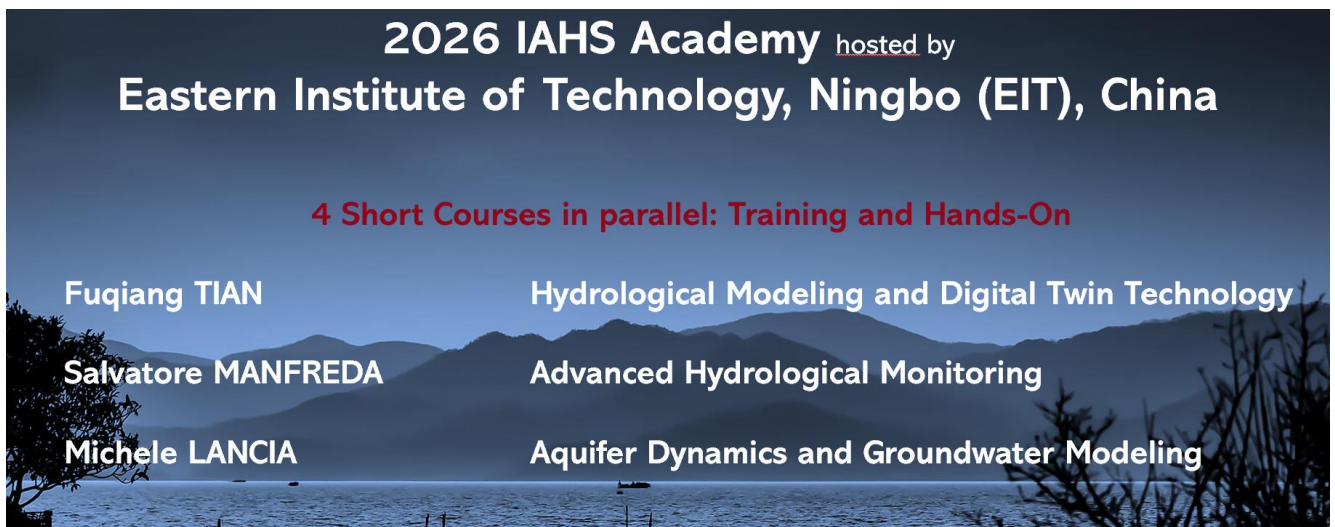


**IAHS Academy 12-18 January 2026 in Ningbo, China**  
<https://iahs.info/Initiatives/iahs-academy/iahs-academy-2026/>



**2026 IAHS Academy** hosted by  
**Eastern Institute of Technology, Ningbo (EIT), China**

**4 Short Courses in parallel: Training and Hands-On**

Fuqiang TIAN	Hydrological Modeling and Digital Twin Technology
Salvatore MANFREDA	Advanced Hydrological Monitoring
Michele LANCIA	Aquifer Dynamics and Groundwater Modeling

### IAHS Academy – January 12-18, 2025 - Ningbo, China

The International Association of Hydrological Sciences (IAHS) is proud to announce the organization of the first edition of the IAHS Academy, the newly established advanced training and educational programs to advance and promote hydrological sciences globally.

#### Dates and venue

The date of the first edition of the IAHS Academy is set for **January 12-18, 2025** and will be hosted in Ningbo, China.

This first edition is organized by [International Association of Hydrological Sciences \(IAHS\)](#), [UNESCO Intergovernmental Hydrological Programme \(IHP\)](#), the [Eastern Institute of Technology, Ningbo \(EIT\)](#) and [Tsinghua University, Beijing](#), and further supported by [International Water Management Institute \(IWMI\)](#), the [Global Water Partnership \(GWP\)](#) and the [Partnership for Research & Innovation in the Mediterranean Area \(PRIMA\)](#).

The IAHS Academy features **3 short courses in parallel** fostering a critical mass of lecturers and students in the same week and venue. This January 2026, in Ningbo, you have the chance to select among 3 topics providing advanced scientific and applied research training and hands-on.

#### Short courses: organization info

The 3 courses will run in parallel for **7 full days** - Monday January 12 to Sunday January 18 2026 - with first day and last day sessions that will have all participants in plenary mode. The courses include lecturing and hands on with applied hydrological science exercises that will be guided and supported by keynote lecturers, invited lecturers and teaching assistants. The course fees cover accommodation and meals as well as transportation to reach the course venue from Ningbo airport and the dorm for the entire duration of your stay in Ningbo (from Sunday January 11 (check in day) to January 19 2026 (check out day). Last Academy day (January 18) all students, organized in groups, will present the work developed during the week with practical case studies based on the knowledge and analytical skills learnt during the week.

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### Course fees

The course fee is **650 euro**. The fee includes the course lectures and materials, accommodation, lunches, and coffee breaks during classes. Transportation to/from Ningbo airport is also included. Please note that it does NOT include the flight ticket to Ningbo, VISA to China or health insurance during the course period.

Participants from Disadvantaged Countries have access to a **reduced fee of 350 euro**.

The list of countries based on UN indicators is published at  
<https://iahs.info/Members-Area/Disadvantaged-countries/>

### IAHS Academy program – Jan 12-18, 2026

<b>January 11</b>	Arrival day in Ningbo University dorm and facility	Transport is organized from Ningbo airport to Ningbo University facility
<b>January 12</b>	Plenary session: Kick-off day of the IAHS Academy in Ningbo EIT	<ul style="list-style-type: none"> <li>• Welcome Institutional remarks by IAHS Academy co-organizers and LOC members</li> <li>• IAHS President: intro to the IAHS Academy and SYSTA initiatives</li> <li>• Invited Keynote lecturers</li> <li>• The three lecturers present the aims and programs of the three courses</li> </ul>
<b>January 13-17</b>	Short courses: 5 days with theory and hands-on	The three courses are executed in parallel
<b>January 18</b>	Plenary session: Participants' project presentation day	All students, organized in groups or single, present in a plenary session the project developed during the course. full day of students' presentations
<b>January 19</b>	Departure day	Transport is organized from Ningbo University to Ningbo airport

### 2026 Ningbo IAHS Academy Steering Committee

Fernando Nardi (IAHS Academy Chair), Salvatore Grimaldi (IAHS President), Christophe Cudennec (IAHS Vice-President), Abou Amani (UNESCO IHP), Stefan Uhlenbrook (WMO), Moctar Dembélé (IAHS ECS Chair), Antonio Annis (IAHS), Fuqiang Tian (IAHS, Tsinghua University), Chunmiao Zheng (EIAS)

### Local Organizing Committee (LOC)

Lan Song (Eastern Institute for Advanced Study), Khosro Morovati (Tsinghua University), Xiaojun Wang (Chinese National Committee for International Association of Hydrological Sciences, CNC-IAHS)

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## Keynote Lecturers and general course programs



**Prof. Fuqiang Tian**

Professor of Hydraulic Engineering Department, Tsinghua University  
Vice President of International Association of Hydrological Sciences (IAHS)

### **Topic: Hydrological modeling using advanced platform, digital twin technology**

This course offers a comprehensive introduction to hydrological modeling, bridging foundational theories of hydrological processes and classic models with the practical application of advanced platforms. Participants will gain hands-on experience in spatial analysis using GIS and explore a wide spectrum of modeling methods, from rapid modeling with platforms like HydroCraft and SWAT to data-driven techniques using machine learning. The curriculum culminates in an integrated exercise, aiming to equip learners with the multidisciplinary skill set required to integrate these tools and independently tackle complex hydrological challenges.

#### **Day 1 | January 13:**

**Morning:** Lecture: Fundamentals of Watershed Hydrological Processes

**Afternoon:** Hands-on Session: Hydrological Spatial Analysis with GIS Tools

#### **Day 2 | January 14:**

**Morning:** Lecture: Introduction to Classic Hydrological Models (e.g., THREW, Xin'anjiang, Beijing Model)

**Afternoon:** Hands-on Session: Hydrological Modeling with the HydroCraft Platform (I)

#### **Day 3 | January 15:**

**Morning:** Hands-on Session: Hydrological Modeling with the HydroCraft Platform (II)

**Afternoon:** Hands-on Session: Building a SWAT Model

#### **Day 4 | January 16:**

**Morning:** Hands-on Session: Machine Learning-Based Hydrological Modeling

**Afternoon:** Lecture: Digital Twin Watersheds: Case Studies and Core Technologies

#### **Day 5 | January 17:**

**Full Day:** Integrated Project: Comprehensive Analysis of a Hydrological Topic Using Learned Methods and Tools

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**Prof. Salvatore Manfreda**

Full Professor of Water Management and Hydrology – IAHS MOXXI Chair  
University of Naples Federico II, Italy

**Topic: Advanced hydrological monitoring**

This seminar introduces key theoretical principles and applied scientific data and model for state of the art hydrologic monitoring. Data and models for hydrometry analytics are introduced and applied. Advanced monitoring using remote sensing is core topic of this course that will guide participants in understanding and developing remote sensing and UAV for hydrologic monitoring and image-based techniques for river monitoring. From water quantity for fluvial systems to water quality in both river basins and oceans, this course will bring participants to learn most recent advanced of hydrologic monitoring as related to science and programs that are part of the IAHS MOXXI working group.

**Day 1 | January 13:**

**Morning:** Introduction to hydrometry

**Afternoon:** Hands-on

**Day 2 | January 14:**

**Morning:** Remote Sensing in Hydrology and Unmanned Aerial Systems in hydrology

**Afternoon:** Hands-on

**Day 3 | January 15:**

**Morning:** Image-based techniques for river monitoring

**Afternoon:** Hands-on

**Day 4 | January 16:**

**Morning:** Water quality monitoring in river and oceans

**Afternoon:** Hands-on

**Day 5 | January 17:**

**Full day:** Use data and models for developing your own project, start to finish

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**Prof. Michele Lancia**, Research Associate Professor, Eastern Institute of Technology, Ningbo



Invited keynote by: **Prof. Aldo Fiori**, University of Roma Tre, Italy

### **Topic: Aquifer dynamics and groundwater modelling**

This course will deliver a comprehensive foundation in theoretical and applied groundwater modeling. Participants will engage in hands-on training utilizing MODFLOW for simulating groundwater flow, PEST for parameter estimation, and MT3DMS and SEAWAT for modeling contaminant transport. Strategies to implement satellite imagery and geologic data will enable participants to construct groundwater models from scratch.

#### **Day 1 | January 13:**

**Morning:** Principles of hydrogeology

**Afternoon:** the hydrogeological conceptual model

#### **Day 2 | January 14:**

**Morning:** Introduction to MODFLOW

**Afternoon:** the MODFLOW packages

#### **Day 3 | January 15:**

**Morning:** Model calibration with PEST

**Afternoon:** principles of MT3DMS and SEAWAT

#### **Day 4 | January 16:**

**Morning:** Interpretation of groundwater modeling elements from satellite image

**Afternoon:** 3D aquifer model from bore logs and geophysical data

#### **Day 5 | January 17:**

**Full day:** On your own: construct your groundwater model from scratch