

XIV training course on KARST HYDROGEOLOGY

eurokarst 2022
MÁLAGA
22 - 25 June

HYDROKARST 2022

Málaga, 20th - 21st June 2022

Karstifiable terrains cover around 15% of the Earth's continental surface and their aquifers are a partial source of drinking water supply of almost 25% of the world's population. In Europe, around one third of its territory overlies karst aquifers and in some countries karst water resources mean more than half of the water supply. Overall, the hydrogeological behavior of karst aquifers shows heterogeneity in its processes and storage dynamics: 1) duality of infiltration and recharge mechanisms (diffuse and/or concentrated, allogenic vs autogenic), 2) spatial heterogeneity and marked anisotropy in the distribution of their hydraulic parameters, 3) duality of discharge conditions, from continuous discharge when the system is dominated by flow through the matrix and fissures to high discharge variability when flow through the conduits is dominant. To investigate these aspects both natural and artificial tracers are one of the most powerful methods.

HYDROKARST 2022 is the 14th edition of a course given usually by researchers from the Partnership Association "Advanced Hydrogeological Studies", constituted by the Center of Hydrogeology of the University of Málaga (CEHIUMA) and the Spanish Geological Survey (IGME), on methods applied to hydrogeological research of carbonate aquifers. On the occasion of the Eurokarst 2022 conference, also members of the IAH Commission on Karst Hydrogeology participate, in the framework of the KARMA project (Karst Aquifer Resources availability and quality in the Mediterranean Area). The course is an activity of the Spanish Group of the International Association of Hydrogeologists (AIH-GE) in collaboration with the International Hydrological Program of UNESCO. In this new edition of the HYDROKARST course, researchers will have the opportunity to learn on the different tracing techniques (both natural and artificial) used in karst aquifers.

PROGRAMME

Monday, June 20

- 08:30 - 09:00** Welcome, reception and opening of the course
- 09:00 - 10:00** Introduction to the study of karst aquifers. General overview. **Juan José Durán Valsero** [Spanish Geological Survey, SPAIN]
- 10:00 - 11:00** Natural tracers. From hydrogeochemical tools to isotopic approaches. **Bartolomé Andreo Navarro** [University of Málaga, SPAIN]
- 11:00 - 11:30** Coffee break
- 11:30 - 13:30** Natural tracers to infer the hydrogeological functioning of karst aquifers. **Matías Mudarra Martínez** [University of Málaga, SPAIN]
- 13:30 - 15:00** Lunch
- 15:00 - 16:30** Hydrogeochemical computation. Application to karst aquifers. **José Manuel Gil Márquez** [University of Málaga, SPAIN]
Practical session
- 16:30 - 17:00** Coffee break
- 17:00 - 18:30** Suspended particles and microbial activity as natural tracers in karst aquifers. **Nadine Goeppert** [Karlsruher Institut für Technologie, GERMANY]

Tuesday, June 21

- 09:00 - 10:30** Introduction to artificial tracers. **Nico Goldscheider** [Karlsruher Institut für Technologie, GERMANY]
- 10:30 - 11:00** Coffee break
- 11:00 - 13:30** Dye tracers. **Philippe Meus** [European Water Tracing Services, BELGIUM]
- 13:30 - 15:00** Lunch
- 15:00 - 16:30** Tracer tests in karst hydrogeology. Analysis of results. *Practical session* **Juan Antonio Barberá Fornell and Beatriz de la Torre Martínez** [University of Málaga, SPAIN]
- 16:30 - 17:00** Coffee break
- 17:00 - 18:30** Coupling natural and dye tracers for groundwater modeling in karst. **Thomas Reimann** [Technische Universität Dresden, GERMANY]

ADDITIONAL INFORMATION

COORDINATORS

Bartolomé Andreo Navarro [University of Málaga]
Juan José Durán Valsero [Spanish Geological Survey]

SECRETARY

Matías Mudarra Martínez (mmudarra@uma.es) +34 951952961
[Center of Hydrogeology of University of Málaga (CEHIUMA)]

AVAILABILITY AND FEE

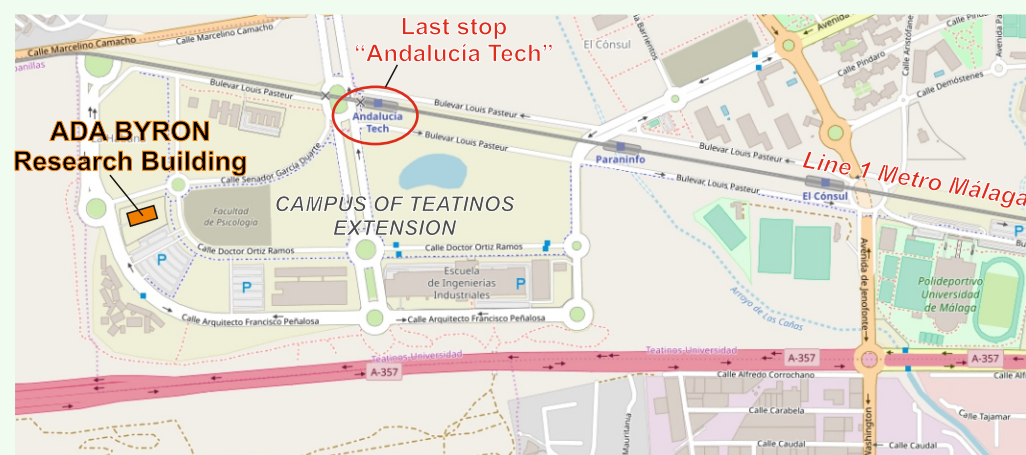
At least 20 inscriptions are necessary to organize the course. The reserve criteria will be in order of inscription arrival to the secretary email address. **Course fee: 150 €** (includes coffee breaks and lunches).

PAYMENT (by bank transfer in the following account or during registration for the Eurokarst conference -via INDICO-):

Bank name: UNICAJA
IBAN: ES24 2103 0146 96 0030028661
SWIFT: UCJAES2MXXX
Reference: 0803000650_HYDROKARST2022

LOCATION

Research building Ada Byron. Arquitecto Francisco Peñalosa, 18. Campus of Teatinos. University of Málaga.



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