



Hosted by
Spain Water
and IWHR, China

39th IAHR WORLD CONGRESS GRANADA, SPAIN 2022

From Snow to Sea

19-24 June 2022



PROGRAM OVERVIEW



Organized by:



International Association
for Hydro-Environment
Engineering and Research

Hosted by
Spain Water and IWHR, China



UNIVERSIDAD
DE GRANADA



SPAIN WATER



GOBIERNO
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VICEPRESIDENCIA
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MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA
Y EL RETO DEMOCRÁTICO

CEDEX
CENTRO DE ESTUDIOS
Y EXPERIMENTACIÓN
DE OBRAS PÚBLICAS

Dirección General del Agua
Dirección General de Sostenibilidad de la Costa y el Mar

Congress Secretariat:



Organized by:



SPAIN WATER



Dirección General del Agua
Dirección General de Sostenibilidad de la Costa y el Mar

Supported by:



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Consejería de Agricultura, Ganadería,
Pesca y Desarrollo Sostenible

PRESIDENT'S WELCOME



Prof. Joseph Hun-wei Lee
IAHR President

On behalf of the International Association for Hydro-environment Engineering and Research (IAHR) I am delighted to invite you to participate in the 39th IAHR World Congress to be held in Granada, Spain, from June 19th to 24th, 2022. For more than seventy-five years, the biennial IAHR World Congresses have brought together leading experts to help address the world's pressing water environment engineering challenges. The event has traditionally provided researchers and decision makers the opportunity to share recent advances and experiences, identify emerging technology trends and engage in lively debates that have positively impacted our world.

Following the last IAHR Congress held in 2019 in Panama City, Panama under the theme "Water – Connecting the World", the main theme of the 39th IAHR World Congress will be "From Snow to Sea" focusing attention on the importance of considering the integral water cycle to address present and future challenges.

Since its creation in 1935, IAHR is known as a leading international organisation of engineers and professionals in fields related to the water environment. IAHR stimulates and promotes research and its application – by sharing new research paradigms and networks, setting industry standards, informing best water management practices, and nurturing young professionals. Through its powerful knowledge products and networks, IAHR makes important contributions to sustainable development in many ways.

At the upcoming Congress IAHR will unleash its new Strategic Plan and present exciting knowledge platforms and prominent speakers on global water environment issues including climate-induced changes to water resources, adaptive management, artificial intelligence (AI) and smart water management, Eco hydraulics, and policy forums. I therefore welcome you to join us and share with us your work. I look forward to welcoming you to Granada in June 2022!



Prince Sultan Bin Abdulaziz International Prize for Water

Recognizing Innovation



Prince Sultan Bin Abdulaziz
International Prize for Water

Recognizing Innovation

Winners for the 10th Award (2022)



Creativity Prize

1) The team led by Thalappil Pradeep (Indian Institute of Technology, Madras, India) for the creation and successful deployment of environmentally friendly "water positive" nanoscale materials for the affordable, sustainable and rapid removal of arsenic from drinking water. Team members include Avula Anil Kumar, Chennai Sudhakar, Sritama Mukherjee, Anshup, and Mohan Udhaya Sankar.



Dr. Thalappil Pradeep



Dr. Dionysios D. Dionysiou

2) The team led by Dionysios D. Dionysiou (University of Cincinnati, USA)

for the development of innovative advanced oxidation technologies and nanotechnologies for environmental applications, particularly in the removal and monitoring of emerging contaminants. Team members include Wael H.M. Abdelraheem, Abdulaziz Al-Anazi, Jiong Gao, Ying Huang, and Vasileia Vogiazzi.



Surface Water Prize

Dennis D. Baldocchi (University of California Berkeley, USA) for the development and implementation of effective models to understand, evaluate and predict evapotranspiration and water-use efficiency in various environments under climate change conditions.



Dr. Dennis D. Baldocchi



Groundwater Prize

Linda M. Abriola (Brown University, USA) for pioneering research on toxic Dense Non-Aqueous Phase Liquids (DNAPLs) in groundwater, ranging from the simulation of their fate to effective methods for cleaning contaminated sites.



Dr. Linda M. Abriola



Alternative Water Resources Prize

The team of Menachem Elimelech (Yale University, USA) and Chinedum Osuji (University of Pennsylvania, USA) for wide-ranging advances in nanostructured materials for next-generation water purification, focusing on implementation issues like manufacturing, sustainability, self-assembly, and bioinspired.



Dr. Menachem Elimelech



Dr. Chinedum Osuji



Water Management and Protection Prize

The team led by Matthew McCabe (KAUST, Thuwal, Saudi Arabia) for employing CubeSat constellations in the sustainable management and security of linked water-food systems, along with estimates of agricultural water use at unprecedented spatial and temporal resolutions and with global coverage. Team members include Bruno Aragon (KAUST) and Rasmus Houborg (Planet Labs, USA).



Dr. Matthew McCabe

Invitation for Nominations

11th Award (2024)

**Nominations open
online until
31 December 2023**

www.psipw.org

e-mail: info@psipw.org

Sunday 19 June

Andalucía III	Andalucía II	Andalucía I	Seminario 8	Seminario 1+2
Numerical methods for particle-laden flows (Master Class) 11:00-13:00	Numerical modelling of flood hazard (with the software Iber) 09:00-13:30	Mathematical modelling in the integrated water cycle. From modelling to decision-making 09:00-13:30		Climate change risks and adaptation in coastal areas 09:00-13:30
The Korteweg-de Vries equation and the Dynamics of undular bores (Master Class) 13:00-15:00	Global Water Security Meeting 14:00-15:00		Hydraulic Structures Meeting 14:00-15:00	
		Transient Flows Meeting 15:00-16:30	Water Resources Management Meeting TC 15:00-16:30	Fluid Mechanics Meeting 15:30-17:00
Education and Professional Development Meeting 17:30-18:30		Flood Risk Management Meeting 17:00-18:00		

 Special Sessions

 Side Events

 High-Level Panels

 Regular Sessions

 Young Professionals

 Pre-congress Workshops & Master Classes

 IAHR Meetings

Monday 20 June

	Manuel de Falla	Andalucía III	Andalucía II	Seminario 3+4+5	Andalucía I	Seminario 8	Seminario 1+2	Seminario 6	Seminario 7	Press Room
08:30 - 10:00	Exhibition & Fair opens, Registration								Asia Pacific Division Meeting 09:00-10:00	
10:00 - 11:30	Official Opening Ceremony & Awards								Fluvial Hydraulics Meeting 11:00-12:00	
11:30 - 12:00	Break Presentation of Hydrolink Special Issue on Global Water Security IAHR STAND									
12:00 - 13:30	Keynote Speakers									
13:30 - 15:00	Lunch		How to write a good paper 14:00-15:00	Lunch						
15:00 - 16:30	Capacity building for a water secure world	Green infrastructure and sustainable urban drainage systems	Theme 1: Human-water relationships	Theme 2: Snow, river and sediment management	Theme 3: Environmental hydraulics and urban water cycle	Theme 4: Hydraulic structures	Theme 6: Computational and experimental methods	Theme 8: Extreme events: from droughts to floods	Africa Division Meeting 15:30-16:30	Publications Committee Meeting 15:00-16:00
16:30 - 17:00	Break									
17:00 - 18:30	From white river to green river: Field investigations and analyses Modelling of vegetation growth and vegetation- geomorphology interaction	Reviews of the IAHR Green Paper "Towards practical flood risk assessment for development projects"	Innovation in safety, operation and maintenance of the dams and large hydraulic infrastructures of the Andalusian Government	Theme 1: Human-water relationships	Theme 2: Snow, river and sediment management	Theme 3: Environmental hydraulics and urban water cycle	Theme 5: Water resources management, valuing and resilience	Theme 6: Computational and experimental methods	Theme 6: Computational and experimental methods	Latin American Division Meeting + RIBAGUA Editorial Board Meeting
After 18:30	President's Welcome Reception							JFK Award Jury Meeting 18:30- 19:30		

Special
Sessions

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Tuesday 21 June

	Manuel de Falla	Andalucía III	Andalucía II	Seminario 3+4+5	Andalucía I	Seminario 8	Seminario 1+2	Seminario 6	Seminario 7	Press Room	IAHR Room
08:30-10:00	Advanced computational simulations in hydraulics for practitioners (GISE)	Theme 1: Human-water relationships	Theme 3: Environmental hydraulics and urban water cycle	Theme 4: Hydraulic structures	Theme 5: Water resources management, valuing and resilience	Theme 6: Computational and experimental methods	Theme 7: Coasts, estuaries, shelves and seas	Theme 8: Extreme events: from droughts to floods		Europe Division Meeting	
10:00-11:30	From Snow to Sea								JHR Editorial Board Meeting 10:30-11:30		
11:30-12:00	Break										
12:00-13:30	River engineering and sediment management. Case study: Fluvial dynamics in the final stretch of the Ebro. The incidence of the reservoirs		Theme 2: Snow, river and sediment management	Theme 3: Environmental hydraulics and urban water cycle	Theme 4: Hydraulic structures	Theme 5: Water resources management, valuing and resilience	Theme 6: Computational and experimental methods	Theme 6: Computational and experimental methods	Theme 8: Extreme events: from droughts to floods	Ecohydraulics Meeting TC 12:00-13:30	Sustainable Development Goals Working Group 12:00-13:00
13:30-15:00	Lunch		Meet an advanced-career peer 14:00-15:00			Lunch			Experimental Methods and Instrumentation Meeting 14:00-15:00	JoE Editorial Board Meeting 13:30-14:30	
15:00-16:30	Reservoir sedimentation in semi-arid and arid environments. A comparative analysis from vulnerability of climate change in sensitive environments	Theme 2: Snow, river and sediment management	Theme 3: Environmental hydraulics and urban water cycle	Theme 4: Hydraulic structures	Theme 5: Water resources management, valuing and resilience	Theme 6: Computational and experimental methods	Theme 6: Computational and experimental methods	Theme 8: Extreme events: from droughts to floods	Institutes Meeting	Climate Change Adaptation Meeting	
16:30-17:00	Break Presentation of the book: Hydraulics of levee overtopping IAHR STAND										
17:00-18:30	Environmental hydraulics related to aquaculture	Ecohydrology and Hydroengineering – a synergy for adaptation of river catchment to climate change and sustainable future	Theme 3: Environmental hydraulics and urban water cycle	Theme 4: Hydraulic structures	Theme 5: Water resources management, valuing and resilience	Theme 6: Computational and experimental methods	Theme 8: Extreme events: from droughts to floods	Kennedy Student Paper Competition Session	Theme 2: Snow, river and sediment management		
18:30-19:15	YPN Assembly incl. YP Challenge										
After 19:00	YPN Night 19:00-22:00										



Special Sessions



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Pre-congress Workshops & Master Classes



IAHR Meetings



Wednesday 22 June

	Manuel de Falla	Andalucía III	Andalucía II	Seminario 3+4+5	Andalucía I	Seminario 8	Seminario 1+2	Seminario 6	Seminario 7
08:30 - 10:00	Modern laboratory and field measurement for Industry in environmental hydraulics (GISE)	Theme 2: Snow, river and sediment management	Theme 3: Environmental hydraulics and urban water cycle	Theme 4: Hydraulic structures	Theme 5: Water resources management, valuing and resilience	Theme 6: Computational and experimental methods	Theme 7: Coasts, estuaries, shelves and seas	Theme 8: Extreme events: from droughts to floods	Coastal climate change impact due to variation of river's solid flow
10:00 - 11:30	Water Governance							JFK Award Jury Meeting	
11:30 - 12:00	Break Water Monograph Series Launch event IAHR STAND								
12:00 - 13:30	The shallow water model intercomparison session: Benchmarking overland flow simulations	From white river to green river: Field investigations and analyses Monitoring, field analysis, and lab experiments	Digitalization of the Water Cycle	Theme 2: Snow, river and sediment management	Theme 3: Environmental hydraulics and urban water cycle	Theme 6: Computational and experimental methods	Theme 7: Coasts, estuaries, shelves and seas	Theme 8: Extreme events: from droughts to floods	JRBM Editorial Board Meeting 12:00-13:00
13:30 - 15:00	Technical Visits								
15:00 - 16:30									
16:30 - 17:00									
17:00 - 18:30									

Special Sessions

Side Events

High-Level Panels

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Young Professionals

Pre-congress Workshops & Master Classes

IAHR Meetings

Thursday 23 June

	Manuel de Falla	Andalucía III	Andalucía II	Seminario 3+4+5	Andalucía I	Seminario 8	Seminario 1+2	Seminario 6	Seminario 7	Press Room	IAHR Room
08:30 - 10:00	Industrial projects in hydraulics and hydro-environmental engineering (GISE)	Theme 2: Snow, river and sediment management	Theme 3: Environmental hydraulics and urban water cycle	Theme 4: Hydraulic structures	Theme 6: Computational and experimental methods	Theme 6: Computational and experimental methods	Theme 7: Coasts, estuaries, shelves and seas	Theme 8: Extreme events: from droughts to floods	Hydrolink Editorial Board Meeting 09:00-10:00		
10:00 - 11:30	Artificial Intelligence										
11:30 - 12:00	Break Presentation of Water Monograph: Contribution to the Theory of undular bores. Blitz Chess Competition IAHR STAND										
12:00 - 13:30	Water and diversity: Hydraulic and environmental research for future	Theme 2: Snow, river and sediment management	Theme 3: Environmental hydraulics and urban water cycle	Theme 4: Hydraulic structures	Theme 5: Water resources management, valuing and resilience	Theme 6: Computational and experimental methods	Theme 6: Computational and experimental methods	Theme 7: Coasts, estuaries, shelves and seas	Theme 8: Extreme events: from droughts to floods	Coastal and Maritime Hydraulics Meeting	JAWER Editorial Board Meeting 12:00-13:00
13:30 - 15:00	Lunch		Meet an advanced-career peer 14:00-15:00						Hydroinformatics Meeting 14:00-15:00	Lunch	
15:00 - 16:30	Ecohydraulics 2021: Novel methods to investigate flow-biota interactions numerically, in the lab and in the field	Theme 2: Snow, river and sediment management	Theme 3: Environmental hydraulics and urban water cycle	Theme 4: Hydraulic structures	Theme 5: Water resources management, valuing and resilience	Theme 6: Computational and experimental methods	Theme 6: Computational and experimental methods	Theme 7: Coasts, estuaries, shelves and seas	Theme 8: Extreme events: from droughts to floods		Journals Editors Meeting 15:00-16:00
16:30 - 17:00	Break Presentation of the book: Climate Change-Sensitive Water Resources Management IAHR STAND										
17:00 - 18:30	General Members Assembly Ippen Lecture: Hydraulic structures engineering and research: why and where to?										
After 18:30	Social Event										

 Special Sessions

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Friday 24 June

	Manuel de Falla	Andalucía III	Andalucía II	Seminario 3+4+5	Andalucía I	Seminario 8	Seminario 1+2	Seminario 6	Seminario 7
08:30 - 10:00	Integrating ecohydraulics and ecohydrology in environmental flow assessments	Theme 2: Snow, river and sediment management	Theme 3: Environmental hydraulics and urban water cycle	Theme 4: Hydraulic structures	Theme 5: Water resources management, valuing and resilience	Theme 6: Computational and experimental methods	Theme 6: Computational and experimental methods	Theme 7: Coasts, estuaries, shelves and seas	Theme 8: Extreme events: from droughts to floods
10:00 - 11:30	Nature-based Solutions and Ecohydraulics								
11:30 - 12:00	Break								
12:00 - 13:30	Implementing Nature-based Solutions – bringing science to practice	Theme 2: Snow, river and sediment management	Theme 4: Hydraulic structures	Theme 5: Water resources management, valuing and resilience	Theme 6: Computational and experimental methods	Theme 6: Computational and experimental methods	Theme 7: Coasts, estuaries, shelves and seas	Theme 8: Extreme events: from droughts to floods	Theme 8: Extreme events: from droughts to floods
13:30 - 15:00	Lunch		Meet an advanced professional from industry 14:00-15:00	Lunch					
15:00 - 16:30	Towards implementation of Nature-based Solutions (Workshop)		Theme 2: Snow, river and sediment management	Theme 3: Environmental hydraulics and urban water cycle	Theme 5: Water resources management, valuing and resilience	Theme 6: Computational and experimental methods	Theme 6: Computational and experimental methods	Theme 8: Extreme events: from droughts to floods	Theme 8: Extreme events: from droughts to floods
16:30 - 17:00	Break								
17:00 - 18:30	Closing Ceremony								

Special Sessions

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Regular Sessions

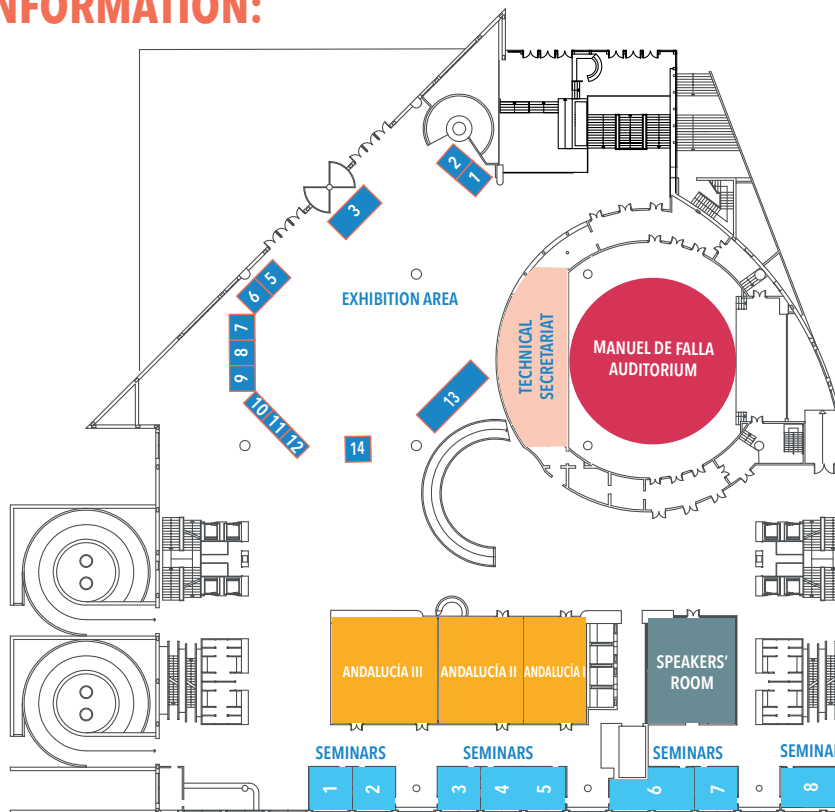
Young Professionals

Pre-congress Workshops & Master Classes

IAHR Meetings

GENERAL INFORMATION:

VENUE FLOOR 1



Thursday 23 June (11:30 – 12:00)

Presentation of the IAHR Water Monograph
Contribution to the Theory of Undular Bores.
Blitz Chess Competition.

Come to the IAHR stand and find out the first
IAHR Open Access publication ***Contribution
to the Theory of Undular Bores. A journey
around the Korteweg-de Vries equation*** by
Damien Violeau, at the same time you can
participate in a blitz chess competition.

Enroll in the game and win a prize!

- 1 K WATER
- 2 Young Professionals Corner
- 3 AGBAR (EMASAGRA - AQUATEC- HIDRALIA)
- 5 EDF
- 6 DHI
- 7 IHE DELF
- 8 VTI
- 9 SANDO
- 10 ILURCO
- 11 IWHR
- 12 UBERTONE
- 13 IAHR
- 14 Granada Tourist Office

FLOOR 2: POSTER AREA

TIMETABLE

	REGISTRATION AREA & TECHNICAL SECRETARIAT	EXHIBITION & POSTER AREA	SPEAKER'S ROOM
19 June	08:30 – 18:30	-	08:30 – 18:30
20 June	08:30 – 18:30	08:30 – 18:30	08:30 – 18:30
21 June	08:30 – 18:30	08:30 – 18:30	08:30 – 18:30
22 June	08:30 – 13:30	08:30 – 13:30	08:30 – 13:30
23 June	08:30 – 18:30	08:30 – 17:00	08:30 – 18:30
24 June	08:30 – 18:30	08:30 – 17:00	08:30 – 17:00

WIFI CONNECTION

WIFI NETWORK: **IAHR**

PASSWORD: **IAHR2022**

ATTENDANCE CERTIFICATES & PROCEEDINGS

The attendance certificate and the online proceedings will be sent by email once the congress finishes.

SOCIAL EVENTS

President's Welcome Reception

Date: **20 June 2022**

Time: **19:00**

Place: **Congress Venue**

YPN Night

Date: **21 June 2022**

Time: **19:15**

Meeting point: **Congress Venue's Main entrance**

Social Event "Cocktail Gala"

Date: **23 June 2022**

Time: **20:00**

Place: **Parque de las Ciencias**

Av. de la Ciencia, s/n, 18006 Granada

IAHR 2022 CONGRESS APP

Scan the QR, download the **39th IAHR World Congress 2022 APP** and do not miss anything about the congress



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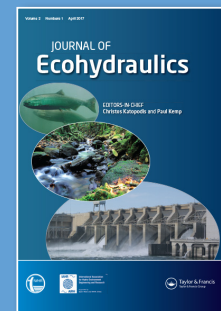
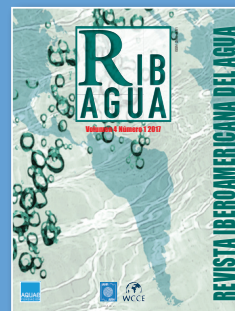
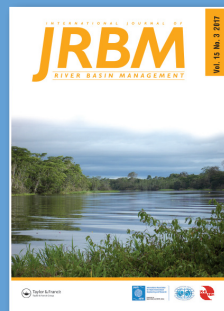
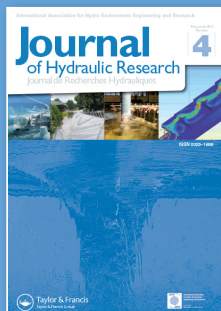
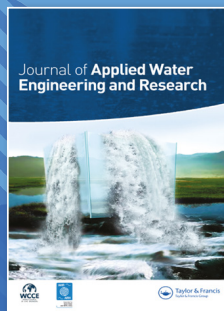


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40TH IAHR WORLD CONGRESS VIENNA–AUSTRIA



21–25 AUGUST 2023

**RIVERS – CONNECTING
MOUNTAINS AND COASTS**

**SAVE
THE DATE!**



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Consejería de Agricultura, Ganadería,
Pesca y Desarrollo Sostenible