## "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 10<sup>th</sup> CEKA 2023 to be held in Trebinje, Bosnia & Herzegovina from 29 May to 04 June 2023

Day	Activity	
28 May	Arrival to Trebinje	
29 May	Opening ceremony and Celebration of 10 years of CEKA and 15 years of CKH (HET*)	

9:00 -10:00 Registration

## 10:00 - 11:00 Welcome speech

Saša Milanović

Zoran Stevanović

Representative of Geological Survey of Republika Srpska – Cvijetko Sandić

Representative of HET – Gordan Mišeljić

Representative of Trebinje Municipality – Dragoslav Banjak

## 11:00 - 12:30 Invited speakers

11:00 - 11:30 - Petar Milanović

Karst Istočne Hercegovine

11:30 - 12:00 - Augusto Auler

Karst Hydrogeology Applied to Oil Reservoirs

Welcome Cocktail party in Atrium of HET Headquarters

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, groundwater tapping, hydrogeological properties and field tests	Z. Stevanović
12:15- 14:00	Lunch Break	

14:00-15:30	Spring hydrology: catchment delineation, inventory, assess, manage springs ecosystems	A. Springer	
15:30- 15:45	Coffee break		
15:45-17:15	Specific investigation and research techniques of complex karst systems as a base for hydrotechnical construction and remediation problems in karst - monitoring, tracing tests, speleodiving, spatial modeling etc	S. Milanović	
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, Physicochemical measurements	Guided by: S. Milanović, A. Springer, Lj. Vasić, B. Petrović, V. Marinović, P. Vojnović	
02 June	CEKA – Lectures (HET)		
9:00-10:30	Natural tracers and natural responses of springs: monitoring strategies and hydrogeochemical and isotopic approaches to characterize the functioning of karst aquifers	Matías Mudarra Martínez	
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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 "Studenac")		
05 June	Leaving of Trebinje		

<sup>\*</sup>HET – Hydro-Energy System of Trebišnjica, Obala Luke Vukalovića 2, Trebinje