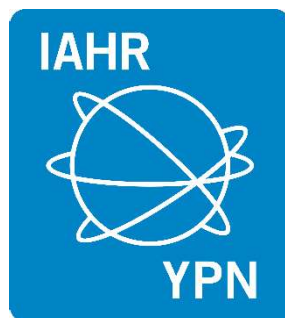


IAHR Universidad Nacional De Ingeniería - Geahh Young Professionals Network

2020 Annual Report of Activities



Universidad Nacional
de Ingeniería-GEAHH
**Young
Professionals
Network**

IAHR Universidad Nacional De Ingeniería -GEAHH - Young Professionals Network

2020 Annual Report of Activities

1. Introduction

Due to the current situation it was not possible to carry out the activities of all the areas in a similar way to the previous periods due to this, the activities of the logistics area were derived to support the other areas, the other areas continued with their normal activities, but adjusting to the type of remote activities, avoiding always the congregation or expose our members or aspiring members to any risk of the current situation. Considering this structure, an attempt was made to stimulate the participation of each area, giving greater freedom and decision-making capacity to the respective heads, so that the group could work more efficiently.

2. 2020 main goal and key objectives

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 also to share knowledge and experiences in the field of engineering and research related to water.

3. Communications

[Website and social networks]

Website	
Facebook	https://www.facebook.com/geahh.uni
Twitter	
Instagram	
Linkedin	www.linkedin.com/in/iahr-uni-geahh
Other	


[Promotional and information materials]

Newsletter/s	
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Publication/s	
Other	


4. Activities

Activity 1


	Introduction to hydrology series analysis using R
	Dates January 31st, 2020
	Objectives : <i>Teach the applications of the R language of time series in Hydrology to the members of the group</i>
	Description Before the beginning of the workshop it was indicated to install Rstudio and download the libraries that would be used in the session. It started with some basic operations in Rstudio. Some parameters in hydrology were explained. He made applications in hydrology using RStudio.

Activity 2

	An introduction to offshore wind farms and subsea cable burial
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	<p>Dates</p> <p>February 28th, 2020</p>
	<p>Objectives</p> <p><i>Introduce the main concepts for the design, operation, and maintenance for offshore wind farms</i></p>
	<p>Description</p> <p>This seminar focused on the topic of offshore wind farms, its design criteria, advantages, disadvantages, operation and maintenance of offshore wind farms.</p>

Activity 3

	<p>Cycle of virtual conferences on hydrology and hydraulic</p>
	<p>Dates</p> <p>May 2nd, 2020</p>
	<p>Objectives</p> <p><i>To present an overview of physical modeling in hydraulics and integrated water resources management.</i></p>
<p>Description</p> <p>This activity consisted in different seminars in Google Meet:</p>	

	<p>Theory and applications of physical modelling in hydraulics.</p> <p>Integrated water resources management with the SIMGES model and application in the Mijares basin, Spain.</p>
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Activity 4

	<p>Theory and applications of physical modelling in hydraulic</p>
	<p>Dates</p> <p>May 16th, 2020</p>
	<p>Objectives <i>B</i></p> <p><i>Delivering a comparison on the usage of physical models made in the UNAM</i></p>
	<p>Description</p> <p>Explain the process to make physical models in comparison to prototypes and its importance</p>

Activity 5

	<p>An introduction to R and climate change</p>
	<p>Dates</p> <p>June 27th, 2020</p>
	<p>Objectives</p> <p><i>Deliver different R applications such as in hydrology and climate change</i></p>

	<p>Description</p> <p>The basic concept on the program were presented, explaining with application in hydrology, an example with covid data, and climate change</p>
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Activity 6

	<p>Dams and connectivity in amazon rivers</p>
	<p>Dates</p> <p>July 1st, 2020</p>
	<p>Objectives</p> <p><i>Share points of view on the impact of infrastructure in amazon rivers</i></p>
	<p>Description</p> <p>Conversation among : Dr Victor Miguel Ponce, Dra. Ada Liz Arancibia, Dr Cayo Leonidas Ramos Taipe, Dr. Patrick Venail, focused on the impact of dams, hydroelectric power stations in the amazon.</p>


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Activity 7

	<p>Dancing rivers and its importance in the understanding of impacts of infrastructure in the amazon</p>
	<p>Dates</p> <p>August 10th, 2020</p>
	<p>Objectives</p> <p><i>Show the results of the research carried out by Dr Abad on the dynamics of amazon rivers</i></p> <p><i>Also the projects in development in the area such as the Amazon hydroway</i></p>
	<p>Description</p> <p>The main features of the amazon rivers were explained, focusing on sediments transport and the fluvial dynamics.</p> <p>It was also explained the development of projects in the amazon such as the Amazon hydroway and hydroelectric power houses</p>


Activity 8

	<p>Determination of width and depth of meandering rivers:</p> <p>How will they change with climate change and installation of infrastructure</p>
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	<p>Dates</p> <p>August 10th, 2020</p>
	<p>Objectives</p> <p>Show the variations over time in width and depth on Huallaga river and Marañon River</p>
	<p>Description</p> <p>Show the studies focused in the analysis of behaviour of rivers' width and depth through its variation in time due to the process of sedimentation and erosion in rivers</p>

Activity 9

	<p>Flood control in the peruvian amazon</p>
	<p>Dates</p> <p>November 10th, 2020</p>
	<p>Objectives</p> <p>Show the problems generated by the rivers of the jungle also show alternative solutions to these.</p>

 <p>DEFENSAS RIBEREÑAS EN LA AMAZONÍA PERUANA</p> <p>10 NOV 4:00 p.m.</p> <p>Ing. Edgar Rodríguez Zubiate</p> <p>Ingeniero Civil de la Universidad Nacional de Ingeniería, Diploma de Posgrado en el Instituto de Hidráulica de Delft – Holanda, Estudios de Ingeniería de Puentes y Presas en Japón. Docente Principal de la Facultad de Ingeniería Civil de la Universidad Nacional de Ingeniería, es Jefe del Departamento Académico de Hidráulica e Hidrología de la Facultad de Ingeniería Civil. Fue Director de la Escuela Profesional de la Facultad de Ingeniería Civil, y Director del Laboratorio Nacional de Hidráulica – UNI. Es Director de PRIZ Ingenieros SAC.</p> <p>ORGANIZA:</p>  <p>Visítenos en:</p> <ul style="list-style-type: none"> f GIEHH UPN f GEAHH - FICA - UNHEVAL f IAHR UNI- GEAHH - Young Professionals Network 	<p>Description</p> <p>He focused on showing the way in which rivers develop in the Peruvian Amazon, then he sought to explain how they are designed and in what way the riparian defenses act in the fluvial morphology of the river.</p>
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Activity 10


 <p>BALANCE HÍDRICO</p> <p>Considerando el humedecimiento de la cuenca</p> <p>11 NOV 10:00 a.m.</p> <p>Dr. Víctor Miguel Ponce</p> <p>Es Docente Principal de Ingeniería Civil en la Universidad Estatal de San Diego California (SDSU), sus campos de especialización son: la ingeniería hidráulica, hidrológica y de recursos hídricos, con 50 años de experiencia en ingeniería, investigación, y consultoría especializada. Sus áreas de especialización son: hidráulica e hidrología computacional, hidrología de aguas superficiales, hidrología ambiental, hidrología de aguas subterráneas, ecot Hidrología, hidroclimatología e hidrosedimentología. El Dr. Ponce tiene 49 años de experiencia como profesor universitario, incluidos 39 años en California, EE.UU., y 4 años en Colorado.</p> <p>ORGANIZA:</p>  <p>Visítenos en:</p> <ul style="list-style-type: none"> f GIEHH UPN f GEAHH - FICA - UNHEVAL f IAHR UNI- GEAHH - Young Professionals Network 	<p>Water balance: using catchment wetting</p> <p>Dates</p> <p>November 11th, 2020</p> <p>Objectives</p> <p><i>Describe Water balance using catchment wetting</i></p> <p><i>How much water can be pumped from an aquifer maintaining sustainability</i></p>
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Activity 11

 <p>CAPACIDADES DEL MODELO HIDROLÓGICO TETIS EN LA GESTIÓN DE LOS RECURSOS HÍDRICOS</p> <p>Ing. Hebert Tejada</p> <p>12 NOV 08:30 p.m.</p> <p>Es Ingeniero Agrícola de profesión, de la Universidad Nacional Pedro Ruiz Gallo. Posee una maestría en Ingeniería Hidráulica y Medio Ambiente en la Universidad Politécnica de Valencia – España. Tiene experiencia profesional en la formulación y evaluación de proyectos hidráulicos de riego a nivel de estudios pre inversión y estudios definitivos, en intervenciones de Reconstrucción con Cambios a nivel de estudios definitivos de riego, formulación de planes integrales de inundación y movimientos de masa, y estudios hidrológicos – hidráulicos. Actualmente especialista en hidrología y docente universitario.</p> <p>ORGANIZA: VNI UNL GEAAH GEAHH</p> <p>Visítenos en: f GIEHH UPN f GEAHH- FICA- UNHEVAL f IAHR UNI- GEAHH- Young Professionals Network</p>	<p>Hydrologic model Tetis capacity in management of water resources</p> <p>Dates August 10th, 2020</p> <p>Objectives <i>Deliver the usefulness of software TETIS as an application in water resources</i></p> <p>Description In the session they talked about the Hydrological modeling TETIS can provide us and the advantages that it presents.</p>
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Activity 12

	<p>Marañon river and Huallaga river in the Andes</p> <p>Dates August 10th, 2020</p> <p>Objectives Show the studies that are currently taking place in the Huallaga river and Marañon river</p>
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 <p>RÍO MARAÑON Y RÍO HUALLAGA EN LOS ANDES: Sus características, importancias y riesgos.</p> <p>Dr. Kensuke Naito</p> <p>Kensuke recibió una maestría en 2014 del Departamento de Ingeniería Civil y Ambiental de la Universidad de Hokkaido, Japón, y un doctorado en 2019 del Departamento de Ingeniería Civil y Ambiental de la Universidad de Illinois, EEUU. Actualmente él trabaja en el Centro de Investigación y Tecnología del Agua (CITA) en la Universidad de Ingeniería y Tecnología (UTEC) como investigador postdoctorado. Sus especialidades son geomorfología de ríos fluviales, transporte de sedimentos, hidráulica fluvial y sensoramiento remoto.</p> <p>ORGANIZA:</p> <p>UNIVERSIDAD GEAHH GEAHH IAHR UNI</p> <p>Visítenos en: f GIEHH UPN f GEAHH - FICA - UNHEVAL f IAHR UNI- GEAHH - Young Professionals Network</p>	<p>Description</p> <p>The process of the studies in Marañon river and Huallaga river were explained, also the evaluation of river behaviour towards the action of sediments, focusing on measurements taken in the area of study.</p>
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Activities to promote membership:

Activity 1

	<p>Searching for new members GEAHH</p>
	<p>Dates</p> <p>November 14th, 2020</p>
	<p>Objectives:</p> <p>To present our YPN to our fellow university students and this branch of Civil Engineering</p>
	<p>Description</p>



First we got together in a meeting in Google Meet

Second we presented our active members and how we are organized

Third, we talked about the activities we were planning to do with them.

Then some former GEAHH members exposed their current jobs and how our YPN helped them in their career development.

Finally, we took a screenshot with all the participants

5. Partnerships and collaborations

Partner organisations and/or interaction with related national organisations

Organisation	Description of partnership
Geahh-Fica-Unheval	Conferences organization
GIEHH UPN	Conferences organization
CEIC UNI	Conferences organization

Collaboration with other YPNs

YPN name	Description of collaboration
IAHR UTEC Water and Environmental Research Young Professionals Network	Conferences organization
IAHR Pontificia Universidad Católica del Perú Young Professionals Network	Conferences organization

IAHR Universidad Peruana de Ciencias Aplicadas (UPC) CEDIARHMA's Young Professionals Network	Conferences organization
IAHR Universidad Nacional Agraria La Molina CIDRHI Young Professionals Network	Conferences organization

6. Contributing to the strategic plan

7.1. Please describe how your activities in 2020 have contributed to and advocated for IAHR's vision and strategic plan (<https://www.iahr.org/index/detail/101>)

We have held a series of conferences to spread knowledge on various topics.

Some workshops were carried out for the dissemination of knowledge by members of the.

There were indications of investigation within the group and work is continuing.

7.2. Please describe how your YPN contributes to the IAHR YPN high-level aims

Throughout the previous period we have carried out activities with the members of our association to promote a scientific attitude and research skills.

Specifically, we have carried out a reading of scientific articles that include topics related to hydraulic engineering, hydrology, irrigation, drainage and water resources management.

In addition, we have conducted research on specific topics including airport drainage, spatial distribution of rainfall, pluvial drainage systems, water turbines, stream protection and sediment transport. This activity consisted in forming working groups, assigning a topic proposed by a graduate, the graduate will advise the working groups and finally after several weeks the assigned topic will be presented to the group to share the new knowledge they obtained on the topic.