



Name: Dr. Masoud Irannezhad

Rank: Associate Professor - Civil Engineering

Personal Information

Nationality Finnish

AU Joining Date: 04 Sep 2022

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Professional Information

Education:

1. *Ph.D. in Environmental Engineering (Water Resources Eng.)*
 - Jun 2010-Dec 2015
 - University of Oulu (Finland)
 - Spatio-temporal Climate Variability and Snow Resource Changes in Finland (Link)
2. *M.Sc. in Civil & Environmental Engineering (Geo and Water Eng.)*
 - Sep 2007-Dec 2009
 - Chalmers University of Technology (Sweden)
 - A Sea Barrage in the Göta älv River, Possible or Impossible? (Link)
3. *B.Sc. in Civil Engineering (Structural Eng.)*
 - Sep 2002-Jun 2007
 - Islamic Azad University - Karaj Branch (Iran)

Professional Certificates:

1. *Integrated Water Resources Management*
 - University of Oulu, Finland (Aug 2013)
2. *Hydrological Model Calibration and Predictive Uncertainty Analysis*
 - University of Oulu, Finland (Aug 2012)
3. *Uncertainty in Environmental Modelling*
 - Uppsala University, Sweden (Jun 2012)
4. *River Basin Management and Climate Change in the Baltic Sea*
 - Hamburg University of Applied Sciences, Germany (Sep 2011)

	5. <i>Catchment Hydrology</i> - University of Aberdeen, UK (Aug 2011)
Specialization:	1. <i>Water Resources Engineering and Management</i> 2. <i>Climate Variability and Change</i> 3. <i>Environmental Engineering & Sustainability</i>
Current Academic Position:	1. <i>Associate Professor - Civil Engineering</i> - College of Engineering, Australian University, Kuwait 2. <i>Distinguished Research Professor (Junior Principal Investigator)</i> - Yellow River Research Institute, North China University of Water Resources and Electric Power, Zhengzhou, Henan, China 2. <i>Senior Research Fellow</i> - Water, Energy & Environmental Engineering Research Unit, Faculty of Technology, University of Oulu, Finland
Current Professional Positions:	1. <i>Principal Investigator of Scientific Research Projects</i> - "Digital Twins System for Sustainable Urban Flash Flood Management", North China University of Water Resources and Electric Power, China (Since Jul 2025) - "KReDiTS-1", Australian University, Kuwait (Since Sep 2024) - "SnowDrop", University of Oulu, Finland (Since Feb 2021) 2. <i>Editorial Services</i> - Associated Editor, <i>Frontiers in Water</i>, IF = 2.6 (Since Apr 2024) - Young Career Researcher Editorial Board Member, <i>Hydrology Research</i>, IF = 2.6 (Since Aug 2020) - International Editorial Board Member, <i>Journal of Geography and Environmental Hazards</i>, IF = NA (Since Jan 2024) - Topic Board Member, <i>International Journal of Environmental Research and Public Health</i>, IF = 4.614 (Since Jan 2018) - Guest Editor, Special Issue "Nature-based Solutions for Water Resilience under Climate Change", <i>Frontiers in Water</i>, IF = 2.6 (Since Oct 2024) - Guest Editor, Special Issue "Hydroclimate Extremes: Causes, Impacts, and Mitigation Plans", <i>Water</i>, IF = 3.0 (Since Mar 2024) - Guest Editor, Special Issue "River Flow in Cold Climate Environments", <i>Water</i>, IF = 3.0 (Since Sep 2020) - Guest Editor, Special Issue "Climate Impacts on Snowpack

	Dynamics”, <i>Frontiers in Earth Science</i>, IF = 2.0 (2021) 3. <i>Reviewer (for > 60 manuscripts from different journals)</i> - For Example: J Hydrol, Water Resource Res., Hydrol. Earth Syst. Sci., Hydrol. Processes J. Geophys. Res.: Atmos., Env. Res. Lett., Glob. Planet. Change, Hydrol Res, Climate Dynamics, Meteo. Atmos. Physics, Boreal Enviro. Res., Int. J. Climatol., Cold Reg. Sci. Tech., J Water and Clim Chang, Stoch. Env & Risk Assess., Frontiers in Earth Sci., Theo. App. Climatol., J Meteo. Research, Adv. in Meteo., Int. J. Geo-Info., etc. 4. <i>Professional Memberships</i> - International Association of Hydrological Sciences (IAHS) - American Society of Civil Engineers (ASCE) - American Geophysical Union (AGU) - European Geosciences Union (EGU) - Nordic Association for Hydrology (NHF) - American Meteorology Association (AMS)
Previous Administrative Position Held:	1. <i>European Cooperation in Science and Technology (e-COST)</i> - Finnish Representative in Management Committee of “Transport and Urban Development COST Action TU1405”, “European Network for Shallow Geothermal Energy Applications in Buildings and Infrastructures (GABI)” 2. <i>Intergovernmental Panel on Climate Change (IPCC)</i> - Chapter Scientist (Jan-Jun 2019) and Contributing Author (Feb 2019-Mar 2022), The Sixth Assessment Report (AR6), Working Group II (WGII), IPCC, “Climate Change 2022: Impacts, Adaptation and Vulnerability”, Chapter 4: Water. (Link) 3. <i>Project Leader & Manager</i> - Digital Twins System, Sustainable Urban Flash Flood Management in Zhengzhou (China) (Since Jul 2025) - Kuwait Resilient Digital Twins System Development for Sustainable Urban Flash Flood Management - Phase 1 (KReDiTS-1) (Since Sep 2024) - Snow Droughts: Climate Drivers, Hydrological Implications & Sustainability Risks (Feb 2021-May 2024) - Atmosphere-Climate-& Water-Related Extreme Interactions in Mainland Southeast Asia (2018-2020) - Hydroclimate Extremes in the Boreal Environment of Finland (2016-2017) - Effects of Land Use-Land Cover and Climate Changes on River

	Discharge in Northeast Iran (2015-2020) - Climate Change Impacts on Snowpack Water Resources in Finland (2014-2015) - Historical Agro-Climate Variability in Finland (2013-2014) 4. <i>Workshop & Seminar Organizer</i> - “Historical Variability and Trends in Precipitation Across the Lancang Mekong River Basin” (09.09.2025) - “The Future Appearance of Water Scarcity in the Arabian Peninsula” (05.05.2025) - “Water Security: A North Star to Global Sustainability” (28.11.2025) - “Snow droughts in Central Iran Using Remote Sensing” (12.2019) - “Data Revolution in Hydrology: The Pursuit of Predictive Modelling and data assimilation” (06.2019) - “Hydrology of GW-SW interactions: Impacts of Climate & Land Use Changes on Ecosystems” (05.2019) - “Effects of WeiMo on extreme precipitation in Spain” (12.2018) 5. <i>Hosting International Visitors</i> - Prof. Hamid Moradkhani, University of Alabama, US (Jun 2019) - Prof. Bjørn Kløve, University of Oulu, Finland (May 2019) - Dr. Shahrbanoo Monjazebe, Yazd University, Iran (Jun-Dec2019) - Dr. Laia Arbiol Roca, Uni. of Barcelona, Spain (Nov-Dec 2018) 6. <i>Ph.D. Defence Committee</i> - Laia Arbiol Roca, University of Barcelona, Spain (29.10.2021)
Previous Academic Positions Held:	1. <i>Assistant Professor, Australian University, Kuwait (Sep 2022-Aug 2025)</i> 2. <i>Senior Research Fellow, University of Oulu, Finland (Since Feb 2021)</i> 3. <i>Assistant Professor, Southern University of Science and Technology, China (Feb 2018-Jan 2021)</i> 4. <i>Post-Doctoral Research Fellow, University of Gothenburg, Sweden (Mar 2017-Jan 2018)</i> 5. <i>Research Associate, Portland State University, USA (Jan 2016-Feb 2017)</i> 6. <i>Research Assistant, University of Oulu, Finland (Jun 2010-Dec 2015)</i>
Fellowships And Honors:	1. <i>Best Presentation Awards</i> - The 13th International Conference on Water Resources and Arid Environments (ICWRAE 2019), 24-25 Oct, 2019, Istanbul, Turkey - The 28th Nordic Hydrological Conference 2014 (NHC2014), 11-13 Aug, 2014, Stockholm, Sweden 2. <i>Competitive Grant Awards</i>

	- Scientific Research (637,550 € = 229,950 KWD) - International Visits (30,600 € = 11,000 KWD) - Traveling (14,475 € = 5,200 KWD) - Publishing (3,650 € = 1,300 KWD)
Teaching Experience:	<i>1. Coordinator</i> - "Water/wastewater Environmental Design" (B.Sc. course, Since Fall 2022) - "Environmental Engineering" (B.Sc. course, Since Summer 2023) - "Statics" (B.Sc. course, Since Fall 2023) - "Traffic Engineering" (B.Sc. course, Summer 2024) - "Geotechnical Engineering" (B.Sc. course, Summer 2023) - "Basics of Geotechnical Engineering" (B.Sc. course, Since Fall 2022) - "Technology Project Planning" (B.Sc. course, Since Spring 2023) - "Technology Project Implementation" (B.Sc. course, Since Fall 2022) <i>2. Co-Instructor</i> - "Applications of Remote Sensing in Inland Waters" (M.Sc. short course, 10-13.04.2017) - "Cold Climate Engineering" (M.Sc. course, Spring 2016) - "Advanced Course in Hydrology" (M.Sc. course, Fall 2014) <i>3. Teacher Assistant</i> - "Research Methodology" (M.Sc. course, Spring 2017, 2015 & 2013) - "Statistical Methods in Hydrology" (M.Sc. course, Fall 2011) <i>4. Guest Lecturer</i> - "Northern Hydrology" (Ph.D. and M.Sc. short course, Dec 2015) - "Principles of Geographical Information System (GIS)" (B.Sc. course, Jun 2015) - "Water Resources Management" (M.Sc. course, Spring 2012)
Industrial And Technical Experience:	<i>1. Water Resources Engineer (Part-time Consultant) - RWCKR, Iran (1.2016 - 2.2017)</i>
Research Interest:	<i>1. Atmospheric Circulation-Climate Variability- and Water Cycle Nexus</i> <i>2. Hydrological Observation and Modelling</i> <i>3. Vulnerability and Risk Assessment of Hydro-Climate Extreme Events</i> <i>4. Water Security and Sustainable Development Goals</i> <i>5. Water Quality Monitoring, Modelling & Management</i> <i>6. Water Supply Infrastructures Design and Modelling</i> <i>7. Geospatial Big Data Analysis and Pattern Recognition</i> <i>8. Hydro-Climatological Remote Sensing and Data Assimilation</i>

Research Grants:	1. "Talented Young Scientists Program", China, 7-10.2025 (PI, 60,000 RMB = 2500 KWD) 2. "Digital Twins System for Sustainable Urban Flash Flood Management in Zhengzhou (China)", Henan Province Foreign Experts Projects, China, 8.2025-7.2028 (PI, 2,200,000 RMB = 95,000 KWD) 3. "A Holistic Framework for Academic Performance Monitoring and Advising Using Deep Learning, Kuwait Foundation for the Advancement of Sciences (KFAS) (Kuwait), 01.2025-12.2026 (Co-I, 4,050 KWD) 4. "Kuwait Resilient Digital Twins System Development for Sustainable Urban Flash Flood Management-Phase 1 (KReDiTS-1)", Kuwait Foundation for the Advancement of Sciences (KFAS) (Kuwait), 9.2024-8.2026 (PI, 9,700 KWD) 5. "Urban Flash Flood Risk Mapping in Kuwait", Australian University Kuwait (Kuwait), (PI, 900 KWD) 6. "Fenno-Scandinavian Snow Drought Projection: Climate Drivers, Hydrological Implications, and Ecological Sustainability Risks", Sakari Alhopuro Foundation (Finland), 6.2022-6.2024 (PI, 80,100 € = 29,000 KWD) 7. "Global Snow Drought Projections (SnowDroPs)", Arctic Interactions Program, Academy of Finland (Finland), 03-10.2021 (PI, 10,600 € = 3,800 KWD) 8. "Atmospheric Circulation- Climate Variability- and Extreme Weathers Interactions in Southeast Asia", Chinese Academy of Science (CAS) (China), 2018-2020 (PI, 115,000 € = 41,500 KWD) 9. "Hydroclimate Extremes in the Boreal Environment of Finland", Finnish Cultural Foundation & University of Oulu (Finland), 2016-2017 (PI, 58,000 € = 21,000 KWD) 10. "Effects of Land Use-Land Cover and Climate Change on the Hydrology of Gorganrood Watershed in Northeast Iran", Ferdowsi University of Mashhad (Iran), 2015-2020 (PI, 15,000 € = 5,500 KWD) 11. "Spatio-temporal Climate Variability and Snow Resource Changes in Finland", Finnish Cultural Foundation & University of Oulu Graduate School (UniOGS) (Finland), 2014-2015 (PI, 38,000 € = 13,750 KWD) 12. "Historical Agro-Climate Variability in Finland", Tekniikan Edistämmissäätiö and Tauno Tönningin Säätiö (Finland), 2013-2014 (PI, 9,000 € = 3,250 KWD)
Research and Publications including Journal and Books:	1. Summary 44 Peer-Reviewed Journal Papers (1st/corresponding author in 33) 2 Book Chapters (corresponding author in 1) 1 Technical Report and 2 Monographs 2. Achievement

Google Citation = 1460 and h-index = 21 (15 Sep 2025) (Link)

3. Peer-Reviewed Journal Papers (* 1st/corresponding author)

- **Irannezhad M***, Abdulghafour Z, AlQallaf R, Abdulreda F, Shamsah G, Alshammari H. **2024**. Variations and Trends in 115 Years of Graded Daily Precipitation Records at Three Hydrometeorological Stations in Finland. *Water* 16: 2684. <https://doi.org/10.3390/w16182684>
- **Irannezhad M***, Abdulghafour Z, Marttila H. **2024**. Annual and Seasonal Mean Daily Discharge in Natural and Regulated Rivers in Northern Finland: Variability, Trends, and Links to Climate Teleconnections. *Hydrology Research* 55 (10): 1001-1013. <https://doi.org/10.2166/nh.2024.041>
- **Irannezhad M***, Abdulghafour Z, Sadeqi A. **2024**. Climate Teleconnections Influencing Historical Variations, Trends, and Shifts in Snow Cover Days in Finland. *Earth Systems and Environment* 8, 1601-1613. <https://doi.org/10.1007/s41748-024-00466-1>
- Thiruchelva SR, Chandran S, **Irannezhad M**, Anandhi A, Kumar V, Surendran U, Dhanasekarapandian M. **2024**. Sustainable Precipitation Management in Madurai Town Planning Area (India). *Discover Sustainability* 5, 87. <https://doi.org/10.1007/s43621-024-00262-x>
- **Irannezhad M***, Sadeqi A, Liu J, Chen D. **2024**. Building on Iran's Gorgan Bay Restoration. *Science* 383 (6685), 837. DOI: 10.1126/science.adn9742
- Sadeqi A, **Irannezhad M***, Bahmani S, Azad Jelodarlou K, Varandili SA, Pham QB. **2023**. Long-term Variability and Trends in Snow Depth and Cover Days Throughout Iranian Mountain Ranges. *Water Resources Research* 60, e2023WR035411. <https://doi.org/10.1029/2023WR035411>
- **Irannezhad M**, Tahami MS, Ahmadi B, Liu J, Chen D. **2022**. Compound climate extreme events threaten migratory bird's conservation in western U.S. *Sustainable Horizons* 3, 100023. <https://doi.org/10.1016/j.horiz.2022.100023>
- **Irannezhad M***, Ronkanen A-K, Malekian A. Editorial: Climate Impacts on Snowpack Dynamics. *Frontiers in Earth Science*. DOI: 10.3389/feart.2022.970981
- Rajasirvaranjan T, Anandhi A, Pater NR, **Irannezhad M**, Srinivas CV, Veluswamy K, Surendran U, Raja p. **2022**. Integrated Use of Regional Weather Forecasting and Crop Modeling for Water Stress Assessment on Rice Yield. *Scientific Reports* 12, 16985. <https://doi.org/10.1038/s41598-022-19750-z>

- Lashkari L, **Irannezhad M***, Liu J, Schulthess U. **2022**. Cascading Soci-Environmental Sustainability Risks of Agricultural Export Miracle in Peru. *Environmental Sustainability* 5, 255-259. <https://doi.org/10.1007/s42398-022-00233-w>
- **Irannezhad M**, Ahmadian S, Sadeqi A, Mianei M, Ahmadi B, Marttila H. **2022**. Peak Spring Flood Discharge Magnitude and Timing in Natural Rivers in Northern Finland: Long-Term Variability, Trends, and Links to Climate Teleconnections. *Water* 14(8): 1312. DOI: 10.3390/w14081312
- **Irannezhad M**, Liu J. **2022**. Evaluation of Six Gauge-Based Gridded Climate Products for Analyzing Long-Term Historical Precipitation Patterns Across the Lancang-Mekong River Basin. *Geography and Sustainability* 3: 85-103. DOI: 10.1016/j.geosus.2022.03.002
- Ghasemifar E, **Irannezhad M**, Minaei F, Minaei M. **2022**. The Role of ENSO in Historical Atmospheric Water Vapor Variability during Cold Months over Iran. *Theoretical and Applied Climatology* 148: 795-817. DOI: 10.1007/s00704-022-03969-x
- **Irannezhad M**, Ahmadi B, Liu J, Chen D, Matthews JH. **2022**. Global Water Security: A North Star in the Dark Sky of Achieving the Sustainable Development Goals. *Sustainable Horizons* 1: 100005. DOI: 10.1016/j.horiz.2021.100005.
- **Irannezhad M**, Liu J, Chen D. **2021**. Extreme Precipitation Variability across the Lancang-Mekong River Basin during 1952-2015 in Relation to Teleconnections and Summer Monsoons. *International Journal of Climatology* 42(5): 2614-2638. DOI: 10.1002/joc.7370.
- Liu J, Chen D, Mao M, **Irannezhad M**, Pokhrel Y. **2021**. Past and Future Changes in Climate and Water Resources in the Lancang-Mekong River Basin: Current Understanding and Future Research Directions. *Engineering*. DOI: 10.1016/j.eng.2021.06.026.
- **Irannezhad M**, Liu J, Chen D. **2020**. Influential Climate Teleconnections for Spatio-temporal Precipitation Variability in the Lancang-Mekong River Basin from 1952 to 2015. *Journal of Geophysical Research: Atmospheres* 125(21): e2020JD033331. DOI: 10.1029/2020JD033331.
- Lashkari A, **Irannezhad M***, Zare H, Labzovskii L. **2020**. Assessing Long-term Spatio-temporal Variability in Humidity and Drought in Iran using Padj Drought Index (PDI). *Journal of Arid Environment* 185: 104336. DOI: 10.1016/j.jaridenv.2020.104336.

- **Irannezhad M**, Liu J, Ahmadi B, Chen D. **2020**. The Dangers of Arctic Zombie Wildfires. *Science* 369(6508): 1171. DOI: 10.1126/science.abe1739.
- Lashkari A, **Irannezhad M***. **2020**. A Multicriteria Decision Analysis of Wheat Production Sustainability in the Semi-Arid Environment of Mashhad, Northeastern Iran. *International Journal of Sustainable Agricultural Research* 8(1): 1-16. DOI: 10.18488/journal.70.2021.81.1.16.
- **Irannezhad M***. **2020**. Effects of Temperature Variability and Warming on the Timing of Snowmelt Events in Southern Finland during the Past 100 Years. *Region-Water Conservancy*. DOI: 10.32629/RWC.V3I1.134.
- Huang Y, Tian Z, Ke Q, Liu j, **Irannezhad M**, Fan D, Hou M, Sun L. **2019**. Nature-Based Solutions for Urban Pluvial Flood Risk Management: A Review. *Wiley Interdisciplinary Reviews: Water* 7(3): e1421. DOI:10.1002/wat2.1421.
- **Irannezhad M***, Moradkhani H, Kløve B. **2018**. Spatio-temporal Variability and Trends in Extreme Temperature Events in Finland over the Recent Decades: Influence of Atmospheric Circulation Patterns. *Advances in Meteorology*: 7169840. DOI: 10.1155/2018/7169840.
- **Irannezhad M**, Minaei M, Ahmadian S, Chen D. **2018**. Impacts of Changes in Land Cover-Land Use and Climate on Floods in Gorganrood Watershed (Northeastern Iran) in Recent Decades. *Geografiska Annaler: Series A, Physical Geography* 100(4): 340-350. DOI: 10.1080/04353676.2018.1515578.
- Rasmus S, Kivinen S, **Irannezhad M**. **2018**. Basal ice formation in snow cover in Northern Finland between 1948 and 2016. *Environmental Research Letters* 13: 114009. DOI: 10.1088/1748-9326/aae541.
- Pedretti D, **Irannezhad M**. **2018**. Non-stationary peaks-over-threshold analysis of extreme precipitation events in Finland, 1961-2017. *International Journal of Climatology* 39(2): 1128-1143. DOI: 10.1002/joc.5867.
- Kiani S, **Irannezhad M***, Ronkanen A-K, Moradkhani H, Kløve B. **2018**. Analysis of Recent Climatic Warming Effects on Oulu-Hailuoto Baltic Sea Ice Road. *Cold Region Science and Technology* (151): 1-8. DOI: 10.1016/j.coldregions.2018.02.010.
- **Irannezhad M***, Ronkanen A-K, Kiani S, Chen D, Kløve B. **2017**. Long-term Variability and Trends in Annual Snowfall/Total Precipitation Ratio in Finland and the Role of Atmospheric Circulation Patterns. *Cold Regions Science and Technology* 143: 23-31. DOI: 10.1016/j.coldregions.2017.08.008.
- **Irannezhad M***, Chen D, Kløve B, Moradkhani H. **2017**. Analysing the Variability and Trends of Precipitation Extremes

in Finland and Their Connection to Atmospheric Circulation Patterns. *International Journal of Climatology* 37(S1): 10563-1066. DOI: 10.1002/joc.5059.

- **Irannezhad M***, Ahmadi B, Kløve B, Moradkhani H. **2017**. Atmospheric Circulation Patterns Explaining Climatological Drought Dynamics in the Boreal Environment of Finland, 1962-2011. *International Journal of Climatology* 37(S1): 801-817. DOI: 10.1002/joc.5039.
- Minaei M, **Irannezhad M**. **2016**. Spatio-temporal Trend Analysis of Precipitation, Temperature and River Discharge in the Northeast of Iran in Recent Decades. *Theoretical and Applied Climatology* 131(1-2): 167-179. DOI: 10.1007/s00704-016-1963-y.
- **Irannezhad M***, Chen D, Kløve B. **2016**. The Role of Atmospheric Circulation Patterns in Agroclimate Variability in Finland, 1961-2011. *Geografiska Annaler, Series A: Physical Geography* 98(4): 287-301. DOI:10.1111/geoa.12137.
- Menberu M, Tahvanainen T, Marttila H, **Irannezhad M**, Ronkanen A-K, Penttinen J, Kløve B. **2016**. Water-Table Dependent Hydrological Changes Following Peatland Forestry Drainage and Restoration: Analysis of Restoration Success. *Water Resources Research* 52(5): 3742-3760. DOI: 10.1002/2015WR018578.
- **Irannezhad M***, Marttila H, Chen D, Kløve B. **2016**. Century-Long Variability and Trends in Daily Precipitation Characteristics at Three Finnish Stations. *Advances in Climate Change Research* 7: 54-69. DOI: 10.1016/j.accre.2016.04.004.
- **Irannezhad M***, Ronkanen A-K, Kløve B. **2016**. Wintertime Climate Factors Controlling Snow Resource Decline in Finland. *International Journal of Climatology* 36:110-131. DOI: 10.1002/joc.4332.
- Marttila H, **Irannezhad M**, Saukkoriipi J, Kløve B. **2015**. Atmospheric Circulation Patterns Influencing Variations in Organic Carbon Fluxes in the River Oulujoki, Finland. *Water and Environment Journal* 29(4): 474-481. DOI: 10.1111/wej.12136.
- **Irannezhad M***, Ronkanen A-K, Kløve B. **2015**. Effects of Climate Variability and Change on Snowpack Hydrological Processes in Finland. *Cold Regions Science and Technology* 118: 14-29. DOI: 10.1016/j.coldregions.2015.06.009.
- **Irannezhad M***, Kløve B. **2015**. Do Atmospheric Teleconnection Patterns Explain Variations and Trends in Thermal Growing Season Parameters in Finland? *International Journal of Climatology* 35:4619-4630. DOI: 10.1002/joc.4311.

- **Irannezhad M***, Torabi Haghighi A, Chen D, Kløve B. **2015**. Variability in Dryness and Wetness in Central Finland and the Role of Teleconnection Patterns. *Theoretical and Applied Climatology* 122(3-4): 471-486. DOI: 10.1007/s00704-014-1305-x.
- **Irannezhad M***, Chen D, Kløve B. **2015**. Interannual Variations and Trends in Surface Air Temperature in Finland in Relation to Atmospheric Circulation Patterns, 1961-2011. *International Journal of Climatology* 35: 3078-3092. DOI: 10.1002/joc.4193.
- **Irannezhad M***, Marttila H, Kløve B. **2014**. Long-term Variations and Trends in Precipitation in Finland. *International Journal of Climatology* 34: 3139-3153. DOI: 10.1002/joc.3902.
- **Irannezhad M***, Hassani Nezhad Gashti E, Moback U, Kløve B. **2014**. Flood Control Structures in the River Göta älv to Protect Gothenburg City (Sweden) during the 21st Century – Preliminary Evaluation. *International Journal of Civil, Architectural, Structural and Construction Engineering* 8(12): 1184-1189. DOI: 10.5281/zenodo.1097293.
- **Irannezhad M***, Hassani Nezhad Gashti E, Mohammadighavam S, Zarrini M, Kløve B. **2014**. Interannual Variations in Snowfall and Continuous Snow Cover Duration in Pelso, Central Finland, Linked to Teleconnection Patterns, 1944-2010. *International Journal of Environmental, Ecological, Geological and Mining Engineering* 8(12): 730-735. DOI: 10.5281/zenodo.1097295.
- Hassani Nezhad Gashti E, Zarrini M, **Irannezhad M**, R. Langroudi J. **2014**. Evaluation of Traditional Methods in Construction and Their Effects on Reinforced-concrete Buildings Behavior. *International Journal of Civil, Architectural, Structural and Construction Engineering* 8(12): 1196-1202. DOI: 10.5281/zenodo.1097289.

4. Book Chapters

- **Contributing Author**
Intergovernmental Panel on Climate Change (IPCC), Sixth Assessment Report (AR6), Working Group II (WG2), Climate Change 2021: Impacts, Adaptation and Vulnerability. Chapter 4: Water
- **Leading Author**
Irannezhad M, Ahmadi B, Marttila H. **2022**. Chapter 12: Impacts of Climate Extremes over Arctic and Antarctic. In Ongoma V, Tabari H (Eds.): Climate Impacts on Extreme Weather: Current to Future Changes on a Local to Global Scale. *Elsevier*. DOI: 10.1016/b978-0-323-88456-3.00004-6

	<i>5. Technical Report</i> - Ronkanen A-K, Irannezhad M, Menberu M, Marttila H, Penttinen J, Kløve B. 2015. Effect of restoration and drainage on peatland hydrology A study of data before and after restoration at 46 sites in Finland. 15.03.2015. (Link) <i>6. Monographs</i> M. Irannezhad*. 2015. Spatio-temporal Climate Variability and Snow Resources Changes in Finland. Ph.D. Thesis, University of Oulu, Finland. M. Irannezhad*. 2010. A Sea Barrage in the Göta River – Possible or Impossible? M.Sc. Thesis, Chalmers University of Technology, Sweden.
Paper Presentations at Professional Conferences:	<i>1. Summary</i> 26 Podium & 13 Poster Presentations in International Conferences <i>2. Keynote Speaker</i> Irannezhad M, Historical Variability and Trends Across the Lancang Mekong River Basin. Talented Young Scientists Program, North China University of Water Resources and Electric Power, China, 9 Sep 2025 Irannezhad M, Remote Sensing of Arctic Zombie Wildfires. 5th FUM-GIS Day 2020, Ferdowsi University of Mashhad, Iran, 17 Dec 2020 Irannezhad M, Liu J, Chen D. Atmospheric Circulation Patterns Influencing Climatological Drought Variability over The Lancang-Mekong River Basin. 2nd Expert Meeting on Climate and Water Resources in Mainland Southeast Asia, Southern University of Science and Technology, Shenzhen, China, 5-7 Sep 2019 Irannezhad M, Moback U, Bergdahl L. Hydrological Feasibility of Flood Barriers to Protect the Gothenburg (Sweden) during the 21st Century - An Initial Assessment. NORDIC WATER 2014, The Nordic Hydrology Model - Linking science and practice, XXVIII Nordic Hydrological Conference, Stockholm, Sweden, 11-13 August, 2014 <i>3. Selected *Podium & #Poster Presentations</i> - Abdulghafour Z, Irannezhad M*. Future Water Scarcity Appearance in the Arabian Peninsula. International Conference on Water and Food Security in the Face of Climate Change: Challenges and Opportunities (WFFC 2025), Doha, Qatar, 4-7 Feb, 2025

	• Irannezhad M*, Abdulghafour Z. Climate Teleconnections Influencing Desertification in the Lancang-Mekong River Basin. The 10th International Conference on Water Resources and Environment (WRE 2024), Hong Kong, 15-18 Nov, 2024 • Irannezhad M*, Abdulghafour Z. Historical Variability and Trends in Aridity Index in the Lancang-Mekong River Basin: The Role of Climate Teleconnections. The 3rd International Conference on Hydrology and Water Management (CHWM 2024), Xiamen, China, 19-21 April, 2024 • Irannezhad M*, Abdulghafour Z. Meteorological (SPI) versus Climatological (SPEI) Droughts in the Lancang-Mekong River Basin: Past and Future. The 3rd International Conference on Hydrology and Water Management (CHWM 2024), Xiamen, China, 19-21 April, 2024 • Irannezhad M*, Abdulghafour Z, Minaei M. Atmospheric Circulation Patterns Controlling Wetness and Dryness Across Lake Urmia Basin in Iran: Historical Drought Dynamics. The 16th International Conference on Climate Change: Impacts & Responses, Pau, France, 25-26 April, 2024 • Irannezhad M*, Abdulghafour Z. Terrestrial Water Storage in the Arabian Peninsula: Mid and Late Future Changes. The 4th World Conference on Climate Change and Global Warming, Madrid, Spain, 26-28 April, 2024 • Irannezhad M*, Ahmadian S, Minaei M. Appropriate Distribution for Standardized Precipitation Index (SPI) in Arid and Semi-Arid Environments. XIII. International Conference on Water Resources and Arid Environments (ICWRAE 2019), Istanbul, Turkey, 24-25 Oct 2019 • Irannezhad M*, Ahmadi B, Moradkhani H, Kløve B. The Role of Atmospheric Circulation Patterns in Climatological Drought Dynamics in Finland during 1962-2011. AGU FALL MEETING 2016, San Francisco, USA, 12-16 December, 2016. • Irannezhad M*, Kløve B. National Scale Assessment of Growing Season Climate in Finland in Relation to Atmospheric Circulation Patterns, 1961-2011. 20th Northern Research Basins Symposium and Workshop, Kuusamo, Finland, 16-22 August, 2015 • Irannezhad M[#], Ahmadian S, Chen D, Kløve B. Analysis of Variability of Trends in Graded Daily Precipitation in Finland, 1908-2008. EGU2018, Vienna, Austria, 8-13 April, 2018
College Service including committee Membership:	NA
National Service:	NA
College Committees:	1. Chair of Validation and Modification Committee, in College of Engineering, Australian University-Kuwait

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2. *Chair of Research and Faculty Development Committee, in College of Engineering, Australian University-Kuwait*
 3. *Member of Curriculum Committee, in College of Engineering, Australian University-Kuwait*
 4. *Member of Project-Based Learning (PBL) Committee in College of Engineering, Australian University-Kuwait*
 5. *Member of Departmental Disciplinary Committee, in College of Engineering, Australian University-Kuwait*
 6. *Member of Labs and Development Committee, in College of Engineering, Australian University-Kuwait*
 7. *Member of Academic Promotion and Appointment Committee, in College of Engineering, Australian University-Kuwait*
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