columbia from a nearshore Pacific Coast Tsunami, *The Zone*, Coastal Zone Canada Association, CZCA, Spring-Summer issue, 7-1

T4. Nistor, I., (**2017**). My life in Japan – A life-altering experience! *Civil Engineering*, JSCE, Tokyo, Japan, Vol. 1012. No. 9

k) OTHER EVIDENCE OF IMPACT AND CONTRIBUTIONS (**2017-2021**)

Mass media

- **2019** –Interviews for CTV (TV) on the impact of the 2019 Ottawa River flood on the Chaudière Bridge
- **2019** –Interviews for Radio CBC on the impact of the 2019 Ottawa River flood on the Chaudière Bridge
- **2018** – Interview in Ottawa Business Journal - *uOttawa's Faculty of Engineering at the forefront of*

protecting Canada's infrastructure

- **2018** – Eights interviews for Radio CBC on the impact of Hurricane Florence, September 2018
- **2018** – Featured on the Discovery Channel "Daily Planet" episode with a presentation of the research conducted on debris impact on infrastructure
- **2017** – Eights interviews for Radio CBC on the impact of Hurricane Irma, September 2017, Ottawa CTV Studio (AM Morning show)
- **2017** – Interview of CTV National Channel on the impact of Hurricane Irma, September 2017, Ottawa CTV Studio (AM Morning show)

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