

**First Announcement of the International Course
"Characterization and Engineering of Karst Aquifers"
CEKA 2024**

by

**Centre for Karst Hydrogeology – CKH and
Geological Survey of Republic of Srpska – GSRS**

Tentative schedule of the 11th CEKA 2024 to be held in Trebinje, Bosnia & Herzegovina from 26 May to 01 June 2024

Day	Activity	
26 May	Arrival to Trebinje	
27 May	Opening ceremony (HET*)	
<p>9:00 -10:00 Registration 10:00 – 10:30 Welcome speech + presentation of participants Saša Milanović (Head of CKH and CEKA course) Representative of Geological Survey of Republika Srpska Representative of HET</p>		
10:30– 11:00	Historical development of karstology and karst hydrogeology and karst distribution worldwide Porosity and permeability of karstic rocks; Groundwater circulation in karst: recharge, flow types and directions, discharge	Z. Stevanović
11:00– 11:30	Coffee break	
11:30– 12:30	Methods in karst hydrogeology – an overview; geology, remote sensing, geophysics, water points inventory, groundwater tapping, hydrogeological properties and field tests	Z. Stevanović
12:30– 14:00	Lunch Break	
14:00-15:00	Specific investigation and research techniques of complex karst systems - monitoring, speleology, tracing tests, spatial modeling etc	S. Milanović
15:00– 15:15	Coffee break	

15:15-16:15	Quality dynamics at karst springs. Isotopic methods in karst, GW ageing	Lj. Vasić
28 May	<i>CEKA – Lectures (HET), Half day field trip</i>	
09:30– 10:30	Problems related to construction of dams, reservoirs and other structures and buildings in karst; Investigation, design, corrective measures, case studies.	P. Milanović
10:30-15:00	Half-day field trip to Grančarevo and Gorica dams, and intake for water supply of Trebinje (“Oko” spring)	Guided by: P. Milanović
15:00-16:30	<i>Lunch Break</i>	
16:30-17:45	Presentation on the HE system Trebišnjica; DVD movie “Trebišnjica” waters. Other movies and case studies, Discussion	
29 May	<i>All-day excursion to Eastern Herzegovina karst area</i>	
9:30-17:30	All-day excursion to Eastern Herzegovina karst area: Visiting of the Vjetrenica cave, Buna karst spring, Mostar, Karst poljes: Popovo, Dabarsko and Fatničko, Bileća reservoir	Guided by: S. Milanović
30 May	<i>CEKA – Lectures (HET)</i>	
9:00-10:00	Mining hydrogeology in complex karst systems - related to tailings, waste dumps, water supply etc.	D. Evans
10:00-10:30	<i>Coffee break</i>	
10:30-11:30	Modeling of karst aquifer – Springs hydrograph analysis and stochastic models	V. Ristić Vakanjac
11:30-12:30	Estimating potential groundwater recharge volume in forested Karst terrain on the Mogollon Rim, Arizona	R. Lima

	Lunch Break	
14:00-15:00	Karst and epikarst; Karst aquifer vulnerability (overview/examples: EPIK; PI; COP; TDM...); Anthropogenic impact and hazards; Karst Disturbance Index	B. Petrović
15:00-16:00	Groundwater management and transboundary aquifers in karst: problems and solutions	V. Marinović
16:00-16:15	Coffee break	
16:15-17:15	Research on Subway Construction and Spring Protection Technology in Jinan	Z. Zhang
31 May	One-day field trip and seminar	
9:30-17:30	All-day excursion: Klinje dam, Cerničko polje and Ključka River (Surface flow of only 300 m from karst spring in Vilina pećina cave to ponor of Ključka River). Fieldwork demonstrations: Hydrometry, Tracer tests, Borehole logging, Physico-chemical measurements...	Guided by: S. Milanović, Lj. Vasić, B. Petrović, V. Marinović, P. Vojnović, R. Lima
01 June	Exam, Farewell party	
9:30 – 13:00	Exam: Written test and verbal discussion (Mandatory for Master students of FMG)	S. Milanović Lj. Vasić B. Petrović V. Marinović P. Vojnović V. Ristić Vakanjac
14:00-15:00	The end of the course and closing ceremony with awarding of Certificates	
20:00 - ?	Farewell party (Restaurant “Studentac”)	
02 June	Leaving of Trebinje	

***HET – Hydro-Energy System of Trebišnjica, Obala Luke Vukalovića 2, Trebinje**