

[Test] August KC News

1 message

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Mon, Aug 21, 2023 at 8:36 AM

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August 2023 NEWS

Chairs: Peter Malik (Europe/Africa, 9/21 - 12/22); Avi Burg (Asia/Oceania, 1/23 - 4/24); Benjamin Tobin (Americas), 5/24 - 8/25)

Note from the chairs

The weather has gone crazy, it's not new. We hope you all survive the storms, the fires, and the abnormal temperatures.

As previously written, the current chairmen of the group see the addition of students and young researchers to the group as a task of first-class importance. We ask all of you again....invite the young researchers around you to join us...they will benefit from getting to know the experienced people in the group, and will receive interesting and important information that we pass on frequently.

Inventory of geological heritage sites

In the previous (July) KC News we reported on an ongoing project managed by the International Union of Geological Sciences (IUGS) - Geological Heritage Sites program, in collaboration with UNESCO, which aims in developing a worldwide inventory of geological heritage sites of international relevance (<https://www.unesco.org/en/igpp/igcp-projects/731>).

We also mentioned that the IAH is involved in selecting new sites. We are pleased to inform you that the KC has been asked by the IAH to propose some outstanding karst springs to be included in the list of the Geological Heritage Sites. The KC chairmen asked our friend Zoran Stevanović to offer a short list of the most suitable

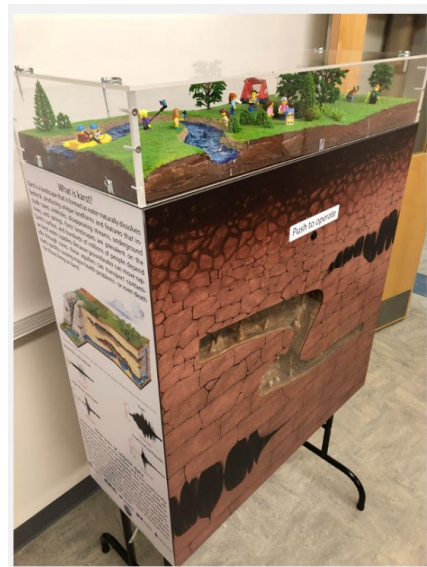
springs in the world that could fit the IUGS requirements. Zoran is the most worthy person for this task due to his extensive knowledge of karst springs all over the world - knowledge that is also applied in his MIKAS project.

Zoran did propose 4 springs that are currently under the IUGS review. The decision on whether some or all of them will be included in the heritage sites list will be during January 2024 and we will then let all of you know the results.

Interactive museum exhibit - Seismic signals from water flowing through caves

We would like to draw your attention to a nice interactive museum exhibit that illustrates seismic signals as water flows through caves.

The information about the project was copied as it is from the NCKRI August News and with their permission:



“Check out this exhibit in action by watching the video Made by the Department of Earth and Environmental Science at Wheaton College. They just completed an interactive museum exhibit illustrating seismic signals as water flows through caves (activated as you push a button on both sides) as part of a NSF grant. There is a Raspberry Shake seismometer at the top, and you can see the seismic data in real time at the following link:

<https://dataview.raspberrypi.org/#/AM/R980B/00/EHZ?streaming=on>

A two-minute movie showing the motivation, background, and implementation of the project can be found here:

<https://www.youtube.com/watch?v=wuMYqFjxg1Q>

If any of you have additional questions, please contact Andrew Luhmann from Wheaton College who is the creator of the exhibit:

andrew.luhmann@wheaton.edu

UPCOMING KC EVENTS

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Eurokarst 2024

The next edition of the biannual international conference on karst hydrogeology EUROKARST, with hundreds of participants worldwide, will be organized for the first time in Rome (Italy), after the usual places of Neuchatel (Switzerland), Besancon (France), and Malaga (Spain). The conference is aimed in presenting the latest news on hydrogeological research on karst aquifers and in discussing groundwater, the fundamental resource for human beings, social development and environmental protection.

EUROKARST 2024 will be co-organized by the Sapienza University of Rome, the University Aldo Moro of Bari and the Sannio University of Benevento, with the support of the Italian Chapter of the IAH, and will be hosted at the main campus of Sapienza University, central Rome, between June 10 and 14, 2024.

For more information look at: <http://www.eurokarst.org> or contact the organizers listed below.

The Chairs of the Organizing Committee:

Francesco Fiorillo (Chair, University of Sannio, Benevento, Italy)

francesco.fiorillo@unisannio.it

Mario Parise (Chair, University Aldo Moro, Bari, Italy) mario.parise@uniba.it

Marco Petitta (Chair, Sapienza University of Rome, Italy) marco.petitta@uniroma1.it

More details will be sent in the coming months.

IAH worldwide groundwater congress: 17 – 22 Sept. 2023, Capetown, South Africa

The Congress theme for IAH 50 is "Groundwater: A Matter of Scale". This theme combines scientific advances through local to global scale experiments and case studies, with those extending over various temporal scales.

We urge the KC group members to attend this conference that brings together most members of the IAH - the umbrella organization that hosts several commissions including our own.

Find out more information at <https://iah2023.org.za>;

Keep in mind that 21 August 2023 is the deadline for late registration.

Visual KARSYS GeoModelling Course N17: 4-5 October 2023

The next Visual KARSYS online course N17 will be organized in 2 sessions of 3 hours each.

Wednesday, October 4th, 2023 - from 1 PM to 4 PM*

Thursday, October 5th, 2023 - from 1 PM to 4 PM*

*(GMT+00:00 Time zone)

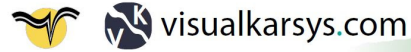
This workshop is dedicated to the learning of the KARSYS approach through an application on a pilot site by using the Visual KARSYS web-tool. It is dedicated

to geologists and hydrogeologists working in complex environments. Attendees will be introduced to theoretical aspects of the approach and the practical process of its application: project dimensioning, data introduction, 3D geological modeling, groundwater modeling, end-user functionalities, etc.

Course fee: employees CHF 170 / students CHF 120

Contact for registration / questions: info@visualkarsys.com

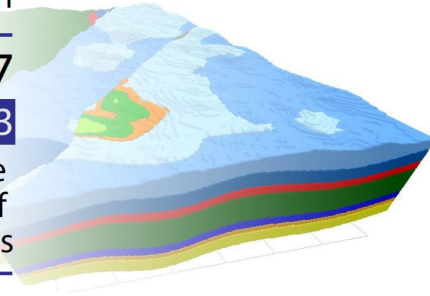
For the program of the course go to: <https://www.visualkarsys.com/courses>



Online course N17

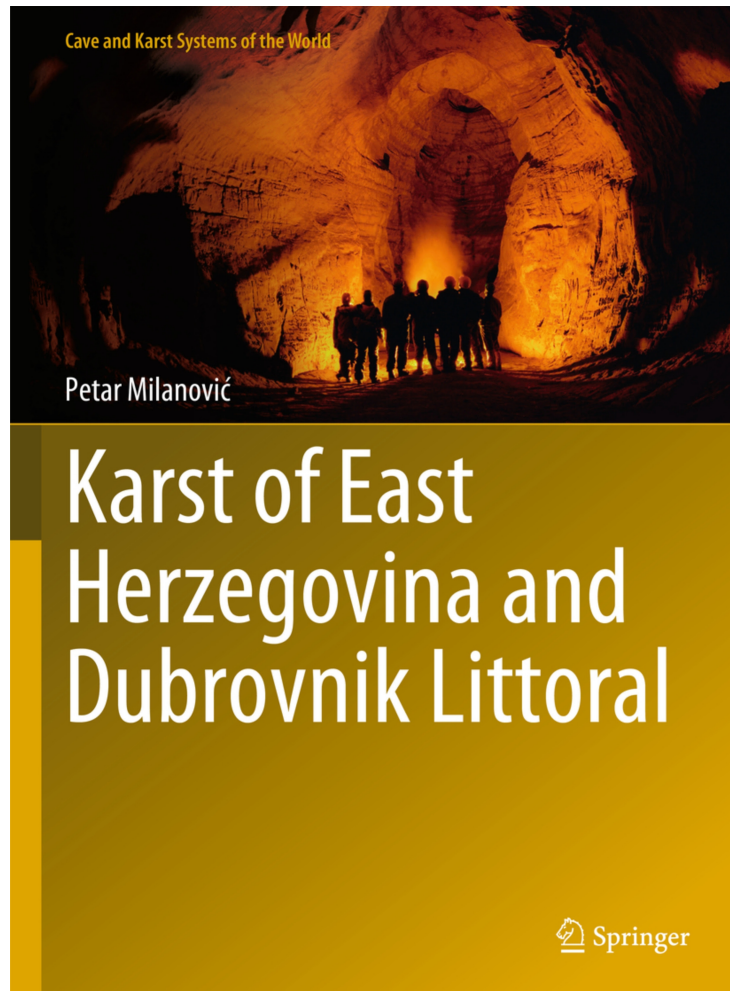
October 04 & 05th, 2023

A webtool to improve
your understanding of
groundwater flows



Recommended publications

Our friend Peter Milanović drew our attention to his new book entitled “*Karst of East Herzegovina and Dubrovnik Littoral*”. The book was published recently by Springer Publishing (Series - Cave and Karst Systems of the World), it is 326 pages long and is available on the market since July 2023.



Our friend Shishir Sarker recently had his paper with partners published and asked to share it with the KC community:

Sarker, S. K., Zhu, J., Fryar, A. E., & Jeelani, G. (2023). Hydrological Functioning and Water Availability in a Himalayan Karst Basin under Climate Change. Sustainability, 15(11), 8666.

or:

<https://www.mdpi.com/2071-1050/15/11/8666>

The study focuses on a spring in the Kashmir valley of northern India. By using statistical time series and machine-learning (ML) techniques (random forest regression (RFR) and support vector regression (SVR)) the authors characterized how rainfall, temperature, and snow cover affect the karst spring flow and provided predictive tools for the future responses of the spring stage based on climate scenarios as well as the long-term water availability.

The study by Ostad et al. (*Ostad, H., Mohammadi, Z. and Fiorillo, F., (2023). Assessing the Effect of Conduit Pattern and Type of Recharge on the Karst Spring Hydrograph: A Synthetic Modeling Approach. Water, V. 15(8), 1594*) where our friend - Zargham Mohammadi is one of the authors, highlighted the impact of the two most frequent patterns of karst conduits (i.e., branchwork and network maze) on the characteristic of the spring hydrograph. The results reveal that peak discharge, fast-flow recession coefficient, and the return time to baseflow are mainly affected by conduit network pattern, conduit network density, and recharge, respectively. In contrast, the time to reach peak flow only responds to recharge conditions.

The article by Luo et al. (*Luo, M., Wan, L., Liao, C., Jakada, H. and Zhou, H., (2023). Geographic and transport controls of temperature response in karst springs. Journal of Hydrology, 129850*) deals with the mechanism of heat transfer in karst aquifer systems. The geographical and transport-controlling factors of heat exchange between conduit flow and surrounding rocks are discussed. It is also proposed here to use the thermal response as a tracer to identify the structure of the karst aquifer. Hydraulic diameter, flow velocity, input water temperature, and circulation depth, mainly depending on the recharge water volume after rainfall events, are important transport factors in controlling the thermal response at a spring outlet.

Members who are interested in recommending a new relevant publication (their own or of their friends) are welcomed to send a link to one of the co-chairs.



IAH Karst Commission
Newsletter sent to members and friends of the IAH Karst Commission

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