

ACECC FUTURE LEADERS GROUP

NEWSLETTER



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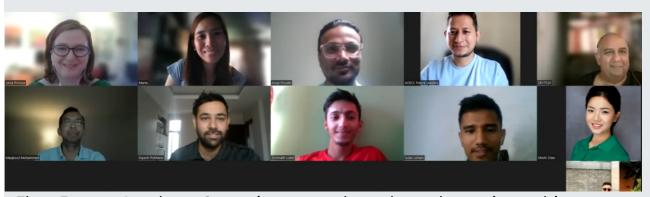
Seminar on "Frontiers Technologies and Innovations in Civil Engineering"

Taiwan

ACECC FLC organized a technical seminar on "Frontiers Technologies and Innovations in Civil Engineering" on 20th September 2023 at the GIS Taipei Tech Convention Centre, Taiwan. There were four future leaders presenting in the seminar... [Read More]

Thematic webinar on "Community Engagement for Resilient Infrastructure"

Pakistan Phillipines Russia



The Future Leaders Committee conducted a thematic webinar on September 30, 2023, with the theme "Community Engagement for Resilient Infrastructure" hosted by Working Group No. 1 comprising of Australia, Japan, Myanmar and Nepal... [Read More]

ACECC Future Leaders



ACECC Future Leaders NEWSLETTER



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2nd ACECC FLC (2023-2024)

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Designed by:

• Er. Suraj Gautam

3RD VOLUME OF ACECC FL NEWSLETTER

Dear Future Leaders,

We are very excited and thankful for your contributions to release this third volume of Future Leaders Newsletter. We'd also like to invite you once again for your kind contribution on the final volume of the newsletter of 2023. As we strive to provide valuable content to our Future Leaders Community, we would love to feature your insights and perspectives on various topics related to Civil Engineering.

We'd like to welcome your amazing stories and experiences in your workplace, ongoing research, thematic articles in the context of Civil Engineering, big news from the Civil Engineering World, Publications and updates from your work. If you want to contribute in our newsletter, please submit it to us at aceccflf@gmail.com cc'd to ersurajgautam@gmail.com. We highly encourage you to write about topics that you are passionate about and that shall serve as a motivation to the Future Leaders community.

Your contribution will not only help our newsletter provide fresh and diverse content, but it will also give you an opportunity to showcase your writing skills and thought leadership to a wider audience. We look forward to hearing from you soon and featuring your work in our upcoming issue. Best regards,

Er. Suraj Gautam **ACECC FLC Chair**

ECH-IEM Conference

Call for Papers

NED University of Engineering and Technology in collaboration with CPEC Unit Higher Education Commission of Pakistan is organizing TECHNOLOGY ENABLED CIVIL INFRASTRUCTURE ENGINEERING & MANAGEMENT CONFERENCE on 15-16 December, 2023 at Syed Mehmood Ul Hassan Auditorium, NED University.

The TECH-IEM conference aims to exchange ideas and experiences of the participants including Chinese specialists, international and national experts, researchers, and academicians related to sustainable development, aiming to promote a more sustainable future and foster collaboration among them.



October 30th, 2023 (Extended)



upto November 15th, 2023 (on Rolling Basis)



Early Bird Registration

Deadline

December 15th, 2023

Call for Papers is open now. The proceedings shall be published in Conference Proceedings Journal (Pending Approval).

You are encouraged to visit the website for further details and submit full papers through the link:

https://tech-iem.neduet.edu.pk/

By Faiza Saeed **ACECC FLC Deputy Chair**



Conference Dates



Message from ACECC FLF Chair

Another successful ACECC 34th TCCM and PCM on 18 September 2023 and the ECM on 19 September 2023 in Taipei, Taiwan. It was wonderful to meet 2 future leaders in person: Suraj Gautam from Nepal (Chair of FLC), Maria Kay Eco from Philippines (Secretary of FLC) and 2 other Future Leaders (Mei-Hui Situ from Taiwan and Ji-Su Kim from Korea) who presented at the FLF Seminar on 20th September.

Great to catchup with Maqbool Mohammed (ASCE colleague) who was formally appointed by the ECM as the ACECC FLF Deputy Chair. Thanks to Maqbool for his assistance with FLF input into finance, awards and ACECC constitution processes. Maqbool and I worked closely with FLC Chair Suraj Gautam and the FLC to include recommendations that were in the September 2023 Future Leaders Activity Report that was discussed with the PCM and ECM in Taiwan. Key recommendations that were discussed with the PCM and approved by the ECM include:

- Approval of the Financial Support Framework for ACECC Future Leaders Committee Members.
- Approval of the proposal for the Future Leaders Award in CECAR.
- ACECC FLC Committee would also like to request for the section of Future Leaders Forum in the website and link to the ACECC Future Leaders Website.
- For the effective and meaningful engagement of the future leaders from each Member Economies, it is recommended to develop a separate Future Leaders Chapter in each of the ACECC member economies. This will increase the outreach and bridging of ACECC Future Leaders on a regular basis.

I encourage ACECC seniors to meet with their Future Leaders quarterly and assist them where required with mentoring and assistance with their planned activities.

Engineers Australia, has an important conference on 30th November in Melbourne, Australia - <u>Climate Smart Engineering</u>. <u>2023 | Engineers Australia</u>

I am the project director at SMEC for a new project called the Roma Street Precinct Masterplan (RSPMP) - Transport and Civil Engineering services for Design Working Group (DWG). The purpose of the RSPMP DWG is to provide a collaborative forum stakeholders between key Queensland including the Queensland and Government Investment Corporation (QIC), to discuss key elements of RSPMP project as it relates to the core area within the Roma Street Cross River Rail (RSCRR) Priority Development Area (PDA). Elements discussed will include the concept planning of the public realm interface with precinct projects and sites.

Cheers, Shalendra Ram, EA ACECC FLF Chair











ACECC FLC organized a technical seminar on "Frontiers Technologies and Innovations in Civil Engineering" on 20th September 2023 at the GIS Taipei Tech Convention Centre, Taiwan. There were four future leaders presenting in the seminar.

Ms. Mei-Hui Situ (CICHE), Assistant Civil Engineer working in the Southern Region Water Resources Agency is in charge of the maintenance of seismic monitoring instruments and supervisor to the engineering in the reservoir's vicinity. She sharing experiences on "Reservoir Sustainability: The Desilting Tunnel Project in Taiwan".

Mr. Suraj Gautam is a geo-hazard researcher working extensively on the application of frontier technologies for the disaster risk reduction and management. He is currently leading a research institute, Institute of Himalayan Risk Reduction which is working towards promoting science and innovations in DRRM. He presented interesting case studies on "Application of (UAV) for Disaster Management: Case Studies from Nepal".

Ms. Mariya Kay S. Eco is a Filipino civil engineer working an Associate ASEAN Engineer who provides free consultation and assistance to those aspiring ASEAN Engineers in the country. Recently, she is exploring for opportunities to share about water resources and hoping to collaborate soon with policymakers. She presented her insights from her Masters dissertation on "Assessment of Climate Change impacts on the water resources of the Lacag River Basin in Ilocos Norte, Philippines using the SWAT Model".

Prof. Ji-Su Kim is working as an assistant professor in the Department of Civil engineering at University of Seoul. Her research interests include random heterogeneous materials, correlation analysis b/w microstructure and property, disaster prevention-mitigation. She showcased some interesting examples and "Overview of 3D concrete printing technology in construction and building industry".





Ms. Mei-Hui Situ is a Assistant Civil Engineer working in the Southern Region Water Resources

She is passionate about using my knowledge and skills to address and solve challenging problems. She joined the Water Resources Agency, also known as WRA 2 years ag. Recently. She is in charge of the maintenance of seismic monitoring instruments and supervisor to the engineering in the reservoir's vicinity.

Mei-Hui Situ sistant Engineering Southern Region Water

Wednesday, Sep 20, 2023

Venue: Hybrid (In person at Everlight Building. Taipei Tech University, Taipei & Google Meet)

"Reservoir Sustainability: The Desilting Tunnel Project in Taiwan"



Chair. ACECC Future Leader Committee

Mayor's Research Fellowship With Kathmanu th Metropolitan City. He is currently leading a research institute, Institute of Himalayan Risk Reduction which is working towards

promoting science and innovations in DRRM. Venue: Hybrid (In person at Everlight Building, Taipei Tech University, Taipei & Google Meet)

Wednesday, Sep 20, 2023 16:30 - 17:50 Application of (UAV) for Disaster Risk Management:

Case Studies from Nepal



Prof. Ji-Su Kim is working as an assistant professor in the Department of Civil engineering at University of Seoul. Her research interests include random heterogeneous materials, correlation analysis b/w microstructure and property, disaster prevention-mitigation. Her current research focus is on 3D concrete printing from material development to pattern optimization

The demand for eco-friendly construction and building materials has grown in recent year. To expedite the material development process while minimizing waste, virtual laboratories that leverage computer simulation and modeling have emerged as a complementary approach to traditional experimentation. Prof. Ji-Su Kim will introduce the potential of virtual laboratories to accelerate material development and optimization, with a particular focus on

"Overview of 3D concrete printing technology in construction and building industry"



Engr. Eco is a Filipino civil engineer who holds the degree of Master of Science in Engineering Major in Soil and Water Resources Engineering. With her active involvement in PICE-Ilocos Norte Laoag Chapter as the Secretary, she was appointed as the Female Representative in the Asian Civil Engineering Coordinating Council who is now holding the position of $% \left\{ 1,2,...,n\right\}$ Secretary of the Future Leaders Committee. She is passionate to serve the civil engineering students in her province through her active participation whenever she receives invitations from the universities as speaker. panelist, and part of the board of judges. She is also an Associate ASEAN Engineer who provides free consultation and assistance to those aspiring ASEAN Committee & Engineer II, DPWH-II.00005 Engineers in the country. Recently, she is looking for opportunities to share about water resources and hoping to collaborate soon with policymakers.

Venue: Hybrid (In person at Everlight Building, Taipei Tech University, Taipei & Google Meet)

Assessment of Climate Change impacts on the water resources of the Laoag River Basin in Ilocos Norte, Philippines using the SWAT Model

















Photo Credits: Nepal Engineers' Association

NEA Celebrates 61st Engineer's Day in Nepal

Nepal Engineers' Association organized the 61st Engineers Day on July 19, 2023 under the gracious presence of Hon'ble Prime Minister Mr. Pushpa Kamal Dahal and Hon'ble Minister Mr. Prakash Jwala of Ministry of Physical Infrastructure and Transport. The program was organized under the theme of "Base of Economic Growth: Technology and Infrastructures" and had two technical sessions (I. Infrastructure & Economy, II. Al in a Digital Age). . NEA expressed the vote of thanks to the chief guests, special guests, high ranking officers of Nepal Government, heads and representatives of various organizations, Session Chairs, Key note Speakers, Panelists, Moderators, Rapporteurs, Awards Selection Committee, sponsors and all the engineers. On the occasion of 61st Engineers Day, outstanding engineers in the country were awarded under different themes. The selection was made by the Award Selection Committee:

- 1. Life Time Achievement Award: Er. Bhoj Raj Regmi
- 2. Martyr Engineer Nawaraj Bista Memorial Award: Er. Sachindra Kumar Dev
- 3. Outstanding Youth Professional Award: Er. Amit Agrawal
- 4. Outstanding Woman Engineer Award: Er. Shuva Laxmi Shrestha
- 5. Engineers' Appreciation Award for Best Management: Er. Umesh Prasad Thani
- 6. Distinguished Public Service Award: Er. Sarita Dawadi
- 7. Engineering Academic Excellence Award: Er. Prof. Dr. Narendra Man Shakya





Photo Credits: Jasper Dawang: Maria Kay S. Eco together with her Thesis Adviser, Dr. Nathaniel R. Alibuyog (left), and the Department Chairman of Agricultural and Biosystems Engineering, Dr. Reynold M. Caoili (right), during the hooding ceremony, held on July 14, 2023, at Sunken Garden-Mariano Marcos State University.

Maria's journey in taking up MSE SWRE

Engr. Maria Kay S. Eco, ACECC Future Leaders Committee Secretary, has always been concerned about soil and water conservation, which includes flood and water scarcity issues. This led her to take up a Master of Science in Engineering Major in Soil and Water Resources Engineering that will help her be technically equipped.

The Philippine Institute of Civil Engineers (PICE) has eight specializations: Project Management and Construction Engineering, Civil Engineering Education, Highway Engineering, Hydraulic Engineering, Quantity Surveying, Soil and Geotechnical Engineering, Structural Engineering, Environmental Engineering, and Energy Engineering. Instead of choosing from one of these, she pursued a degree that is under the program of Agricultural and Biosystems Engineering at Mariano Marcos State University, her undergraduate Alma Mater.

This specialization focuses on soil and water management and conservation. It offers sustainable practices that will protect these essential resources now and in the future. Academic subjects emphasize the functions and dynamic nature of the soil and water resources. Based on the most current scientific information and case studies from real-life situations, students learn ways to predict and mitigate the degradation of these resources.

The Philippines is a tropical country and experiences flooding every year. Engr. Eco studied the Assessment of Climate Change Impacts on the Water Resources of the Laoag River Basin in Ilocos Norte using the SWAT Model. Using the Soil and Water Assessment Tool (SWAT) is a new thing for her. Her Thesis Adviser played a great role in helping her understand the concept of the said tool.

The climate change impact on the water resources of the Laoag River Basin was simulated using the calibrated SWAT model by considering the RCP 8.5 projected seasonal precipitation changes that will likely decrease by as much as 10.1% and increase in temperature by as much as 1.6 degrees Celsius in 2050. Results show that the annual rainfall amount will likely decrease by 7.27%, which will result in a decrease in surface runoff by 11.59%, groundwater recharge by 10.19%, and water yield by 11.10%. Such a decrease may have environmental impacts and would affect the available water resources within the river basin. Thus, water managers, policymakers, and stakeholders must implement water conservation measures, establish a comprehensive water management plan, develop alternative water sources, promote afforestation, educate the public, and acquire telemetered instruments.

"Completing my research study has opened an opportunity for me to become an advocate of soil and water resources engineering who can be able to talk about related issues for public awareness and the development of policy recommendations. My journey as an MSc student made me desire more to be of help in mitigating flood and water scarcity issues.", Engr. Eco testified.

Indeed, the degree she holds will help with the realization of the Sustainable Development Goals, particularly the core of the 17 goals, which is clean water and sanitation.

Kudos to our soil and water resources engineer!!!



Dr. Ji-Su Kim at the FLF Technical Seminar

I am a Future Leader representing the Korea Society of Civil Engineering (KSCE) and currently working as an assistant professor at the University of Seoul. In September, I had the privilege to attend the 45th ECM and ACECC conference held in Taiwan, thanks to the generous support of KSCE and FLF (Future Leaders Forum). This opportunity allowed me to gain valuable experiences and create lasting memories.

Furthermore, I had the honor of presenting at the FLF, marking my second presentation at an FLC event. My initial presentation occurred in April during the 44th ECM in Jeju Island, Korea, under the the session title "Innovations in Civil Engineering towards Sustainability." For the 45th ECM, I presented with the theme of "Frontiers Technologies and Innovations in Civil Engineering."

At this time, the FLF Seminar showcased four presentations. Engr. Mei-Hui Situ, representing CICHE, delivered the first presentation, shedding light on the Desilting Tunnel Project in Taiwan. The second presentation, by Engr. Suraj Gautam from Nepal, provided insights from case studies on disaster risk management in Nepal. The third presentation, conducted by Engr. Maria Kay S. Eco, representing PICE, delved into climate change and water resources. For the last presentation, I provided the overview of the application of 3D printing in the construction and building industry.

Participating in the FLF session was most meaningful for me as it provided a unique opportunity to meet the FLC members in person. In the field of international collaboration and activities, direct encounters are often limited, but during this ECM, I was thrilled to meet FLF representatives from various countries. It was particularly rewarding to engage with future leaders from diverse fields, each exploring issues such as climate change, drones, and 3D concrete printing, and their efforts to integrate cutting-edge technologies into civil engineering. I believe this experience has opened up possibilities for future collaborations and discussions on how we can work together to address the challenges and opportunities in our respective fields.

These experiences expanded my knowledge and deepened my understanding of the field, and I am grateful for the support and opportunities provided by KSCE and FLF, as well as the inspiring presentations and discussions at the FLF. I look forward to the opportunity to meet everyone again at the upcoming ECM or the CECAR 10 conferences scheduled for 2025.

Frontiers Technologies and Innovations in Civil Engineering



Dr. Ji-Su Kim

Korea/KSCE

University of Seoul

Prof. Ji-Su Kim is working as an assistant professor in the Department of Civil engineering at University of Seoul. Her research interests include random heterogeneous materials, correlation analysis b/w microstructure and property, disaster prevention-mitigation. Her current research focus is on 3D concrete printing from material development to pattern optimization.

The demand for eco-friendly construction and building materials has grown in recent year. To expedite the material development process while minimizing waste, virtual laboratories that leverage computer simulation and modeling have emerged as a complementary approach to traditional experimentation. Prof. Ji-Su Kim will introduce the potential of virtual laboratories to accelerate material development and optimization, with a particular focus on sustainability.

Wednesday, Sep 20, 2023 16:30 - 17:50 Venue: Hybrid (In person at Everlight Building, Taipei Tech University, Taipei & Google Meet)

"Overview of 3D concrete printing technology in construction and building industry"



FLC Chair shares his ECM Experience

I am honored to serve as the Chair of the Future Leaders Committee and to contribute to our vision. The Second Tenure of ACECC FLC commenced in January 2023 with renewed leadership, and I am thrilled to witness the growing interest and active engagement of our Future Leaders. Our shared objective is to establish a dynamic platform for exchanging insights, knowledge, and experiences that transcend borders.

In the span of 9 months, we have made significant progress in fulfilling our commitments. The inclusive and dynamic ACECC FLC has introduced working groups, including WG 1: Activity Management, WG 2: Newsletter, WG 3: Research & Documentation, and WG 4: Website, Communication & Social Media Handling. Members were invited to express their interest in participating in these Working Groups through a circulated Expression of Interest (EoI) form. Additionally, a dedicated group for organizing webinars was established.

The committee has successfully organized two thematic webinars: 1) "Recent Earthquakes in the Region - Lessons for Civil Engineers" and 2) "Community Engagement for Resilient Infrastructure." We invited resource persons from Turkey, Nepal, USA, and Australia to share their experiences with the civil engineering community. Recordings of these webinars are available on our YouTube channel:

https://www.youtube.com/@aceccflc5937

Furthermore, ACECC FLC has published two editions of the Newsletter, featuring articles, accomplishments, and updates from Future Leaders across various member economies of ACECC. The newsletters can be accessed at https://aceccfutureleaders.org/download. We are committed to fostering collaboration and knowledge-sharing, and I look forward to the continued success of ACECC FLC in the coming months.

Attending the 45th ECM hosted by CICHE marked my inaugural in-person presence in the ACECC Forum, following the virtual engagement of ACECC FLC in the 44th ECM. Participating in TCCM, FCM, PCM, and ECM meetings was a valuable learning experience. The vibrant atmosphere of the meetings, networking sessions, on-site events, and field visits stood out as the highlights of my in-person attendance.

In its activity report, ACECC FLC sought proposals for the ACECC Future Leaders Financial Support Framework for attending ECMs and proposed Future Leader Awards. These proposals garnered unanimous support from distinguished delegates representing ACECC member economies and received ECM approval. Additionally, ACECC FLC consistently organizes the Future Leaders Forum Seminar at ECMs.

During the recently concluded 45th ECM, ACECC FLF hosted a seminar on "Frontiers Technologies and Innovations in Civil Engineering," featuring presentations from Future Leaders of CICHE, NEA, PICE, and KSCE. I had the pleasure of presenting alongside three other outstanding Future Leaders. In the 44th ECM organized by KSCE, ACECC FLC held a FLF Seminar on "Innovations in Civil Engineering towards Sustainability," with Future Leaders from KSCE and FED.MES serving as resource persons.

We express our gratitude for the ACECC's support, enabling two Future Leaders to participate in the 45th ECM. The introduction of sustainable efforts for Future Leaders in such forums will undoubtedly contribute to the development of the Sustainable Future Leaders Forum (FLF), fostering a diverse and inclusive culture for young civil engineers. This initiative aims to create avenues for professional development and enhance strong international technical collaboration among young civil engineers across ACECC member economies.

THEMATIC WEBINAR



The Future Leaders Committee conducted a live webinar on September 30, 2023, with the theme "Community Engagement for Resilient Infrastructure" hosted by Working Group No. 1 comprising of Australia, Japan, Myanmar and Nepal.

Two estemeed speakers from Australia and Nepal had shared their knowledge and expertise on community engagement. Leisa Prowse, a Director at Leisa Prowse Consulting from Australia, talked about the topic "Resilient infrastructure and community engagement — an Australian practitioner's perspective of best practice" and Mr. Anup Poudel, a Structural Engineer from Nepal shared about his recent experience of working with community after the Gorkha Earthquake 2015.

Prowse emphasized that significance of community engagement for resilient infrastructure. She also focused on the meaning of engagement and how components like stakeholder, communication, proactiveness and participation matters.

On the other hand, Mr. Anup highlighted the components of resilient infrastructure and importances of community engagement as a vital part prior to implementation of projects leading to resilient infrastructure. Mr. Poudel focused on the aspects of Continuity, recovery, adaptibility, sustainability and community-centered appraoches for the resilient infrastructure. To those who missed to attend the webinar may watched the livestreamed event through our Youtube Channel https://youtu.be/fDA-Ccmgrl0?si=5lwPBhK_KlWzw3QS

THE SPEAKERS PROFILE

Leisa is the Director of Leisa Prowse Consulting. Established in 2013, Leisa Prowse Consulting helps organisations deliver infrastructure and planning projects and explore complex and sensitive community with their challenges stakeholders. With more than 30 years of in community and stakeholder engagement, and almost 300 projects under her belt, Leisa understands complex and contentious projects in the transport, resources, energy, water, education, health, property and government sectors, and the challenges they face. Leisa is tertiary-qualified in both town planning and communication. This combination of skills enables her to meaningfully engage with a range of stakeholders, from landowners to legislators, while ensuring that the results of engagement processes readily can be incorporated into technical studies and add value to project outcomes. Leisa is a Fellow of the International Association for Public Participation (IAP2) Australasia. For the past 4 years Leisa has served as a major awards judge for the IAP2 Australasia Core Values Awards.

Mr. Poudel is a professional working in section of Disaster risk reduction and infrastructure sector with 7 years of experience through different programs in Municipalities. He has served as a leader in aiding municipalities in building code implementation section at devising plans and procedures of the municipality. He has led several training programs for numerous stakeholders in Safer Building Construction. He has been involved in Building Code Compliance Survey and Building Inventory Design Survey along with the data management and extraction of analytical and statistical results. He has extensive knowledge in Earthquake resistant buildings, and is experienced in site management of retrofitted building construction. His expertise also extends to policy development with active involvement in development of legal documents in building code implementation and building permit system at municipalities. He has worked in housing reconstruction along with construction of transition shelter for affected populations in fire. In addition to this Mr. Poudel has also involved in community level works through retrofitting of ward buildings and other infrastructure related works.