

IAHR GEAHH YOUNG PROFESSIONALS NETWORK

2022 Annual Report of Activities



1. Our vision and mission

Our mission is to generate a suitable academic environment for students of the Faculty of Civil Engineering of the National University of Engineering (FIC UNI) interested in the branches of Hydraulics and Hydrology, seeking that each member will be a good future civil engineer developing in the areas of hydraulics and hydrology, dedicated to the sustainable use and development of water resources in the country.


Our vision is to be the leading student group in the area of hydraulics and hydrology at the national level, generating, disseminating and promoting spaces for the exchange of knowledge and experiences in the fields of hydraulics and hydrology among university students, professors, engineers and other interested professionals, thus contributing to the development of water engineering in the country.


2. Main goals and key objectives in 2022


Our YPN aims to promote, disseminate and develop activities that contribute to the engineering training (including academic plans, research and leadership) to students of the Faculty of Civil Engineering of the National University of Engineering, contemplating a projection towards other universities and institutions, in the areas of hydraulics and hydrology, and to share knowledge and experiences in the field of engineering and research related to water.


3. Activities in 2022

	<p>Webinar: Chow, Froude and Vedernikov History review and comparison of this three hydraulics engineering's characters</p> <p>Date/s</p> <p>February 24th, 2022</p> <p>Venue</p> <p>Online</p> <p>Objectives</p> <p>to teach the knowledge about historic characters and their contribution in hydraulics engineering</p> <p>Description</p> <p><i>PhD. Victor Miguel Ponce explained the main contributions (equations, papers, and theory) of the three characters.</i></p>
	<p>Recruitment of new members 2022</p> <p>Date/s</p> <p>April 10th, 2022</p> <p>Venue</p> <p>Online</p> <p>Objectives</p> <p><i>To include aspirants to GEAHH's group to help us in our activities and learn about hydraulic and hydrology.</i></p> <p>Description</p> <p><i>First, we invite to FIC UNI's students to participate in the convocatory 2022. Then, they participate in the convocatory's activities.</i></p>


	Welcome to newbies 2022 -1
	Date/s
	May 2nd, 2022
	Venue
	Online
Objectives	To receive students and teach them about hydraulic and hydrology engineering
Description	A virtual presentation was developed for the new students of the civil engineering career, in order to show them an introduction to the branch of hydraulics and hydrology

	Webinar: Scope of research topics in water resources
	Date/s
	July 23rd, 2022
	Venue
	Online
Objectives	To show how to look for specific research topics according to the content of the project
Description	Starting from the basic content of the research topic, you should look for topics according to what is needed
Flood analysis: Hydraulic Modelling	Flood analysis: Hydraulic Modelling
Date/s	Date/s
August 6th, 2022	August 6th, 2022
Venue	Venue
Online	Online
Objectives	To teach about flood analysis theory and present a case of study in Colombia
Description	A case of flood analysis in Colombia was presented, in addition, the methodology of a flood analysis was explained

	<p>Webinar: Artificial Intelligent for Water Resources</p> <p>Date/s</p> <p>September 23rd, 2022</p> <p>Venue</p> <p>Online</p> <p>Objectives</p> <p>Give an introduction of AI in water resources</p> <p>Description</p> <p>Explain the importance of AI for water resources and applications. Also, Dr. Gerald Corzo showed an application in forecast drought with views obtained of AI.</p>
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	<p>Workshop: HEC-RAS 6.3, sediment transport modules</p> <p>Date/s</p> <p>September 10th and 11th, 2022</p> <p>Venue</p> <p>Online</p> <p>Objectives</p> <p>To show the latest updates in the software HEC-RAS 6.3 related to sediment transport and debris flow</p> <p>Description</p> <p>MSc. Julio Montenegro showed the theoretical basis of the new modules in HEC-RAS and there was a group project for the attendees to get a certificate.</p>
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 <p>The top image is a poster for 'CONVOCATORIA GEAHH 2022-2'. It features a landscape background with a river and a dam. Text on the poster includes: 'SABADO 17 SEPTIEMBRE 7:00 PM', 'TE ESPERAMOS! ZOOM', and a list of topics: 'MECANICA DE FLUIDOS E HIDRAULICA', 'ESTUDIO Y APLICACIONES DE HIDROLOGIA', 'GESTION DE RECURSOS HIDRICOS', 'DISEÑO DE OBRAS HIDRAULICAS', 'MODELAMIENTO NUMERICO', 'AGUA Y SANEAMIENTO', and 'ANALISIS Y GESTION DE RIESGOS'. Logos for GEAHH and Universidad Nacional de Ingeniería are present. The bottom image shows a group of about ten students standing behind a table in a hall, with a GEAHH banner in the background.</p>	<p>Recruitment of new members</p> <p>Date/s</p> <p>September 17th, 2022</p> <p>Venue</p> <p>Hall of Faculty of Civil Engineering, Universidad Nacional de Ingeniería</p> <p>Objectives</p> <p>To search new members for GEAHH to help us in our activities and learn about hydraulic and hydrology.</p> <p>Description</p> <p>We search students who are interested in belonging to the community, and carry out a series of activities that demonstrate their interest and support for the improvement of our community.</p>
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 <p>The poster is for a course titled 'CURSO: R APLICADO A HIDROLOGÍA'. It features two circular portraits: 'Ing. Erick Claros' and 'Bach. Fiorela Castillon'. The text describes the course as being for civil engineers and those interested in R programming for hydrology. It lists topics like 'Ingeniero civil de la Universidad Nacional de Ingeniería', 'Instructor de cursos sobre programación en R en congresos y para otras instituciones', 'Experiencia en proyectos de hidrología y cambio climático', 'Bachiller en Ing. Ambiental de la Universidad Nacional Agraria La Molina y con estudios de maestría en la Universidad de Ingeniería y Tecnología', 'Conocimientos en hidroclimatología y modelamiento atmosférico', and 'Instructora en cursos de programación con R'. The dates '1, 8, 9, 15, 16 y 22 de octubre' and time '09:00 - 12:00 (UTC-5)' are listed. Logos for GEAHH and Universidad Nacional de Ingeniería are at the bottom.</p>	<p>Course: R for Hydrology</p> <p>Date/s</p> <p>October 1st, 8th, 9th, 15th, 16th, 22nd 2022</p> <p>Venue</p> <p>Online</p> <p>Objectives</p> <p>To show the capabilities of R programming language for Hydrology studies</p> <p>Description</p> <p>The teachers show different libraries and examples in using R to manage hydrological and geospatial data in hydrology.</p>
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ANÁLISIS DE REBASES EN ESTRUCTURAS DE PROTECCIÓN COSTERA

MSc. Ing. Yoch Ponte Torres

- Ingeniero de Mecánica de Fluidos por la Universidad Nacional Mayor de San Marcos.
- Estudios de postgrado por la University of Minnesota y la Texas A&M University.
- Experiencia en las áreas de modelado morfodinámico de aguas superficiales, dinámica de fluidos computacional (CFD) y diseño de estructuras hidráulicas orientadas principalmente al mercado energético y portuario en proyectos realizados en España, Brasil, Reino Unido, EE.UU y Perú.
- Ganador de la Beca Santander, becario por la National Science Foundation, AGU Travel Fellowship y la International Young Professional Leaders Award in Water Resources and Management.

01 DICIEMBRE 05:00 PM

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geahh@uni.edu.pe

Webinar: Analysis of overshoots in coastal protection infrastructure

Date/s

December 01st, 2022

Venue

Online

Objectives

To show numerical modelling for analysis of overshoots in coastal protection infrastructure

Description

MSc. Ponte showed a bit of theory about modelling coastal protection structures, he also explained in a general way aspects of numerical modelling, such as scaling, calibration, etc.

EL MODELADOR GRÁFICO DE QGIS: CONSEJOS Y TRUCOS

MSc(c). Michel Huber Cueva Portal

- Ingeniero Hidráulico de la Universidad Nacional de Cajamarca.
- Maestría en ciencias en Ingeniería Civil con mención en hidráulica (UNI) y estudiante de la Maestría en Recursos Hídricos (UNALM).
- Más de 6 años de experiencia profesional en consultoría de recursos hídricos para empresas nacionales e internacionales de ingeniería y medioambientales.
- Participación en diseños de proyectos multidisciplinarios de los rubros de Minería, Hidrocarburos, Telecomunicaciones, Transportes, etc.
- Experiencia como investigador y publicaciones en congresos y revistas internacionales, organizador en conferencias nacionales e internacionales.

01 DICIEMBRE 06:30 PM

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The QGIS Graphical Modeler: Tips

Date/s

December 01st, 2022

Venue


Online

Objectives

Learn the most effective use of the GIS program and its tools.

Description

MSc(c). Michel Cueva shows the resources displayed by the program, keyboard shortcuts, algorithms to use and more tools to use.

	<p>Integrated modelling in storm drainage systems with Storm Fluidit Software</p> <p>Date/s</p> <p>December 01st, 2022</p> <p>Venue</p> <p>Online</p> <p>Objectives</p> <p>To show advantages of Fluidit Storm in modelling drainage systems.</p> <p>Description</p> <p>Eng. Bolivar taught about the use of the FS software with an application in Colombia and Peru.</p> <p>Then, he explained how the students can obtain a course of Fluidit Storm.</p>
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4. Partnerships and collaborations

4.1. Partnerships

Organisation	Description of partnership
Escuela Peruana del Agua	To organize webinars
CEIC UNI	To organize Webinars

4.2. Collaboration with other YPNs

There were no collaboration with other YPNs in this year.

5. Communication channels

Facebook: <https://www.facebook.com/geahh.uni>

Instagram: https://www.instagram.com/geahh_uni_peru/

Linkedin: www.linkedin.com/in/iahr-uni-geahh