

THE 5TH INTERNATIONAL CONFERENCE
ON GREEN TECHNOLOGY AND SUSTAINABLE DEVELOPMENT

VIRTUAL GTSD2020

CONFERENCE PROGRAM

November 27-28, 2020

Ho Chi Minh City, Vietnam

Co-organized by:



In cooperation with:



Sponsored by:



Springer

IEEE
SMC

Systems, Man, and Cybernetics Society



WELCOME MESSAGE

Distinguished participants,
Ladies and gentlemen,

It is our great pleasure to welcome you to The 5th International Conference on Green Technology and Sustainable Development (GTSD2020).

We originally looked forward to seeing you at the Conference in Da Nang City, Vietnam. Unfortunately, due to the worldwide spread of Covid-19, the Organizing Committee has decided to convert the conference into virtual format for health and safety of all participants which are at the highest priority.

GTSD2020 aims to provide a unique opportunity for international scholars, researchers and practitioners who are working in the fields of green technology and sustainable development to get together and share their latest research findings and results.

We hope the participants will get the theoretical achievements, practical knowledge and personal contacts that will help you build up long-term, profitable and sustainable communication among researchers and practitioners in a wide range of scientific areas.



Prof. Dr. Do Van Dung,
President, HCMUTE, Vietnam
Honorary Chair

On behalf of all the Conference Organizing Committees, we would like to thank all of the authors for your valuable submissions. Thanks also go to the Program Committee members and external reviewers for your hard-working and responsible contribution. Your high expertise, enthusiasm, valuable time and knowledge, have enabled us to prepare this conference. To our keynote speakers, welcome and thank you for accepting our invitation and spending your valuable time to share your experience with us. Finally, we highly appreciate the sponsors for making this event a success through your generosity.

Please stay safe from Covid-19. We look forward to seeing you all again at our next events.

Best wishes!

OPENING SPEECH OF HCMUTE

Distinguished participants,
Ladies and gentlemen,

Welcome you to the GTSD2020 Conference, a new milestone in the 2-year periodical series of Green Technology and Sustainable Development International Conference started since 2012 in Ho Chi Minh City University of Technology and Education (HCMUTE). After taking place in Taiwan in 2018, the conference comes back to Vietnam this year.

As you have all known well, Covid-19 spread has affected almost all fields throughout the world and its negative influence is predicted not yet to end soon. Governments of all nations in the world are prioritizing safety of people from the pandemic and encouraging social distance. Vietnam is not an exception. Conventional events and activities in Education and Scientific Research in our country are also suffering from this pandemic. GTSD 2020 conference, therefore, faces a big challenge in organizing work as well as its format and venue. As originally announced, the conference was supposed to take place in Da Nang City. However, we did have to change according to the uncertainty of the epidemic. Fortunately, HCMUTE long ago already prepared a high-quality internet infrastructure to serve for online learning platform, and today, this turns out to be a powerful solution to the Covid-19 situation. For this reason, while all the previous Conferences in GTSD series were conducted traditionally face-to-face, this is the very first time the conference is conducted 100% virtually.

One more special new thing about our GTSD2020 is that the conference has 02 separated proceedings, one of which is published by Springer and the other one is published by IEEE. Being recognized by both these prestigious publishers is a proof for the non-stop increasing quality of our conference series. With more than 400 submissions received, our cautious and responsible scientific committee has selected only 54 papers for the Springer volume and 120 papers for the IEEE volume. Such high elimination rate shows that the peer-reviewing process has been seriously



A. Prof. Dr. Ngo Van Thuyen,
University Council Chairman, HCMUTE, Vietnam

conducted with the emphasis on scientific quality of the research papers. We highly appreciate the patience of authors who, in some cases, have had to upgrade their paper even more than twice to obtain its best status that meets with the demands or suggestions of reviewers. All these selected papers will be presented in the 26 separated sessions within 2 days of GTSD 2020, the 27th and 28th of November 2020.

Moreover, in this occasion, GTSD 2020 committee is delighted to bring to you keynote speeches from 4 respected speakers in different fields and from different countries, including Poland, Finland, Australia and Taiwan. We strongly believe that their valuable speeches will enrich our understanding and knowledge about Green technology and Sustainable development in the context of Industrial Revolution 4.0.

Ladies and gentlemen, please let us take this opportunity to show our gratitude to the distinguished speakers, participants and colleagues for your invaluable contributions to our conference. Great thanks also go to the many reviewers for their respectful scientific supports. Thanks also go to member institutions and partner universities for being together with us in organizing the conference. Finally, we thank very much the organizing committee members for all your long hard working period to prepare for this event. We wish you all health and safety!

Thank you again!

OPENING SPEECH OF UD

Dear honored guests,
Ladies and gentlemen,

It is my great honor to deliver the opening speech on behalf of The University of Da Nang, a Co-Host university for the prestigious GTSD International Conference in 2020.

As a key regional university providing a wide range of courses and training programs at multi-level and multi-disciplinary. We have 05 member universities, 01 College of Information Technology and 06 affiliated training units. For nearly 45 years, the university has provided the Central-Highlands region and the whole country with a large resource of leaders, managers, experts and entrepreneurs in many key fields of engineering - technology, economics - law, social sciences and humanities, education, language - culture, medicine. Alumni, postgraduate students and PhD students of our university are successful and have held key positions and responsibilities in agencies, organizations, schools and businesses that have contributed significantly to the cause of socio - economic development of the region and the country. We always focus on building the human resources, improving the quality of training and scientific research, consider it a "vital" factor, a goal and motivation to confirm the prestige and quality of the top leading university in Vietnam with ranking in the regional and international higher education system. Taking important mission, responsibility and the great trust of the Government and the Ministry of Education and Training, the university is directed to promote investment in the construction of the Urban University of The University of Da Nang (in Hoa Quy-Dien Ngoc) to "become one of the three prestigious training and scientific research centers on a regional and global scale, making an important contribution to the process of integration and renovation of the country's higher education.

The University of Da Nang is happy to cooperate with HCMUTE in organizing this important scientific event. We do hope and highly encourage experts, outstanding researchers and colleagues to network and exchange their latest findings and solutions to problems for our better future lives. We also believe that authors from 25 countries such as Australia, Germany, France, Finland, Ireland, Italy, Russian, UK, India, Japan, Taiwan, South Korea, Thailand, Vietnam and so on, will share the same language of innovation in science and technology through professional discussions.

Ladies and gentlemen, I would like to say that due



A. Prof. Dr. Le Quang Son,
Vice President
The University of Da Nang

to Covid-19, it is really a big pity that The University of Da Nang has missed the chance to welcome you to our campus in the beautiful and world famous seaside Da Nang city. Being a main co-organizer in holding the GTSD 2020 international conference, we have supposed to offer you not only a great event for scientific research exchange among experts but also a decent stay in Vietnam at the end period of November 2020. However, all such preparation was not realized and replaced by the virtual form in order to assure health and safety of all participants. In GTSD 2020, there are totally 174 selected papers to be presented in 26 separated sessions with various scientific topics and distinguished chairmen. The papers are published by Springer and IEEE in 2 proceedings. Participants are kindly invited to join in the sessions of their interest in order to gain the most knowledge and experience. To make sure you are familiar with the online platform of the conference and able to find the session room correctly, please refer to the Conference booklet for the information and instruction you need.

Finally, this event would not have been possible without the supports from all of the stakeholders. We would like to thank all participants for your invaluable participation and contribution to the conference. Many thanks also go to the organizing committee for their devoted assistance in the overall organization work. Despite the fact that The University of Da Nang is the co-host of the event, we highly appreciate the cooperation of the outstanding team from Ho Chi Minh City University of Technology and Education. Such collaboration is for sure a milestone of the desirable brotherhood relationship between our two universities.

Thank you and best wishes!

KEYNOTE SPEECH

Topic: Computational Aspects of Collective Intelligence



Professor Nguyen Ngoc Thanh

Full Professor of Wroclaw University of Science and Technology

Head of Department of Information Systems

Chair of IEEE SMC Technical Committee on Computational Collective Intelligence

Email: Ngoc-Thanh.Nguyen@pwr.edu.pl

Nguyen Ngoc Thanh is a state professor of Poland and Vietnam, and a full professor of Wroclaw University of Science and Technology, and the Head of Information Systems Department in the Faculty of Computer Science and Management. His scientific interests consist of collective intelligence, knowledge engineering, inconsistent knowledge processing, and multi-agent systems. He has edited more than 30 special issues in international journals, 52 books and more than 50 conference proceedings. He is an author or co-author of 5 monographs, more than 400 journal and conference papers and 2 patents. Prof. Nguyen serves as Editor-in-Chief of International Journal of Information and Telecommunication (Taylor&Francis), Transactions on Computational Collective Intelligence (Springer), Vietnam Journal of Computer Science (World Scientific) and International Journal of Intelligent Information and Database Systems (Inderscience). He is also an Associate Editor-in-Chief of Applied Intelligence (Springer) and Associate Editor of several prestigious international journals. He was a General Chair or Program Chair of more than 40 international conferences. He serves as an expert of National Center of Research and Development and European Commission in evaluating research projects in several programs like Marie Sklodowska-Curie Individual Fellowships, FET and EUREKA. He has given 20 plenary and keynote speeches for international conferences, and more than 40 invited lectures in many countries. In 2009 prof. Nguyen was granted of title Distinguished Scientist of ACM. He was also a Distinguished Visitor of IEEE and a Distinguished Speaker of ACM. He serves as the Chair of IEEE SMC Technical Committee on Computational Collective Intelligence. Prof. Nguyen is a member of The Committee on Informatics of the Polish Academy of Sciences and The Council of Scientific Excellence of Poland. His homepage: <http://staff-ksi.pwr.edu.pl/nguyen/>

KEYNOTE SPEECH

Topic: AI vs AI: Intelligence Amplification with DDNA



Professor Edward Szczerbicki

Conjoint Professor
School of Engineering (Mechanical Engineering)
The University of Newcastle, Australia
Email: edward.szczerbicki@newcastle.edu.au

Professor E Szczerbicki has had very extensive experience in the area of intelligent systems development over an uninterrupted 35 year period, 15 years of which he spent in the top information science research centres in the USA, UK and Germany. In this area he contributed to the understanding of information and knowledge management in complex systems operating in changing environments characterised by informational uncertainties. He has published over 300 refereed papers which attracted more than 1400 citations over the last 20 years (ISI Web of Science; Google Scholar).

His DSc degree (1993) and the Title of Professor (2006) were gained in the area of information science for his international published contributions. Since coming to Australia in 1994, he has been awarded over 20 different competitive grants, and has also coordinated 4 Large European Union (EU) grants in the area of intelligent systems development. Contribution to the Research Area of Intelligent Information and Knowledge Management. The research of Prof Szczerbicki contributes significantly to the area of smart information use in modelling and development of complex and intelligent systems. With his papers published in the beginning of the nineties in IEEE Transactions he developed autonomous systems based on information processing for the purposes of intelligent decision support. This was his unique contribution to the emerging cross-disciplinary research area of smart information use for which information has a value, is treated as the main resource, and is the basis for intelligent decision making. Since then, he has contributed to the field with over 200 refereed publications making an outstanding impact at the international level.

In 1999 he was invited to serve as a Board Member of International Academic Advisory Council for Natural and Artificial Intelligence Systems Organization (NAISO), Canada. He was also invited to join Editorial Boards of Cybernetics and Systems, Cognitive Processing, International Journal of Knowledge-Based Intelligent Engineering Systems, and Management and Control. The contributions of Professor Szczerbicki have additionally been most recently acknowledged by (i) 20 invitations to deliver keynote addresses at international conferences (ii) invitation to act as a General Chair for International Symposium on Advances in Intelligent Industrial Systems, Australia 2000, Co-Chair for International Conference on Intelligent Information Technology for Environmental Engineering, Poland 2003, Track Chair for KES06, KES10, KES12 in the UK and (iii) invitation to guest edit over 20 volumes of CBS Special Issue on Intelligent Systems in the period of 2002-2016.

KEYNOTE SPEECH

Topic: Collaborative Robotics Applications and Potential for Sustainable Development



Francois Christophe, D.Sc. (Tech.)

Principal researcher
HAMK Tech
Häme University of Applied Sciences
Hämeenlinna, Finland
Email: francois.christophe@hamk.fi

Francois Christophe received the M.Sc. (Tech.) degree in Software Engineering from Brest National Engineering School, France, in 2007. He then pursued his doctoral thesis in co-supervision between Aalto University School of Engineering (Finland) and Nantes Centrale Engineering School (France) which he defended in 2012.

After post-doctoral research on bio-integrated sensor networks at the Pervasive Computing Department of Tampere University of Technology (2014-2017) and working as university researcher in the Empirical Software Engineering research group, at the Department of Computer Science of University of Helsinki (2017-2019), he is currently leading the Robotics group as Principal researcher at HAMK Tech, Häme University of Applied Sciences. His research interests evolve around collaborative robots, machine vision, swarm robotics, autonomy and artificial intelligence. View detail his publication at https://www.researchgate.net/profile/Francois_Christophe.

KEYNOTE SPEECH

Topic: The State of the Art and Future Prospect of Green Energy Development in Taiwan



Professor. Yan-Kuin Su

Chair Professor in Kun Shan University
Director of Green Energy Technology Research Center
Tainan Taiwan
Email: yksu@mail.ksu.edu.tw

Professor Yan-Kuin Su is currently a Chair Professor in Kun Shan University (KSU), Tainan Taiwan. He is now a Director of Green Energy Technology Research Center, supported by Ministry of Education Taiwan. He even served as President of KSU from 2007 to 2018. He also even worked as Chairman of Department of Electrical Engineering NCKU from 1989 to 1993. From 1995 to 1998 and 2001 to 2007 he served as Dean of Research and Development and Dean of Academic Affairs, NCKU respectively. His research interests are in the semiconductor and optoelectronic devices. So far he has published own 750 SCI journal papers and got over 80 patents in Taiwan and United States. He is an IEEE Life Fellow since 2018 and IEEE Fellow in 2007 for great contributions to optoelectronics and nanophotonics research and education. He is also a SPIE Fellow since 2012 and an OSA Fellow since 2013. In 1993 he was a visiting Professor in Stuttgart University, Germany, in 1986 a member of technical staff (MTS) in AT&T Bell Laboratories, US. And an Adjunct Professor of State University of New York, Binghamton, US in 1991–1997. He has got many prizes and medals during his research career including four times of excellent research awards from National Science Council (NSC) Taiwan.

ONLINE PRESENTATION GUIDELINE

Online GTSD 2020 will be hosted via ZOOM platform

1. Preparation

1.1 Necessary equipment:

- 1) A computer with internet connection (wired connection recommended)
- 2) A USB plug-in headset with a microphone (recommended for optimal audio quality)
- 3) A built-in or USB plug-in Webcam

1.2 Environment requirements

- 1) A quiet location/room
- 2) A stable internet connection
- 3) Proper lighting

2. How to use Zoom

Step 1: Download Zoom from the link: <https://zoom.us/download>

Step 2: Sign up for an account

Step 3: Set up the language(s) and do some basic test

For more skills, you can find more video tutorials on:

<https://support.zoom.us/hc/en-us/articles/206618765-Zoom-Video-Tutorials>

Step 4: How to join the conference online

- 1) Open the program, search with your paper ID, find your presentation, you will see there is a meeting ID/link and the password in each session.
- 2) Click the meeting link or Open the ZOOM, click the join, paste the meeting ID, enter the password, then you can join the conference.

Step 5: Rename your account (**ATTENTION PLEASE !!!**)

When you sign in your Zoom account to participate in your session, please kindly modify your account name in this format: your **Paper ID _ Full name**, so that our chairmen could easily recognize who you are and if you are presenting in the next turn

Step 6: Get familiar with the basic functions: Chat, raise hands, and screen share, etc. The most important function is share screen, because you will use it for your online presentation on November 27 or 28.

3. Zoom test-session before the formal session

The online meeting link of each session will be opened on November 25 and 26 for testing, we request that you please access the link of your session to test ZOOM usage for all the above-mentioned functions. The detailed testing schedule is available on the conference website: <http://qttd2020.hcmute.edu.vn>

4. Important notes

4.1. Form of presentation

The presentation must be prepared in either of the following forms:

- a regular presentation (*to be presented live*), or
- a video file (*for back-up in case of unstable internet connection*)

To deliver your presentation, you should open it in a window before logging into your session.

4.2. Recorded GTSD2020 Conference

The GTSD2020 conference will be FULLY recorded. Thus, we very much appreciate your proper behaviors. And your live presentation is highly preferable.

4.3. Video Instructions

Each presentation lasts in 20 minutes within which the video/presentation should be within 10-15 minutes and succeeded by a 5-minute Q&A.

Due to the quite tight agenda of GTSD2020, to effectively control the time and avoid unexpected delays, it is highly recommended that you record your presentation in advance as a back-up and send this video to us in advance. In case of internet connection failure, late arrival/log-in or other technical problems, we could play the video when it is your turn for presentation.

To make this video:

- a) Author(s) records a video introduction with his/her own image, speaking to the camera, self-introducing name, affiliation, brief description of scope of his/her work.
- b) Author(s) then switches to their slides and provides a voiceover describing images in each slide.

Please be very well-noted that even in the case you have a well-prepared video presentation, you must still be present and ready for the live Q&A within your time slot.

Please name your video/presentation file and the pre-recorded back-up presentation video with your paper ID and upload them together to <https://driveuploader.com/upload/KHZ00UzhJn/> no later than November 22, 2020.

4.4. Local Time Reminder

The time shown in this schedule is Coordinated Universal Time (UTC+7) – Vietnam Local Time, you are requested to carefully check for your own formally assigned presentation time and convert to your local time zone.

TIME ZONES

UTC (GMT): Portugal, UK

UTC (GMT) + 1: Poland, Croatia, Czech Republic, Denmark, France, Germany, Hungary, Spain

UTC (GMT) + 2: Romania

UTC (GMT) + 6: Bangladesh, Kazakhstan

UTC (GMT) + 7: Vietnam, Thailand, Indonesia (Jakarta)

UTC (GMT) + 8: Malaysia, Philippines, Singapore, Taiwan

UTC (GMT) + 9: Japan, South Korea

UTC (GMT) + 11: Australia (Melbourne, Sydney)

UTC (GMT) + 13: New Zealand

PROGRAM OUTLINE

Day 1: Springer Volume Friday, November 27, 2020		
UTC + 7	UTC + 1	
08:00 - 17:30 (Vietnam)	02:00 - 11:30 (Poland)	HelpDesk Link: https://zoom.us/j/93480721701?pwd=anUwSTIOeS9TVkNRRcTBTGtWUGRqZz09 Zoom ID: 934 8072 1701 Password: gtsd2020
08:30 - 11:30 (Vietnam)	02:30 - 5:30 (Poland)	Parallel session No. 1 (PS-1) Topic: Artificial Intelligence and Cyber Systems Chair: Dr. Yi-Liang Hu, Taiwan Dr. Tran Vu Hoang, Vietnam Connection Venue: Room No. A1-803 Link: https://zoom.us/j/98509986333?pwd=M1Vka3JGdUVReUhEMWl2MFBBrRGF3dz09 Zoom ID: 985 0998 6333 Password: gtsd2020
08:30 - 11:30 (Vietnam)	02:30 - 5:30 (Poland)	Parallel session No. 2 (PS-2) Topic: Robotics and Intelligent Systems Chair: Prof. Dr. Wen-June Wang, Taiwan Dr. Vu Van Phong, Vietnam Connection Venue: Room No. A1-804 Link: https://zoom.us/j/92635126067?pwd=RzJYc2Z0enZPZ1ZPak0vMkFQclRyQT09 Zoom ID: 926 3512 6067 Password: gtsd2020
08:30 - 11:30 (Vietnam)	02:30 - 5:30 (Poland)	Parallel session No. 3 (PS-3) Topic: Green energy and power systems Chair: Prof. Dr. Chang-Ren Chen, Taiwan Assoc. Prof. Dr. Truong Dinh Nhon, Vietnam Connection Venue: Room No. A1-601B Link: https://zoom.us/j/92939405669?pwd=YWFqNVA1ZHZ0SFRBcnhGQnlrY0J3UT09 Zoom ID: 929 3940 5669 Password: gtsd2020
08:30 - 10:30 (Vietnam)	02:30 - 4:30 (Poland)	Parallel session No. 4A (PS-4A) Topic: Mechanical and Computational Mechanic models - A Chair: Prof. Dr. Pracha Yeunyoungkul, Thailand Assoc. Prof. Dr. Truong Nguyen Luan Vu, Vietnam Connection Venue: Room No. A1-602 Link: https://zoom.us/j/96126694793?pwd=TTRQNnNWNjBOaW9lNjIjBaUc0S3ZCQT09 Zoom ID: 961 2669 4793 Password: gtsd2020
08:30 - 10:30 (Vietnam)	02:30 - 4:30 (Poland)	Parallel session No. 4B (PS-4B) Topic: Mechanical and Computational Mechanic models - B Chair: Prof. Dr. Dung-An Wang, Taiwan Assoc. Prof. Dr. Pham Huy Tuan, Vietnam Connection Venue: Room No. A1-603 Link: https://zoom.us/j/98542713604?pwd=MWJmRUUrZGU2M0lV0JncJGbetwdz09 Zoom ID: 985 4271 3604 Password: gtsd2020

08:30 - 11:30 (Vietnam)	02:30 - 5:30 (Poland)	Parallel session No. 5A (PS-5A) Topic: Advances in Civil Engineering - A Chair: Prof. Dr. Hiroaki Nishiuchi, Japan Dr. Tran Vu Tu, Vietnam Connection Venue: Room No. A1-1206 Link: https://zoom.us/j/96888085539?pwd=NFp4VmttVIVHMXhiSFJjd2xwcC9tZz09 Zoom ID: 968 8808 5539 Password: gtsd2020
08:30 - 10:30 (Vietnam)	02:30 - 4:30 (Poland)	Parallel session No. 5B (PS-5B) Topic: Advances in Civil Engineering - B Chair: Prof. Dr. Kochi Maekawa, Japan Assoc. Prof. Dr. Nguyen Trung Kien, Vietnam Connection Venue: Room No. A1-1207 Link: https://zoom.us/j/93343447089?pwd=dkZ4SWF2ME11aUdFYnVZdExOZzU5UT09 Zoom ID: 933 4344 7089 Password: gtsd2020
14:00 - 14:30 (Vietnam)	08:00 - 08:30 (Poland)	Opening Ceremony A.Prof. Dr. Ngo Van Thuyen, University Council Chairman, HCMUTE, Vietnam A.Prof. Dr. Le Quang Son, Vice President, DNU, Vietnam Dr. Tran Nam Tu, Deputy Director General of Science, Technology and Environment Department, MOET, Vietnam Connection Venue: Room No. A2-102, 1 st Floor, The Center Building Link: https://zoom.us/j/93898661432?pwd=U296NWxUaTRyalZDQ0E4cm9LWjNydz09 Zoom ID: 938 9866 1432 Password: gtsd2020
14:30 - 15:00 (Vietnam)	08:30 - 09:00 (Poland)	Keynote Speech 1 Speaker: Prof. Dr. Nguyen Ngoc Thanh, Wroclaw University of Science and Technology, Poland Topic: Computational Aspects of Collective Intelligence Connection Venue: Room No. A2-102, 1 st Floor, The Center Building Link: https://zoom.us/j/93898661432?pwd=U296NWxUaTRyalZDQ0E4cm9LWjNydz09 Zoom ID: 938 9866 1432 Password: gtsd2020
15:00 - 15:30 (Vietnam)	09:00 - 09:30 (Poland)	Keynote Speech 2 Speaker: Prof. Dr. Edward Szczerbicki, The University of Newcastle, Australia Topic: AI vs AI: Intelligence Amplification with DDNA Connection Venue: Room No. A2-102, 1 st Floor, The Center Building Link: https://zoom.us/j/93898661432?pwd=U296NWxUaTRyalZDQ0E4cm9LWjNydz09 Zoom ID: 938 9866 1432 Password: gtsd2020
15:30 - 15:45 (Vietnam)	09:30 - 09:45 (Poland)	Break Time
15:45 - 16:15 (Vietnam)	09:45 - 10:15 (Poland)	Keynote Speech 3 Speaker: Dr. Francois Christophe, Häme University of Applied Sciences, Finland Topic: Collaborative Robotics Applications and Potential for Sustainable Development Connection Venue: Room No. A2-102, 1 st Floor, The Center Building Link: https://zoom.us/j/93898661432?pwd=U296NWxUaTRyalZDQ0E4cm9LWjNydz09 Zoom ID: 938 9866 1432 Password: gtsd2020

<p>16:15 - 16:45 (Vietnam)</p>	<p>10:15 - 10:45 (Poland)</p>	<p>Keynote Speech 4 Speaker: Prof. Yan-Kuin Su, Taiwan Topic: The State of the Art and Future Prospect of Green Energy Development in Taiwan Connection Venue: Room No. A2-102, 1st Floor, The Center Building Link: https://zoom.us/j/93898661432?pwd=U296NWxUaTRyaZDQ0E4cm9LWjNydz09 Zoom ID: 938 9866 1432 Password: gtsd2020</p>
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PROGRAM OUTLINE

DAY 2: IEEE Volume Saturday, 28 November 2020		
UTC + 7	UTC + 8	
08:00 - 17:30 (Vietnam)	09:00 - 18:30 (Taiwan)	Help Desk Link: https://zoom.us/j/93480721701?pwd=anUwSTIOeS9TVkNRRcBTGtWUGRqZz09 Zoom ID: 934 8072 1701 Password: gtsd2020
08:30 - 10:30 (Vietnam)	09:30 - 11:30 (Taiwan)	Parallel session No. 6 (PS-6) Topic: Artificial Intelligence and Machine Learning Chair: Prof. Dr. Pei-Jun Lee, Taiwan Assoc. Prof. Dr. Le My Ha, Vietnam Connection Venue: Room No. A2-102 Link: https://zoom.us/j/96425264940?pwd=UHM1cmpYZG1DUXIJT1Vtd3Nnc05pdz09 Zoom ID: 964 2526 4940 Password: gtsd2020
08:30 - 10:30 (Vietnam)	09:30 - 11:30 (Taiwan)	Parallel session No. 7 (PS-7) Topic: Neural networks and Fuzzy systems Chair: Prof. Dr. Nob. Harada, Japan Dr. Truong Ngoc Son, Vietnam Connection Venue: Room No. A1-601A Link: https://zoom.us/j/93040813075?pwd=MVVzdFI5OWwwbVFuNkdLYnBYNXZwUT09 Zoom ID: 930 4081 3075 Password: gtsd2020
08:30 - 10:30 (Vietnam)	09:30 - 11:30 (Taiwan)	Parallel session No. 8 (PS-8) Topic: Robotics Chair: Dr. Chien-Te Liu, Taiwan Dr. Dang Xuan Ba, Vietnam Connection Venue: Room No. A1-601B Link: https://zoom.us/j/91201753015?pwd=cFgwMFZNV0k3bjFFOFZ0MGRqbW8rdz09 Zoom ID: 912 0175 3015 Password: gtsd2020
08:30 - 10:30 (Vietnam)	09:30 - 11:30 (Taiwan)	Parallel session No. 9 (PS-9) Topic: Electronics Engineering Chair: Prof. Dr. Shang-Chou Chang, Taiwan Dr. Tran Manh Son, Vietnam Connection Venue: Room No. A1-602 Link: https://zoom.us/j/92012580030?pwd=Uy9PWjJQS3NlbnZnYINGQ1QxTit1QT09 Zoom ID: 920 1258 0030 Password: gtsd2020
08:30 - 11:10 (Vietnam)	09:30 - 12:10 (Taiwan)	Parallel session No. 10 (PS-10) Topic: Electrical Engineering Chair: Dr. Nopadon Maneetien, Thailand Dr. Vu Van Phong, Vietnam Connection Venue: Room No. A1-603 Link: https://zoom.us/j/97789328533?pwd=T0xFK1V1QUk5ZTU0ZWHENm9tVUttUT09 Zoom ID: 977 8932 8533 Password: gtsd2020

08:30 - 10:50 (Vietnam)	09:30 - 11:50 (Taiwan)	Parallel session No. 11A (PS-11A) Topic: Green energy and power systems-A Chair: Prof. Dr. Cheng-Yuan Chang, Taiwan Assoc. Prof. Dr. Le Chi Kien, Vietnam Connection Venue: Room No. A1-803 Link: https://zoom.us/j/96668229175?pwd=OE1tWmdoRTZwZnQ1ZTErNIBRYXZDdz09 Zoom ID: 966 6822 9175 Password: gtsd2020
08:30 - 10:30 (Vietnam)	09:30 - 11:30 (Taiwan)	Parallel session No. 11B (PS-11B) Topic: Green energy and power systems-B Chair: Prof. Dr. Jung Guo Bin, Taiwan Dr. Nguyen Vu Lan, Vietnam Connection Venue: Room No. A1-804 Link: https://zoom.us/j/97459915336?pwd=Mk9mZWUwNHdwK3lCVXd3Tk9ZREIiUT09 Zoom ID: 774 5991 5336 Password: gtsd2020
08:30 - 09:50 (Vietnam)	09:30 - 10:50 (Taiwan)	Parallel session No. 12 (PS-12) Topic: Information and Communication Engineering Chair: Prof. Dr. Chan-Yun Yang, Taiwan Assoc. Prof. Dr. Hoang Van Dung, Vietnam Connection Venue: Room No. A1-1007 Link: https://zoom.us/j/99147725501?pwd=MEhOYmRJSdlzVmY3T05aRnFIZmZCdz09 Zoom ID: 991 4772 5501 Password: gtsd2020
08:30 - 09:50 (Vietnam)	09:30 - 10:50 (Taiwan)	Parallel session No. 13 (PS-13) Topic: Mechatronics Engineering Chair: Prof. Dr. Guo-Shing Huang, Taiwan Dr. Bui Ha Duc, Vietnam Connection Venue: Room No. A1-1206 Link: https://zoom.us/j/94988990047?pwd=ZXdVaWI5TkFObVFvbHYxaTBXT3NQZz09 Zoom ID: 949 8899 0047 Password: gtsd2020
08:30 - 11:10 (Vietnam)	09:30 - 12:10 (Taiwan)	Parallel session No. 14 (PS-14) Topic: Mechanical Engineering Chair: Assoc. Prof. Dr. Pham Huy Tuan, Vietnam Dr. Patricia Josepha Pritadewi, Indonesia Connection Venue: Room No. A1-1207 Link: https://zoom.us/j/5320810993?pwd=ejJpVmpMdFFnb1o0cTNzVlVvbDVFdz09 Zoom ID: 532 081 0993 Password: gtsd2020
14:00 - 15:40 (Vietnam)	15:00 - 16:40 (Taiwan)	Parallel session No. 15 (PS-15) Topic: Automotive Engineering Chair: Prof. Dr. Jau-Huai Lu, Taiwan Dr. Nguyen Van Trang, Vietnam Connection Venue: Room No. A2-102 Link: https://zoom.us/j/96425264940?pwd=UHM1cmpYZG1DUXIjT1Vtd3Nnc05pdz09 Zoom ID: 964 2526 4940 Password: gtsd2020

14:00 - 17:00 (Vietnam)	15:00 - 18:00 (Taiwan)	<p>Parallel session No. 16 (PS-16) Topic: Green Economy and Industrial Engineering Chair: Prof. Dr. Chun-Liang Lin, Taiwan Dr. Nguyen Thi Thanh Thuy, Vietnam Connection Venue: Room No. A1-301 Link: https://zoom.us/j/93040813075?pwd=MVVzdFI5OWwwbVFuNkdLYnBYNXZwUT09 Zoom ID: 930 4081 3075 Password: gtsd2020</p>
14:00 - 15:20 (Vietnam)	15:00 - 16:20 (Taiwan)	<p>Parallel session No. 17 (PS-17) Topic: Educational Development Chair: Prof. Dr. Patil Arun Shripati, Australia Assoc. Prof. Dr. Ngo Anh Tuan, Vietnam Connection Venue: Room No. A1-803 Link: https://zoom.us/j/91201753015?pwd=cFgwMFZNV0k3bjFFOFZ0MGRqbW8rdz09 Zoom ID: 912 0175 3015 Password: gtsd2020</p>
14:00 - 16:00 (Vietnam)	15:00 - 17:00 (Taiwan)	<p>Parallel session No. 18 (PS-18) Topic: Chemical and Environmental Engineering Chair: Assoc. Prof. Dr. Trinh Khanh Son, Vietnam Dr. Hao-Lin Hsu, Taiwan Connection Venue: Room No. A1-804 Link: https://zoom.us/j/92012580030?pwd=Uy9PWjJQS3Nlb2ZnYINGQ1QxTit1QT09 Zoom ID: 920 1258 0030 Password: gtsd2020</p>
14:00 - 15:40 (Vietnam)	15:00 - 16:40 (Taiwan)	<p>Parallel session No. 19 (PS-19) Topic: Advances in Civil Engineering Chair: Dr. Nguyen Van Chung, Vietnam Dr. Nguyen Duy Liem, Vietnam Connection Venue: Room No. A1-1005A Link: https://zoom.us/j/97789328533?pwd=T0xFK1V1QUk5ZTU0ZWheNm9tVUtUT09 Zoom ID: 977 8932 8533 Password: gtsd2020</p>
14:00 - 16:40 (Vietnam)	15:00 - 17:40 (Taiwan)	<p>Parallel session No. 20 (PS-20) Topic: Computational Mechanic models Chair: Assoc. Prof. Dr. Chau Dinh Thanh, Vietnam Dr. Dao Duy Kien, Vietnam Connection Venue: Room No. A1-1005B Link: https://zoom.us/j/96668229175?pwd=OE1tWmdoRTZwZnQ1ZTErNIBRYXZDdz09 Zoom ID: 966 6822 9175 Password: gtsd2020</p>
14:00 - 17:00 (Vietnam)	15:00 - 18:00 (Taiwan)	<p>Parallel session No. 21 (PS-21) Topic: Construction Engineering Chair: Dr. Ha Duy Khanh, Vietnam Dr. Nguyen Minh Duc, Vietnam Connection Venue: Room No. A1-1007 Link: https://zoom.us/j/97459915336?pwd=Mk9mZWUwNHdwK3lCVXd3Tk9ZRElIU09 Zoom ID: 774 5991 5336 Password: gtsd2020</p>

<p>14:00 - 15:00 (Vietnam)</p>	<p>15:00 - 16:00 (Taiwan)</p>	<p>Parallel session No. 22 (PS-22) Topic: Transportation Engineering Chair: Prof. Dr. Hiroaki Nishiuchi, Japan Dr. Tran Vu Tu, Vietnam Connection Venue: Room No. A1-1206 Link: https://zoom.us/j/99147725501?pwd=MEhOYmRJSdIzVmY3T05aRnFIZmZCdZ09 Zoom ID: 991 4772 5501 Password: gtsd2020</p>
<p>14:00 - 16:20 (Vietnam)</p>	<p>15:00 - 17:20 (Taiwan)</p>	<p>Parallel session No. 23 (PS-23) Topic: Green building materials Chair: Prof. Dr. Kochi Maekawa, Japan Assoc. Prof. Dr. Le Anh Thang, Vietnam Connection Venue: Room No. A1-1207 Link: https://zoom.us/j/94988990047?pwd=ZXdVaWI5TkFObVFvbHYxaTBXT3NQZz09 Zoom ID: 949 8899 0047 Password: gtsd2020</p>
<p>17:00 - 17:15 (Vietnam)</p>	<p>18:00 - 18:15 (Taiwan)</p>	<p>Closing Ceremony Invitation to the next GTSD2022 Prof. Dr. Do Van Dung, President, HCMUTE, Vietnam Connection Venue: Room No. A2-102, 1st Floor, The Center Building Link: https://zoom.us/j/93898661432?pwd=U296NWxUaTRyaZDQ0E4cm9LWjNydZ09 Zoom ID: 938 9866 1432 Password: gtsd2020</p>

PARALLEL SESSIONS PROGRAM

DAY 1: Springer Volume Friday, 27 November 2020		
UTC + 7	UTC + 1	
PS-1 <b style="color: red;">Artificial Intelligence and Cyber Systems		Chair: Dr. Yi-Liang Hu, Taiwan Dr. Tran Vu Hoang, Vietnam Connection Venue: Room No. A1-803 Link: https://zoom.us/j/98509986333?pwd=M1Vka3JGdUVReUhEMWI2MFBrRGF3dz09 Zoom ID: 985 0998 6333 Password: gtsd2020
08:30 - 09:30 (Vietnam)	02:30 - 03:30 (Poland)	22 - Mobile Data Traffic Offloading with Content Centric Networking <i>Dung Ong Mau, Tuyen Dinh Quang, Anh Phan Tuan, Nga Vu Thi Hong and Quyen Le Ly Quyen</i> 36 - Temporal Features Learning Using Autoencoder for Anomaly Detection in Network Traffic <i>Nguyen Thanh Van, Le Thanh Sach and Tran Ngoc Thinh</i> 57 - A Computer-Aided Detection to Intracranial Hemorrhage by Using Deep Learning: A Case Study <i>Kien Luong Gia, Hieu N. Duong, Cong Minh Van, Thu Hang Ho Thi, Trong Thy Nguyen, Nam Thoai and Thi T. T. Tran Thi</i>
09:30 - 10:30 (Vietnam)	03:30 - 04:30 (Poland)	86 - A Novel Security Solution for Decentralized Web Systems with Real Time Hot-IPs Detection <i>Tam T. Huynh, Chinh N. Huynh and Thuc D. Nguyen</i> 244 - Segmentation of Left Ventricle in Short-Axis MR Images based on Fully Convolutional Network and Active Contour Model <i>Tien Thanh Tran, Thi-Thao Tran, Quoc Cuong Ninh, Minh Duc Bui and Van-Truong Pham</i> 335 - Proposed Novel Fish Freshness Classification using Effective Low-Cost Threshold-based and Neural Network Models on Extracted Image Features <i>Anh Thu T. Nguyen, Minh Le, Hai Ngoc Vo, Duc Nguyen Tran Hong, Tuan Tran Anh Phuoc and Tuan V. Pham</i>
10:30 - 11:30 (Vietnam)	04:30 - 05:30 (Poland)	351 - Machine Learning-based Evolutionary Neural Network Approach Applied in Breast Cancer Tumor Classification <i>Hoang Duc Quy, Cao Van Kien, Ho Pham Huy Anh and Nguyen Ngoc Son</i> 377 - Malware Classification by Using Deep Learning Framework <i>Tran Kim Toai, Roman Senkerik, Vo Thi Xuan Hanh and Ivan Zelinka</i> 478 - Attention Mechanism for Fashion Image Captioning <i>Bao T. Nguyen, Om Prakash and Anh H. Vo</i>
PS-2 <b style="color: red;">Robotics and Intelligent Systems		Chair: Prof. Dr. Wen-June Wang, Taiwan Dr. Vu Van Phong, Vietnam Connection Venue: Room No. A1-804 Link: https://zoom.us/j/92635126067?pwd=RzJYc2Z0enZPZ1ZPak0vMkFQclRyQT09 Zoom ID: 926 3512 6067 Password: gtsd2020

08:30 - 09:30 (Vietnam)	02:30 - 03:30 (Poland)	<p>134 - An Intelligent Inverse Kinematic Solution of Universal 6-DOF Robots <i>Dang Sy Binh, Le Cong Long, Khuu Luan Thanh, Dinh Phuoc Nhien and Dang Xuan Ba</i></p> <p>148 - A PD-Folding-based Controller for a 4DOF robot <i>Vo Tan Tai, Doan Ngoc Minh and Dang Xuan Ba</i></p> <p>208 - Designing and Analysis of a Soft Robotic Arm <i>Yousef Amer, Harsh Rana, Linh Thi Truc Doan and Tham Thi Tran</i></p>
09:30 - 10:30 (Vietnam)	03:30 - 04:30 (Poland)	<p>300 - ROV stabilization using an adaptive nonlinear feedback controller <i>Ngoc-Huy Tran, Manh-Cam Le, Thien-Phuong Ton, The-Cuong Le and Thien-Phuc Tran</i></p> <p>318 - On Robust Control of Permanent Magnet Synchronous Generators using Robust Integral of Error Sign <i>Tien Hoang Nguyen, Hong Quang Nguyen, Phuong Nam Dao and Nga Thi-Thuy Vu</i></p> <p>326 - A Flexible Sliding Mode Controller for Robot Manipulators Using a New Type of Neural-network Predictor <i>Dang Xuan Ba</i></p>
10:30 - 11:30 (Vietnam)	04:30 - 05:30 (Poland)	<p>355 - Optimized Gait Planning of Biped Robot Using Multi-Objective JAYA Algorithm <i>Tran Thien Huan, Cao Van Kien and Ho Pham Huy Anh</i></p> <p>361 - Improve stability of Deep Flux Weakening Operation Control Strategies for IPMSM <i>Pham Quoc Khanh, Truong Viet Anh and Ho Pham Huy Anh</i></p> <p>407 - Muscle-Gesture Robot Hand Control based on sEMG Signals utilizing Deep Neural Networks <i>Guan-Chun Luh, Hao-Sung Chiu and Min-Jou Tsai</i></p>
<p>PS-3 Green energy and power systems</p>		<p>Chair: Prof. Dr. Chang-Ren Chen, Taiwan Assoc. Prof. Dr. Truong Dinh Nhon, Vietnam Connection Venue: Room No. A1-601B Link: https://zoom.us/j/92939405669?pwd=YWFqNVA1ZHZ0SFRBcnhGQnlrY0J3UT09 Zoom ID: 929 3940 5669 Password: gtsd2020</p>
08:30 - 09:30 (Vietnam)	02:30 - 03:30 (Poland)	<p>11 - Techno-Economic Analysis of Grid Connected Photo-voltaic Power Plant in Vietnam <i>Le Phuong Truong, Bui Van Tri and Nguyen Cao Cuong</i></p> <p>67 - Stability Identification of Power System based Neural Network Training <i>Nguyen Ngoc Au , Le Vinh Thinh and Tran Thien Huan</i></p> <p>79 - Load Shedding in Islanded Microgrid with Uncertain Conditions <i>Thi Thanh Binh Phan, Quoc Dung Phan, L Tran, Q. Vo, T. Vu, H. Nguyen and Trong Nghia Le</i></p>
09:30 - 10:30 (Vietnam)	03:30 - 04:30 (Poland)	<p>133 - Effects of Designing and Operating Parameters on the Performance of Glucose Enzymatic Biofuel Cells <i>Ngoc Bich Duong, Van Men Truong, Tran Thi Ngoc Bich and Hsiharng Yang</i></p>

		<p>182 - A Novel Fault Location Technique for Transmission Lines of a Power System based on a Language of an Optimization Problem <i>Thanh H. Truong, Duy C. Huynh, Anh V. Truong and Matthew W. Dunnigan</i></p> <p>186 - Parameter Estimation of Solar Photovoltaic Cells Using an Improved Artificial Bee Colony Algorithm <i>Duy C. Huynh, Loc D. Ho and Matthew W. Dunnigan</i></p>
10:30 - 11:30 (Vietnam)	04:30 - 05:30 (Poland)	<p>233 - Improvement of ANFIS Controller for SVC Using PSO <i>Van-Tri Bui and Dinh-Nhon Truong</i></p> <p>330 - Study on the Operating Characteristics of Cell Electrodes in a Solid Oxide Fuel Cell (SOFC) Through the Two-Dimensional Numerical Simulation Method <i>XuanVien Nguyen, PhamTrungKhanh Luong, ThiNhung Tran, MinhHung Doan, AnQuoc Hoang and ThanhTrung Dang</i></p> <p>386 - The Structure and Electrochemical Properties of PAN-Based Carbon Aerogel Composite <i>Haolin Hsu, Kaiying Liang, Junkun Lin, Jeanhong Chen and Lungchuan Chen</i></p>
<p>PS-4A Mechanical and Computational Mechanic models - A</p>		<p>Chair: Prof. Dr. Pracha Yeunyoungkul, Thailand Assoc. Prof. Dr. Truong Nguyen Luan Vu, Vietnam Connection Venue: Room No. A1-602 Link: https://zoom.us/j/96126694793?pwd=TTRQNnNWNjBOaW9lNjJlBaUc0S3ZCQT09 Zoom ID: 961 2669 4793 Password: gtsd2020</p>
08:30 - 09:30 (Vietnam)	02:30 - 03:30 (Poland)	<p>62 - Theoretical and Experimental Research in the Assessment Fatigue Life of Prestressed Concrete Sleeper on the Urban Railway <i>Tran Anh Dung, Tran The Truyen, Nguyen Hong Phong, Pham Van Ky and Le Hai Ha</i></p> <p>68 - Modeling of Urban Public Transport Choice Behaviour in Developing Countries: A Case Study of Da Nang, Vietnam <i>Tran-Thi P.Anh, Nguyen-Phuoc Q.Duy, Phan Cao Tho and Fumihiko Nakamura</i></p> <p>201 - The Group Efficiency of Soil-Cement Columns in Comparison With the Group Factor of Piles <i>Tham Hong Duong and Nguyen Thanh Nga</i></p>
09:30 - 10:30 (Vietnam)	03:30 - 04:30 (Poland)	<p>213 - Design of Simplified Decoupling Control System of Pulsed MIG Welding Process for Aluminum Alloy <i>Luan Vu Truong Nguyen, Lam Chuong Vo, Nguyen Thanh Hai and Moonyong Lee</i></p> <p>229 - Static Analysis of HSDT-based FGM Plates using ES-MITC3+ Elements <i>Thanh Chau-Dinh, Huong Tran-Ngoc-Diem and Jin-Gyun Kim</i></p> <p>236 - Developing the Assembly Jig of Push-Belt CVT by SLA 3D Printing Technology <i>Thanh Trung Do, Son Minh Pham, Minh The Uyen Tran, Quang Khoa Dang, Hoang Khang Tran and Sang-Ryeoul Ryu</i></p>

PS-4B Mechanical and Computational Mechanics models - B		Chair: Prof. Dr. Dung-An Wang, Taiwan Assoc. Prof. Dr. Pham Huy Tuan, Vietnam Connection Venue: Room No. A1-603 Link: https://zoom.us/j/98542713604?pwd=MWJmRUUrZGU2M0lV0JnclJGtEtdz09 Zoom ID: 985 4271 3604 Password: gtsd2020
08:30 - 09:30 (Vietnam)	02:30 - 03:30 (Poland)	308 - The Effect of Airflow Rate on The Cooling Capacity of Minichannel Evaporator using CO2 Refrigerant <i>Tronghieu Nguyen, Thanhtrung Dang and Minhhung Doan</i> 409 - An Approach to Optimize the Design of Ultrasonic Transducer for Food Dehydration <i>Hay Nguyen, Ngoc-Phuong Nguyen, Xuan-Quang Nguyen and Anh-Duc Le</i> 440 - An ESO Approach for Optimal Steel Structure Design Complying with AISC 2010 Specification <i>Atitaya Chaiwongnoi, Huynh Van Thu, Sawe-kchai Tangaramvong and Chung Nguyen Van</i>
09:30 - 10:30 (Vietnam)	03:30 - 04:30 (Poland)	441 - A Gravity Balance Mechanism Using Compliant Mechanism <i>Ngoc Le Chau, Hieu Giang Le and Thanh-Phong Dao</i> 447 - Numerical Simulation of Flow Around a Circular Cylinder with Sub-Systems <i>Phan Duc Huynh and Nguyen Tran Ba Dinh</i> 475 - Research on Performance of Color Reversible Coatings for Exterior Wall of Buildings <i>Vu-Lan Nguyen, Chang-Ren Chen, Chang-Yi Chung, Kao-Wei Chen and Rong-Bin Lai</i>
PS-5A Advances in Civil Engineering - A		Chair: Prof. Dr. Hiroaki Nishiuchi, Japan Dr. Tran Vu Tu, Vietnam Connection Venue: Room No. A1-1006 Link: https://zoom.us/j/96888085539?pwd=NFp4VmmtVlVHMxhiSFJjd2xwcC9tZz09 Zoom ID: 968 8808 5539 Password: gtsd2020
08:30 - 09:30 (Vietnam)	02:30 - 03:30 (Poland)	46 - Experimental Study of Geopolymer Concrete Using Re-cycled Aggregates under Various Curing Conditions <i>Ngoc Thanh Tran</i> 66 - Fundamental Study for Estimating Shear Strength Parameters of Fiber-Cement-Stabilized Soil by Using Paper Debris <i>Kazumi Ryo, Tomoaki Satomi and Hiroshi Takahashi</i> 70 - Study on the Compressive and Tensile Strength Behaviors of Corn Husk Fiber-Cement Stabilized Soil <i>Nga Thanh Duong, Tomoaki Satomi and Hiroshi Takahashi</i>
09:30 - 10:30 (Vietnam)	03:30 - 04:30 (Poland)	94 - Experimental and Numerical Investigation on Bearing Behavior of TRC SlabPS under Distributed or Concentrated Loads <i>Tran The Truyen and Tu Sy Quan</i> 104 - Probabilistic Free Vibration Analysis of Functionally Graded Beams using Stochastic Finite Element Methods <i>Phong T. T. Nguyen, Luan C. Trinh and Kien-Trung Nguyen</i> 105 - A Study on Property Improvement of Cement Pastes

		<p>Containing Fly Ash and Silica Fume After Treated at High Temperature <i>Phuong Do Thi, Van Quang Nguyen and Duc Vu Minh</i></p>
10:30 - 11:30 (Vietnam)	04:30 - 05:30 (Poland)	<p>128 - Tornado-Induced Loads on a Low-Rise Building and the Simulation of Them <i>Ngoc Tinh Nguyen and Linh Ngoc Nguyen</i></p> <p>139 - Development of a New Stress-Deformation Measuring Device and Hazard Early Warning System for Con-structional Work in Da Nang, Vietnam <i>Truong-Linh Chau, Thu-Ha Nguyen, Viet-Thanh Le and Quoc-Thien Tran</i></p> <p>155 - Compressive Behavior of Concrete: Experimental Study and Numerical Simulation Using Discrete Element Method <i>Tran Van Tieng, Nguyen Thi Thuy Hang and Nguyen Xuan Khanh</i></p>
<p>PS-5B Advances in Civil Engineering - B</p>		<p>Chair: Prof. Dr. Kochi Maekawa, Japan Assoc. Prof. Dr. Nguyen Trung Kien, Vietnam</p> <p>Connection Venue: Room No. A1-1007</p> <p>Link: https://zoom.us/j/93343447089?pwd=dkZ4SWF2ME11aUdFYnVZdExOZzU5UT09</p> <p>Zoom ID: 933 4344 7089 Password: gtsd2020</p>
08:30 - 09:30 (Vietnam)	02:30 - 03:30 (Poland)	<p>175 - A Study on Motorcycle Equivalent Unit of Container Truck in Motorcycle Dominated cities <i>Tran Vu Tu, Nguyen Huynh Tan Tai, Ho Si Dac and Hiroaki Nishiuchi</i></p> <p>202 - Accelerated Cyclic Corrosion Testing of Steel Member inside Concrete <i>Dao Duy Kien, Phan Tan Hung, Haidang Phan, Phan Thanh Chien, In-Tae Kim and Nguyen Thanh Hung</i></p> <p>270 - Prediction of Compressive Strength of Concrete Using Recycled Materials from Fly Ash Based On Ultrasonic Pulse Velocity and Design of Experiment <i>Le Thang Vuong, Cung Le and Dinh Son Nguyen</i></p>
09:30 - 10:30 (Vietnam)	03:30 - 04:30 (Poland)	<p>398 - Performance of Foundation on Bamboo–geotextile Composite Improved Soft Soil in Mekong Delta through both Plate Load Test and Numerical Analyses <i>Huu-Dao Do, Quoc-Thien Tran, Van-Hai Nguyen, Khac-Hai Phan and Anh-Tuan Pham</i></p> <p>439 - Prediction of Long Span Bridges Response to Winds <i>Hoang Trong Lam and Do Viet Hai</i></p> <p>453 - Effect of wall thickness and node diaphragms on the buckling behavior of bamboo culm <i>Luan C. Trinh, Quaiyum M. Ansari, Phong T.T. Nguyen, Trung-Kien Nguyen and Paul M. Weaver</i></p>

PARALLEL SESSIONS PROGRAM

DAY 2: IEEE Volume Saturday, 28 November 2020		
UTC + 7	UTC + 8	
PS-6 Artificial Intelligence and Machine Learning		Chair: Prof. Dr. Pei-Jun Lee, Taiwan Assoc. Prof. Dr. Le My Ha, Vietnam Connection Venue: Room No. A2-102 Link: https://zoom.us/j/96425264940?pwd=UHM1cmpYZG1DUXIjT1Vtd3Nnc05pdz09 Zoom ID: 964 2526 4940 Password: gtsd2020
08:30 - 09:30 (Vietnam)	09:30 - 10:30 (Taiwan)	78 - Traditional Method Meets Deep Learning in an Adaptive Lane and Obstacle Detection System <i>Van-Tin Luu, Viet-Cuong Huynh, Vu-Hoang Tran, Trung-Hieu Nguyen and Thi-Ngoc-Hieu Phu</i> 87 - A Lightweight Model For Real-time Traffic Sign Recognition <i>Trung-Hieu Nguyen, Vu-Hoang Tran, Van-Dung Do, Van-Thuyen Ngo and Thanh-Thanh Ngo-Quang</i> 98 - Traffic Flow Estimation Using Deep Learning <i>Tran Nhat Huy and Bui Ha Duc</i>
09:30 - 10:30 (Vietnam)	10:30 - 11:30 (Taiwan)	225 - Vision-based People Counting for Attendance Monitoring System <i>Manh Cuong Le, My-Ha Le and Minh-Thien Duong</i> 338 - Deep Learning Based Semantic Segmentation for Nighttime Image <i>Hien T.T Bui, Duy H. Le, Thu T.A Nguyen and Tuan V. Pham</i> 352 - Parallel Multi-Population Technique For Meta-Heuristic Algorithms On Multi Core Processor <i>Nguyen Tien Dat, Cao Van Kien, Ho Pham Huy Anh and Nguyen Ngoc Son</i>
PS-7 Neural networks and Fuzzy systems		Chair: Prof. Dr. Nob. Harada, Japan Dr. Truong Ngoc Son, Vietnam Connection Venue: Room No. A1-601A Link: https://zoom.us/j/93040813075?pwd=MVVzdFI5OWwwbVfUkndL_YnBYNXZwUT09 Zoom ID: 930 4081 3075 Password: gtsd2020
08:30 - 09:30 (Vietnam)	09:30 - 10:30 (Taiwan)	18 - An Adaptive Fuzzy for PMSM to Overcome the Changing Load <i>Nguyen Vu Quynh</i> 245 - Skin Lesion Segmentation based on Integrating EfficientNet and Residual block into U-Net Neural Network <i>Duy Khang Nguyen, Thi-Thao Tran, Cong Phuong Nguyen and Van-Truong Pham</i> 307 - Design Integrated Staff Welcoming and Administration System Based on Facial Recognition for Smart University <i>Dat Tan La, Huy Quang Tran, Nhat Tien Le, Quang Luong Nguyen, Thu Thi Anh Nguyen and Tuan Van Pham</i>

09:30 - 10:30 (Vietnam)	10:30 - 11:30 (Taiwan)	<p>314 - Saliency prediction for 360-degree video <i>Chuong H. Vo, Jui-Chiu Chiang, Duy H. Le, Thu T. A. Nguyen and Tuan V. Pham</i></p> <p>354 - Adaptive MIMO Fuzzy Controller for Double Coupled Tank System Optimizing by Jaya Algorithm <i>Cao Van Kien, Nguyen Ngoc Son and Ho Pham Huy Anh</i></p> <p>414 - A Study on Patterns of Neural Activity Generation from A Bio-realistic Cerebellum Neural Network <i>Vo Nhu Thanh, Pham Anh Duc, Le Hoai Nam, Dang Phuoc Vinh and Tran Ngoc Hai</i></p>
PS-8 Robotics		<p>Chair: Dr. Chien-Te Liu, Taiwan Dr. Dang Xuan Ba, Vietnam</p> <p>Connection Venue: Room No. A1-601B</p> <p>Link: https://zoom.us/j/91201753015?pwd=cFgwMFZNV0k3bjFFOFZ0MGRqbW8rdz09</p> <p>Zoom ID: 912 0175 3015 Password: gtsd2020</p>
08:30 - 09:30 (Vietnam)	09:30 - 10:30 (Taiwan)	<p>5 - Real-time Measurement and Prediction of Ball Trajectory for Ping-pong Robot <i>Vo Duy Cong, Le Duc Hanh and Le Hoai Phuong</i></p> <p>101 - A Finite-Time Robust Control for a Manipulator with Output Constraints and Unknown Control Directions <i>Duc Thien Tran, Manh Son Tran and Nguyen Van Hiep</i></p> <p>146 - Design and Control of a 4-bar-transmission 2-DOF Robot <i>Pham Tan Phat, Bui Manh Huy, Tran Hoai Nam, Huynh Vinh Nghi and Dang Xuan Ba</i></p>
09:30 - 10:30 (Vietnam)	10:30 - 11:30 (Taiwan)	<p>303 - Design Depth Controller for Hybrid Autonomous Underwater Vehicle using Backstepping Approach <i>Nguyen-Nhut-Thanh Pham, Ngoc-Huy Tran, Thien-Phuong Ton, Thien-Phuc Tran</i></p> <p>304 - Implementation and Enhancement of Set-Based Guidance by Velocity Obstacle along with LiDAR for Unmanned Surface Vehicles <i>Ngoc-Huy Tran, Minh-Hung Vu, Tu-Cuong Nguyen, Minh-Tam Phan and Quang-Ha Pham</i></p> <p>463 - Receptionist and Security Robot Using Face Recognition with Standardized Data Collecting Method <i>Quang-Minh Ky, Dung-Nhan Huynh and My-Ha Le</i></p>
PS-9 Electronics Engineering		<p>Chair: Prof. Dr. Shang-Chou Chang, Taiwan Dr. Tran Manh Son, Vietnam</p> <p>Connection Venue: Room No. A1-602</p> <p>Link: https://zoom.us/j/92012580030?pwd=Uy9PWjJQS3NlB2ZnYINGQ1QxTit1QT09</p> <p>Zoom ID: 920 1258 0030 Password: gtsd2020</p>
08:30 - 09:30 (Vietnam)	09:30 - 10:30 (Taiwan)	<p>38 - A Redundant Unit Form of Quasi-Z-source T-Type Inverter with Fault-Tolerant Capability <i>Duc-Tri Do, Vinh-Thanh Tran, Hieu-Giang Le, Thanh-Hai Quach, Viet-Anh Truong, Minh-Khai Nguyen and Thi-Ngoc-Han Vuong</i></p>

		<p>72 - Multi-class Support Vector Machine Algorithm for Heart Disease Classification <i>Thanh-Nghia Nguyen, Thanh-Hai Nguyen, Duc-Dung Vo and Truong-Duy Nguyen</i></p> <p>113 - Wheelchair Navigation System using EEG Signal and 2D Map for Disabled and Elderly People <i>Ba-Viet Ngo, Thanh-Hai Nguyen, Van-Thuyen Ngo, Dang-Khoa Tran and Truong-Duy Nguyen</i></p>
09:30 - 10:30 (Vietnam)	10:30 - 11:30 (Taiwan)	<p>224 - Breast Image Segmentation for evaluation of Cancer Disease <i>Thanh-Tam Nguyen, Thanh-Hai Nguyen, Ba-Viet Ngo and Duc-Dung Vo</i></p> <p>402 - Navigation Technology Using Inertial Elements to Compensate for GPS Signal-Shaded in Real Time <i>Guo-Shing Huang, Po-Chun Hsu and Ming-Cheng Kao</i></p> <p>469 - Biometric Image Recognition For Secure Authentication Based on FPGA : A survey <i>Huu Q Tran and Van Thai Nguyen</i></p>
<p>PS-10 Electrical Engineering</p>		<p>Chair: Dr. Nopadon Maneetien, Thailand Dr. Vu Van Phong, Vietnam</p> <p>Connection Venue: Room No. A1-603 Link: https://zoom.us/j/97789328533?pwd=T0xFK1V1QUk5ZTU0ZWheNm9tVUtUT09 Zoom ID: 977 8932 8533 Password: gtsd2020</p>
08:30 - 09:30 (Vietnam)	09:30 - 10:30 (Taiwan)	<p>91 - A Strategy to Enhance Generator Efficiency of Sudoku-based PV Arrays Under Partial Shading Conditions <i>Le Viet Thinh, Nguyen Duc Tuyen and Vu Xuan Son Huu</i></p> <p>165 - Determining Optimal Location and Sizing of STATCOM Based on PSO Algorithm and Designing Its Online ANFIS Controller for Power System Voltage Stability Enhancement <i>Huu Vinh Nguyen, Hung Nguyen, Kim Hung Le, Minh Tien Cao, Tan Hung Nguyen, Tien Hoang Nguyen and Minh Vuong Le</i></p> <p>194 - Unknown Input Based Observer Design for Wind Energy Conversion System with Time-Delay <i>Van-Phong Vu, Wen-June Wang, Van-Thuyen Ngo, Dinh-Nhon Truong, Pei-Jun Lee, Ton Duc Do and Van-Ngoc Tong</i></p>
09:30 - 10:30 (Vietnam)	10:30 - 11:30 (Taiwan)	<p>404 - An Automatic Approach for Estimation of CPR Signal using Thoracic Impedance <i>Van-Truong Pham and Thi-Thao Tran</i></p> <p>415 - Integration of MicroSCADA SYS600 9.4 into Distribution Automation System <i>The Khanh Truong, Kim Hung Le, Minh Quan Duong, Tue Truong-Bach and Van Phuong Vo</i></p> <p>443 - Application of Fuzzy Control Algorithm to Start a Large - Capacity Synchronous Motor <i>Quoc Hung Duong, Huu Cong Nguyen, The Cuong Nguyen and Hong Quang Nguyen</i></p>
10:30 - 11:10 (Vietnam)	11:30 - 12:10 (Taiwan)	<p>466 - An efficient evolutionary algorithm for joint optimization of maintenance grouping and routing <i>Ho Si Hung Nguyen, Phuc Do, Hai-Canh Vu, Thanh Bac Le and Kim</i></p>

		<p>Anh Nguyen</p> <p>482 - Redundant Relay Protection Devices for Power Systems Reliability Model</p> <p><i>Andrey Trofimov and Alexandra Khalyasmaa</i></p>
<p>PS-11A</p> <p>Green energy and power systems-A</p>		<p>Chair: Prof. Dr. Cheng-Yuan Chang, Taiwan Assoc. Prof. Dr. Le Chi Kien, Vietnam</p> <p>Connection Venue: Room No. A1-803</p> <p>Link: https://zoom.us/j/96668229175?pwd=OE1tWmdoRTZwZnQ1ZTErNIBRYXZDdz09</p> <p>Zoom ID: 966 6822 9175 Password: gtsd2020</p>
<p>08:30 - 09:30 (Vietnam)</p>	<p>09:30 - 10:30 (Taiwan)</p>	<p>23 - A method to analyzing and clustering aggregate customer load profiles based on PCA</p> <p><i>Alessandro Bosisio, Alberto Berizzi, Andrea Vicario, Andrea Morotti, Bartolomeo Greco, Gaetano Iannarelli and Dinh-Duong Le</i></p> <p>33 - An Improvement of Maximum Power Point Tracking Algorithm Based on Particle Swarm Optimization Method for Photovoltaic System</p> <p><i>Xuan Truong Luong, Van Hien Bui, Duc Tri Do, Thanh Hai Quach and Viet Anh Truong</i></p> <p>40 - A High-Efficient Power Converter for Thermoelectric Energy Harvesting</p> <p><i>Van-Khoa Pham</i></p>
<p>09:30 - 10:50 (Vietnam)</p>	<p>10:30 - 11:50 (Taiwan)</p>	<p>65 - Optimal Day-ahead Energy Scheduling of Battery in Distribution Systems Considering Uncertainty</p> <p><i>Ying-Yi Hong, Man-Yin Wu and Sheng-Huei Lee</i></p> <p>125 - Effects of the Relative Humidity on the Performance of Thermoelectric Freshwater Generator using Solar Power Source</p> <p><i>Le Minh Nhut and Dang Thi Truc Linh</i></p> <p>150 - PyPSA-VN: An open model of the Vietnamese Electricity System</p> <p><i>Markus Schlott, Bruno Schyska, Dinh Thanh Viet, Vo Van Phuong, Duong Minh Quan, Ma Phuoc Khanh, Fabian Hofmann, Lueder von Bremen, Detlev Heinemann, Alexander Kies</i></p> <p>227 - Electricity Demand Forecasting for Smart Grid Based on Deep Learning Approach</p> <p><i>Van-Binh Nguyen, Minh-Thien Duong and My-Ha Le</i></p>
<p>PS-11B</p> <p>Green energy and power systems-B</p>		<p>Chair: Prof. Dr. Jung Guo Bin, Taiwan Dr. Nguyen Vu Lan, Vietnam</p> <p>Connection Venue: Room No. A1-804</p> <p>Link: https://zoom.us/j/97459915336?pwd=Mk9mZWUwNHdwK3lCVXd3Tk9ZRElIUT09</p> <p>Zoom ID: 774 5991 5336 Password: gtsd2020</p>
<p>08:30 - 09:30 (Vietnam)</p>	<p>09:30 - 10:30 (Taiwan)</p>	<p>240 - A Novel Technique for Increasing Concentration Ratio and Uniformity of Fresnel Lens</p> <p><i>Thanh-Tuan Pham and Thanh Phuong Nguyen</i></p> <p>320 - Stability Analysis of an Islanded Microgrid Using Supercapacitor-based Virtual Synchronous Generator</p> <p><i>Hong Viet Phuong Nguyen, Van Tan Nguyen, Binh Nam Nguyen, Thi Bich Thanh Truong, Huu Dan Dao and Quoc Cuong Le</i></p>

		<p>328 - 3D Numerical Simulation Study of a Pre-Heater Used in Solid Oxide Fuel Cell Technology <i>XuanVien Nguyen, TrangDoanh Nguyen, AnQuoc Hoang, MinhHung Doan, ThiNhung Tran</i></p>
09:30 - 10:30 (Vietnam)	10:30 - 11:30 (Taiwan)	<p>388 - Comparative Studies of Different Methods for Short-term Locational Marginal Price Forecasting <i>Ying- Yi Hong and Rolando Pula</i></p> <p>476 - An Investigation on Efficiency of Magnetic Assisted Generator <i>Vu-Lan Nguyen, Huann-Ming Chou, Chang-Ren Chen, Bo-Jun Zheng and Kuo-Chen Yang</i></p> <p>483 - Forecasting the Solar Power Plants Generation in a Meteorological Data-Constrained Environment <i>Andrey Tokarev and Alexandra Khalyasmaa</i></p>
<p>PS-12 Information and Communication Engineering</p>		<p>Chair: Prof. Dr. Chan-Yun Yang, Taiwan Assoc. Prof. Dr. Hoang Van Dung, Vietnam</p> <p>Connection Venue: Room No. A1-1007</p> <p>Link: https://zoom.us/j/99147725501?pwd=MEhOYmRJSdIzVmY3T05aRnFIZmZCdz09</p> <p>Zoom ID: 991 4772 5501 Password: gtsd2020</p>
08:30 - 09:30 (Vietnam)	09:30 - 10:30 (Taiwan)	<p>17 - An improvement of Disk Aware Discord Discovery Algorithm for Discovering Time Series Discord <i>Nguyen Thanh Son</i></p> <p>35 - P2C2-Popular Content Prediction and Collaboration in mobile edge caching <i>Dung Ong Mau, Anh Phan Tuan, Tuyen Dinh Quang, Tuyen Dinh Quang and Nga Vu Thi Hong</i></p> <p>49 - Performance Analysis and Evaluation of Underlay Two-Way Cooperative Networks with NOMA <i>Nguyen Duc Anh and Pham Ngoc Son</i></p>
09:30 - 10:50 (Vietnam)	10:30 - 11:50 (Taiwan)	<p>71 - Improving the Adaptivities of Over-The-Top Television System <i>Ha Tran Thu, Son Tran Minh, Thai Nguyen Van and Minh Le Hoang</i></p> <p>74 - Computational Intelligence Towards Trusted Cloudlet Based Fog Computing <i>Thinh Vinh Le and Tran Thien Huan</i></p> <p>260 - A Novel Binning Algorithm Using Topic Modelling and k-mer Frequency on Groups of Non-Overlapping Short Reads <i>Hoang D. Quach, Hoang T. Lam, Dang H. N. Nguyen, Phuong V. D. Van and Van Hoai Tran</i></p> <p>315 - Heart Rate Estimation Based on Facial Image Sequence <i>Dao Q. Le, Wen-Nung Lie, Quynh Nguyen Quang Nhu and Thu T.A. Nguyen</i></p>
<p>PS-13 Mechatronics Engineering</p>		<p>Chair: Prof. Dr. Guo-Shing Huang, Taiwan Dr. Bui Ha Duc, Vietnam</p> <p>Connection Venue: Room No. A1-1206</p> <p>Link: https://zoom.us/j/94988990047?pwd=ZXdVaWI5TkFObVFvbHYxaTBXT3NQZz09</p> <p>Zoom ID: 949 8899 0047 Password: gtsd2020</p>

<p>08:30 - 09:50 (Vietnam)</p>	<p>09:30 - 10:50 (Taiwan)</p>	<p>61 - A Study on Design and Fabrication of Concrete Pipe Cutting Machine <i>Cong Binh Phan</i></p> <p>89 - Design of Delta Robot Arm based on Topology Optimization and Generative Design Method <i>Thanh Hai Tuan Tran, Dinh Son Nguyen, Nhu Thanh Vo and Hoai Nam Le</i></p> <p>209 - A Mobile Deep Convolutional Neural Network Combined with Grad-CAM Visual Explanations for Real Time Tomato Quality Classification System <i>Loc-Phat Truong, Bach-Duong Pham and Quang-Huy Vu</i></p> <p>217 - Fractional order Modeling and Control of a Quadruple-tank Process <i>Lam Chuong Vo, Luan Vu Truong Nguyen and Moonyong Lee</i></p>
<p>PS-14 Mechanical Engineering</p>		<p>Chair: Assoc. Prof. Dr. Pham Huy Tuan, Vietnam Dr. Patricia Josepha Pritadewi, Indonesia Connection Venue: Room No. A1-1207 Link: https://zoom.us/j/5320810993?pwd=ejJpVmpMdFFnb1o0cTNzVlVvbDVFdz09 Zoom ID: 532 081 0993 Password: gtsd2020</p>
<p>08:30 - 09:30 (Vietnam)</p>	<p>09:30 - 10:30 (Taiwan)</p>	<p>3 - Modelling the Distribution of TiC Reinforced Co-Based on Skd61 Steel Surface Prepared by Laser Cladding <i>Ngoc Thien Tran and Hong Nga Thi Pham</i></p> <p>15 - Effect of the welding parameters on mechanical properties of AA5083 friction stir welding <i>Phan Thanh Nhan</i></p> <p>286 - An Experimental on Heat Transfer Characteristics of the Cascade Heat Exchanger in Refrigeration System Using R32/CO2 <i>Thanhtrung Dang, Vanloi Nguyen and Hoangtuan Nguyen</i></p>
<p>09:30 - 10:30 (Vietnam)</p>	<p>10:30 - 11:30 (Taiwan)</p>	<p>367 - Surface Roughness Optimization for Grinding Parameters of SKS3 Steel on Cylindrical Grinding Machine <i>Thi-Minh Pham, Huy-Tuan Pham, Van-Khien Nguyen, Quang-Khoa Dang and Duong Thi Van Anh</i></p> <p>438 - Optimization Design of a Compliant Tension Spring <i>Minh Phung Dang, Hieu Giang Le, Xuan Hoang Vo and Thanh-Phong Dao</i></p> <p>479 - Microstructure and Hardness of Borided Layer on SKD61 Steel <i>Nga Thi-Hong Pham, Long Nhut-Phi Nguyen and The-San Tran</i></p>
<p>10:30 - 11:10 (Vietnam)</p>	<p>11:30 - 12:10 (Taiwan)</p>	<p>480 - An Experimental Study on The Performance of An Air Conditioning System using CO2 Refrigerant with The Actual Power Input of 440W <i>Thanhtrung Dang and Tronghieu Nguyen</i></p> <p>486 - Numerical Study on Gas-Assisted Mold Temperature Control with the Application of Air Cover for Improving the Cavity Temperature in Injection Molding Process <i>Son Minh Pham, Minh The Uyen Tran and Thanh Trung Do</i></p>

PS-15 Automotive Engineering		Chair: Prof. Dr. Jau-Huai Lu, Taiwan Dr. Nguyen Van Trang, Vietnam Connection Venue: Room No. A2-102 Link: https://zoom.us/j/96425264940?pwd=UHM1cmpYZG1DUXIjT1Vtd3Nnc05pdz09 Zoom ID: 964 2526 4940 Password: gtsd2020
14:00 - 15:00 (Vietnam)	15:00 - 16:00 (Taiwan)	214 - Design of Driver Circuit to Control Induction Motor Applied in Electric Motorcycles <i>Dinh Cao Tri and Le Thanh Phuc</i> 297 - Research on using PSO Algorithm to Optimize Controlling of Regenerative Braking Force Distribution in Automobile <i>Tung Duong Tuan, Dung Do Van and Thinh Nguyen Truong</i> 366 - Proposed Research on Saline-Water Distillation for Living by Utilizing Waste Heat from Industrial Steam Boilers <i>Ngoc Han Pham and Van Tuyen Nguyen</i>
15:00 - 15:40 (Vietnam)	16:00 - 16:40 (Taiwan)	484 - Vehicle Body Design and Analysis Aerodynamic by Flow Simulation <i>Phu Thuong Luu Nguyen and Van Dung Do</i> 485 - A Preliminary Study of a Two Stroke Free- Piston Engine for Electricity Generation <i>Nguyen Huynh Thi, Nguyen Van Trang, Huynh Thanh Cong, Huynh Van Loc, Dao Huu Huy and Ngo Duc Huy</i>
PS-16 Green Economy and Industrial Engineering		Chair: Prof. Dr. Chun-Liang Lin, Taiwan Dr. Nguyen Thi Thanh Thuy, Vietnam Connection Venue: Room No. A1-301 Link: https://zoom.us/j/93040813075?pwd=MVVzdFI5OWwwbVFuNkdLYnBYNXZwJT09 Zoom ID: 930 4081 3075 Password: gtsd2020
14:00 - 15:00 (Vietnam)	15:00 - 16:00 (Taiwan)	45 - Impact of Financial Inclusion on Economic Growth: GMM Approach <i>Khac Hieu Nguyen and Thi Anh Van Nguyen</i> 56 - Reusing Fabric Scraps in Garment Industry - A Green Manufacturing Process <i>Thi Bich Dung Phung and Tuan-Anh Nguyen</i> 58 - Analyzing Total Quality Management of Service Enterprises in Vietnam <i>Nguyen Thi Anh Van and Nguyen Khac Hieu</i>
15:00 - 16:00 (Vietnam)	16:00 - 17:00 (Taiwan)	103 - The Effect Of Capital Structure On Profitability: An Empirical Analysis of Vietnamese Listed Banks <i>Tran Thuy Ai Phuong, Nguyen Thi Anh Van and Nguyen Thi Hoang Anh</i> 152 - Customer satisfaction with service quality: An empirical study of An Giang Power Company <i>Hong -Xuyen Ho Thi and Lan Anh Nguyen Thi</i> 176 - Chances and Challenges of Vietnam's Garment Industry in the new Trend of Sustainable Development <i>Tri Tran Quang, Tu Tran, Alang Tho and John Burgess</i>
16:00 - 17:00	17:00 - 18:00	363 - A New Approach for Analyzing and Predicting Carbon Dioxide

(Vietnam)	(Taiwan)	<p>Emissions: case study of Vietnam <i>Le Thi Giang, Khuu Manh Dat, Nguyen Xuan Hiep and Sam Nguyen-Xuan</i></p> <p>418 - Optimizing Warehouse Storage Location Assignment Under Demand Uncertainty <i>Nguyen Truong Thi, Phan Thi Kim Phung and Tran Thi Tham</i></p> <p>462 - Digital Economy: Overview of Definition and Measurement Criteria <i>Nguyen Thi Thanh Van and Nguyen Thien Duy</i></p>
<p>PS-17 Educational Development</p>		<p>Chair: Prof. Dr. Patil Arun Shripati, Australia Assoc. Prof. Dr. Duong Thi Kim Oanh, Vietnam</p> <p>Connection Venue: Room No. A1-803</p> <p>Link: https://zoom.us/j/91201753015?pwd=cFgwMFZNV0k3bjFFOFZ0MGRqbW8rdz09</p> <p>Zoom ID: 912 0175 3015 Password: gtsd2020</p>
14:00 - 15:20 (Vietnam)	15:00 - 16:20 (Taiwan)	<p>255 - An Educational Transformative Sustainability Model Based On Modern Educational Technology <i>Xuan Thanh Pham, Anh Tho Mai and Anh Tuan Ngo</i></p> <p>339 - Proposed Smart University Model As A Sustainable Living Lab For University Digital Transformation <i>Tuan V. Pham, Anh Thu T. Nguyen, Thanh Dinh Ngo, Duy H. Le, Khai C.V. Le, Thuong H.N. Nguyen and Huy Q. Le</i></p> <p>448 - Mobile learning in non-English Speaking Countries: Designing a Smartphone Application of English Mathematical Terminology for Students of Mathematics Teachers Education <i>Bui Anh Tuan, Lam Minh Huy, Nguyen Hieu Thanh, Tieu Ngoc Tuoi and Huynh Tuyet Ngan</i></p> <p>467 - Using Dual-use Electronic Lectures in E-learning: An Empirical Study of Teaching and Learning Mathematics at Vietnamese High Schools <i>Bui Anh Tuan, Tran Thi Thu Thao, Nguyen Ngoc Phuong Anh and Le Thanh Dien</i></p>
<p>PS-18 Chemical and Environmental Engineering</p>		<p>Chair: Assoc. Prof. Dr. Trinh Khanh Son, Vietnam Dr. Hao-Lin Hsu, Taiwan</p> <p>Connection Venue: Room No. A1-804</p> <p>Link: https://zoom.us/j/92012580030?pwd=Uy9PWjJQS3Nlb2ZnYINGQ1QxTit1QT09</p> <p>Zoom ID: 920 1258 0030 Password: gtsd2020</p>
14:00 - 15:00 (Vietnam)	15:00 - 16:00 (Taiwan)	<p>60 - Synthesis of Zinc Oxide Nanoparticles and Their Antibacterial Activity <i>Thi Duy Hanh Le and Khanh Son Trinh</i></p> <p>107 - Carboxymethyl Cellulose /Aloe Vera Gel Edible Films For Food Preservation <i>Hung Ngoc Nguyen, Khoe Dang Dinh and Linh T. K. Vu</i></p> <p>112 - Optimum of Biodegradable Plate Production from Banana Trunk Waste by Taguchi Methods <i>Nhung Thi-Tuyet Hoang, Anh Thi-Kim Tran and Phan Thi Thu Thuy</i></p>
15:00 - 16:00	16:00 - 17:00	149 - The Morphological Characteristics and Physical Properties of

(Vietnam)	(Taiwan)	<p>Porous Corn Starch Hydrolyzed by Mixture of α-Amylase and Glucoamylase <i>Dang My Duyen Nguyen and Thanh Tung Pham</i></p> <p>188 - Extraction of Pectin from <i>Passiflora edulis</i> by Aqueous Two-Phase System <i>Nga Thi Vo, Thi Hao Cao and Minh Hao Hoang</i></p> <p>219 - Treatment of Wastewater Containing Reactive Dyes by electro-Fenton Method <i>Nguyen Thai Anh, Tran Tien Khoi, Nguyen Nhat Huy, Hoang Thi Ngoc Mai and Nguyen Hong Ngoc Linh</i></p>
<p>PS-19 Advances in Civil Engineering</p>		<p>Chair: Nguyen Van Chung, Vietnam Dr. Nguyen Duy Liem, Vietnam Connection Venue: Room No. A1-1005A Link: https://zoom.us/j/97789328533?pwd=T0xFK1V1QUk5ZTU0ZWheNm9tVUttUT09 Zoom ID: 977 8932 8533 Password: gtsd2020</p>
14:00 - 15:00 (Vietnam)	15:00 - 16:00 (Taiwan)	<p>44 - Collaborative Robotics in Construction: A Test Case on Screwing Gypsum Boards on Ceiling <i>Milan Gautam, Hannu Fagerlund, Blerand Greicevci, Francois Christophe and Jarmo Havula</i></p> <p>108 - The Load-Bearing of Concrete Beams as the Steel Reinforcements Connected by the Coupler at a Cross-Section of a Beam <i>Thanh-Hung Nguyen, Phuong-Doanh Huynh and Anh-Thang Le</i></p> <p>115 - Experimental study of the Strain Localization in a Rock Analogue Material at Brittle-Ductile Transition <i>Thi-Phuong-Huyen Tran, Sy-Hung Nguyen and Stéphane Bouissou</i></p>
15:00 - 15:40 (Vietnam)	16:00 - 16:40 (Taiwan)	<p>276 - Study on the Influence of Diaphragm Wall on the Behavior of Pile Raft Foundation <i>Van Qui Lai, Quoc Thien Huynh, Nhat Hoang Vo and Chung Nguyen Van</i></p> <p>280 - City-Scale Electricity Demand Forecasting using a Gaussian Process Model <i>Phong T. T. Nguyen and Lance Manuel</i></p>
<p>PS-20 Computational Mechanics models</p>		<p>Chair: Assoc. Prof. Dr. Chau Dinh Thanh, Vietnam Dr. Dao Duy Kien, Vietnam Connection Venue: Room No. A1-1005B Link: https://zoom.us/j/96668229175?pwd=OE1tWmdoRTZwZnQ1ZTErNIBRYXZDdz09 Zoom ID: 966 6822 9175 Password: gtsd2020</p>
14:00 - 15:00 (Vietnam)	15:00 - 16:00 (Taiwan)	<p>2 - Numerical Study on Vibration Control of Structures Using Multi Tuned Liquid Dampers with High Mass Ratio <i>Bui Pham Duc Tuong and Phan Duc Huynh</i></p> <p>34 - Static Analysis of Sandwich Plates using ES-MITC3 Elements based on the Third-order Shear Deformation Layerwise Theory <i>Thanh Chau-Dinh, Loi Dang-Huu and Jin-Gyun Kim</i></p> <p>37 - Ritz solution for static analysis of thin-walled laminated composite I-beams based on first-order beam theory <i>Ngoc-Duong Nguyen and Trung-Kien Nguyen</i></p>

15:00 - 16:00 (Vietnam)	16:00 - 17:00 (Taiwan)	<p>204 - Application of Element Combine39 to Reflect the Nature of Newly Puzzel Shaped Crestbond Rib Shear Connector in Composite Beam <i>Pham Duc Thien, Dao Duy Kien, Nguyen Van Khoa and Nguyen Thanh Hung</i></p> <p>277 - A Theoretical and Numerical Study of Ultrasonic Waves in Laminated Composites for Nondestructive Evaluation of Structures <i>Duy Kien Dao, Duchtho Le, TruongGiang Nguyen, Hoai Nguyen, Duc Chinh Pham and Haidang Phan</i></p> <p>278 - Guided Wave Propagation in a Layered Half-Space Structure of Anisotropic Materials <i>Duy Kien Dao, Duchtho Le, Quang Hung Le, Minh Tuan Nguyen, Haidang Phan and Duc Chinh Pham</i></p>
16:00 - 16:40 (Vietnam)	17:00 - 17:40 (Taiwan)	<p>452 - Fire Resistance Evaluation of Reinforced Concrete Structures <i>Dao Duy Kien, Do Van Trinh, Khong Trong Toan and Le Ba Danh</i></p> <p>471 - A novel two-variable model for bending analysis of laminated composite beams <i>Xuan-Bach Bui, Trung-Kien Nguyen, Quoc-Cuong Le and T. Truong-Phong Nguyen</i></p>
PS-21 Construction Engineering		<p>Chair: Dr. Ha Duy Khanh, Vietnam Dr. Nguyen Minh Duc, Vietnam Connection Venue: Room No. A1-1007 Link: https://zoom.us/j/97459915336?pwd=Mk9mZWUwNHdwK3lCVXd3Tk9ZRElIU09 Zoom ID: 774 5991 5336 Password: gtsd2020</p>
14:00 - 15:00 (Vietnam)	15:00 - 16:00 (Taiwan)	<p>25 - The Bearing Capacity of Compacted Clay Reinforced by Geotextile and Sand Cushion <i>Minh-Duc Nguyen</i></p> <p>47 - Ultimate Bond Strength of Steel Bar Embedded in Sea Sand Concrete under Different Curing Environments <i>Quoc Khanh Tran, Tri Thuong Ngo, Duy Liem Nguyen and Ngoc Thanh Tran</i></p> <p>90 - Effects of Soaking Process on CBR Behavior of Geotextile Reinforced Clay with Sand Cushion <i>Tu Nguyen Thanh and Duc Nguyen Minh</i></p>
15:00 - 16:00 (Vietnam)	16:00 - 17:00 (Taiwan)	<p>93 - The Influence of Water Content and Compaction on the Unconfined Compression Strength of Cement Treated Clay <i>Minh-Duc Nguyen, Anh-Thang Le, Thien-An Nguyen, Nguyen-Thao Thach and Thanh-Kiet Phan</i></p> <p>174 - An MCS–based Model to Qualify the Relationship between Worker’s Experience and Construction Productivity <i>Duy-Khanh Ha, Soo-Yong Kim and Van-Khoa Nguyen</i></p> <p>342 - Characteristics of Recycled Reinforced Concrete at High Temperatures <i>Nguyen Thanh Hung, Dao Duy Kien, Nguyen Van Khoa, Tran Minh Hieu and Doan Dinh Thien Vuong</i></p>
16:00 - 17:00 (Vietnam)	17:00 - 18:00 (Taiwan)	<p>345 - The Influence of Raft Thickness on the Behaviour of Piled Raft Foundation</p>

		<p><i>Tong Nguyen, Phuong Le and Viet Tran</i></p> <p>370 - Study on INTOC Waterproofing Technology for Basement of High-Rise Buildings <i>Sy-Hung Nguyen, Thanh-Tich Do and Julien Ambre</i></p> <p>474 - Water, Urban Morphology, Urbanization and Sustainable Development: Case study of the Nhieu Loc – Thi Nghe canal area in Ho Chi Minh city <i>Xuan Son Do</i></p>
<p>PS-22 Transportation Engineering</p>		<p>Chair: Prof. Dr. Hiroaki Nishiuchi, Japan Dr. Tran Vu Tu, Vietnam</p> <p>Connection Venue: Room No. A1-1206</p> <p>Link: https://zoom.us/j/99147725501?pwd=MEhOYmRJSdIzVmY3T05aRnFIZmZCdz09</p> <p>Zoom ID: 991 4772 5501 Password: gtsd2020</p>
14:00 - 15:00 (Vietnam)	15:00 - 16:00 (Taiwan)	<p>195 - Analysis of Flexible Pavements Comprised of Conventional and High Modulus Asphalt Concrete Subjected to Moving Loading using Linear Viscoelastic Theory <i>H.T. Tai Nguyen, Thanh-Nhan Phan, Tien-Tho Do, Duy-Liem Nguyen and Vu-Tu Tran</i></p> <p>196 - Effects of Forta-fi Fiber on the Resistance to Fatigue of Conventional Asphalt Mixtures <i>Tien-Tho Do, Duy-Liem Nguyen, Vu-Tu Tran and H.T. Tai Nguyen</i></p> <p>416 - A Study on Urban Traffic Congestion Using Simulation Approach <i>Phan Thi Kim Phung, Nguyen Truong Thi and Vo Thi Kim Cuc</i></p>
<p>PS-23 Green building materials</p>		<p>Chair: Prof. Dr. Kochi Maekawa, Japan Assoc. Prof. Dr. Le Anh Thang, Vietnam</p> <p>Connection Venue: Room No. A1-1207</p> <p>Link: https://zoom.us/j/94988990047?pwd=ZXdVaWI5TkFObVFvbHYxaTBXT3NQZz09</p> <p>Zoom ID: 949 8899 0047 Password: gtsd2020</p>
14:00 - 15:00 (Vietnam)	15:00 - 16:00 (Taiwan)	<p>19 - Crack patterns in direct tension and flexure of ultra-high-performance fiber-reinforced concrete with scale effect <i>Duy-Liem Nguyen, Vu-Tu Tran, Huynh-Tan-Tai Nguyen and Min-Kyoung Kim</i></p> <p>20 - Indirect Tensile Strengths of Crushed-Sand Concretes in Correlation with Its Compressive Strength <i>Duy-Liem Nguyen, Vu-Tu Tran, Thi-Ngoc-Han Vuong and Tien-Tho Do</i></p> <p>102 - Determine the percentage of Recovering FCC Spent Catalysts as mineral filler in the asphaltic concrete mixture <i>Anh Thang Le and Nguyen Manh Tuan</i></p>
15:00 - 16:20 (Vietnam)	16:00 - 17:20 (Taiwan)	<p>137 - Effect of Alkaline Solution and Curing Conditions on the Strength of Alkali – Activated Slag Mortar <i>Tai Tran Thanh, Tu Nguyen Thanh and Hyug-Moon Kwon</i></p> <p>154 - Engineering Properties of Cement Mortar Produced with Mine Tailing as Fine Aggregate <i>Duy-Hai Vo, Khanh-Dung Tran Thi, Mitiku Damtie Yehualaw, Chao-Lung</i></p>

		<p><i>Hwang, Thi-My Ngo and Hoang-Anh Nguyen</i></p> <p>159 - Effect of Water-To-Solid Ratio on the Strength Development and Cracking Performance of Alkali-Activated Fine Slag under Water Curing Condition</p> <p><i>Duy-Hai Vo, Khanh-Dung Tran Thi, Mitiku Damtie Yehualaw, Chao-Lung Hwang, Hoang-Anh Nguyen and Vu-An Tran</i></p> <p>382 - Influence of Heating Temperature in Thermal Oxidation to Prepare Titanium Oxide /Aluminum-doped Zinc Oxide Films for Multi-functional-energy-saving Glass</p> <p><i>Shang-Chou Chang, Tsung-Han Li and Huang-Tian Chan</i></p>
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