

**First Announcement of the International Course
"Characterization and Engineering of Karst Aquifers"
CEKA 2023**

by

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

Tentative schedule of the 10th CEKA 2023 to be held in Trebinje, Bosnia & Herzegovina from 29 May to 04 June 2023

Day	Activity	
28 May	<i>Arrival to Trebinje</i>	
29 May	<i>Opening ceremony and Celebration of 10 years of CEKA and 15 years of CKH (HET*)</i>	
	<p>9:00 -10:00 Registration 10:00 – 11:00 Welcome speech Saša Milanović Zoran Stevanović Representative of Geological Survey of Republika Srpska Representative of HET 11:00 – 12:30 Invited speakers Petar Milanović Neven Krešić Augusto Auler Welcome Cocktail party</p>	
30 May	CEKA – Lectures (HET)	
9:00 – 10:30	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
10:30– 10:45	Coffee break	
10:45– 12:15	Methods in karst hydrogeology – an overview; geology, remote sensing, geophysics, water points inventory,	Z. Stevanović

	groundwater tapping, hydrogeological properties and field tests	
12:15– 14:00	Lunch Break	
14:00-15:30	Modeling of karst aquifers – conceptualization for numeric models, software, EPM, Modflow USG - CLN, case studies	N. Krešić
15:30– 15:45	Coffee break	
15:45-17:15	Springs ecohydrogeology: The Stories Told by Springs	A. Springer
31 May	CEKA – Lectures (HET), Half day field trip	
09:30– 11:00	Problems related to construction of dams, reservoirs and other structures and buildings in karst; Investigation, design, corrective measures, case studies.	P. Milanović
11:00-15:00	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	Lunch Break	
16:30-17:45	Presentation on the HE system Trebišnjica; DVD movie “Trebišnjica” waters. Other movies and case studies, Discussion	
01 June	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, A. Springer, Lj. Vasić, B. Petrović, V. Marinović, P. Vojnović
02 June	CEKA – Lectures (HET)	
9:00-10:30	Specific investigation and research techniques of complex karst systems as a base for hydrotechnical construction and remediation problems in karst -	S. Milanović

	monitoring, tracing tests, speleodiving, spatial modeling etc.	
10:30-10:45	Coffee break	
10:45-12:15	Karst geomorphology and speleology related to karst evolution, hydrogeological processes and climate change	A. Auler
12:15-14:00	Lunch Break	
14:00-15:15	Mining hydrogeology in complex karst systems - related to tailings, waste dumps, water supply etc.	D. Evans
15:15-16:30	Transboundary aquifers in karst: specifics, challenges and experience	N. Kukurić
16:30-16:45	Coffee break	
16:45-18:00	Modeling of karst aquifer – Springs hydrograph analysis and stochastic models	V. Ristić Vakanjac
03 June	All-day excursion to Eastern Herzegovina karst area	
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	
04 June	Exam, Farewell party	
9:30 – 13:00	Exam: Written test and verbal discussion (Mandatory for Master students of FMG)	S. Milanović Lj. Vasić Z. Stevanović 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”)	
05 June	Leaving of Trebinje	

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