

Conference Program & Abstract



Singapore
17-19 January 2020



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2020 IPN CONFERENCES SINGAPORE

SINGAPORE
17 - 19 JANUARY 2020



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Welcome to IPN Conferences 2020

Dear Professor, Dr and distinguished delegates,

Welcome to the IPN Conferences 2020 in Singapore. On behalf of **IPN Education Group**, I would like to thank all the Conference Chair, Program Chairs and the Technical Committees. Their high competence and professional advice enable us to prepare the high-quality programs. For the participants, we hope all of you have a wonderful time at the conference and also in Singapore.

We believe that by this excellent conference, you can get more opportunities for further communication with researchers and practitioners. For the conferences of **ICGT 2020, ICEMA 2020 and ICETM 2020** more than 40 submitted papers have been received and 25 papers have been accepted and published finally.

In order to hold more professional and significant international conferences, your suggestions are warmly welcomed. And we are looking forward to meet you again next time.

**Best Regards,
Thank you.**

Yours Sincerely,

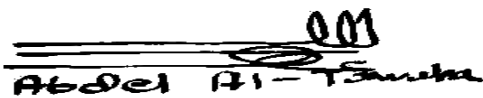


Datin MZ Zainab
Director – Conference Management IPN Education Group
Chairman, IPN Conferences 2020

Message from IPN Honorary Advisor

On behalf the IPN Education Group, it is my privilege to welcome you to the IPN Conferences Singapore 2020. IPN is an independent, non-political, non-governmental organization of distinguished scientists dedicated to advancing science around the world. We aim to help scientists and researchers to publish their findings in scientific journals and to promote and help to organize worldwide conferences. We believe that has no boundaries, regardless of the great distances between countries and continents. Thus IPN welcomes contributions from researchers from all concern irrespective to the race, colour, religion and nationality.

Best Regards



Prof. Dr. Abdel Rahman Mohammad Said Al Tawaha
Honorary Advisor IPN Education Group
IPN Conferences 2020 Singapore

About IPN Education Group

The IPN Education Group is a non-profit international association dedicated to the promotion of international education and university cooperation in the field of Business, Art, Social Science, Management, Education, Science, Technology, Engineering and any other related field.

Through the organization of different international events, it brings together institutions, bodies and organizations from different countries of the world for discussion and cooperation. IPN Mission is to promote and enhance the dialogue in education among the institutions devoted to field mentioned above through:

- Promotion of best practice standards in the service of international education.
- The facilitation of relevant forums, training and information exchange.
- Creation and dissemination of knowledge; exert an influence in public policy.
- Production of publications used as a database document for research works, projects and innovation activities held on the international education field.

IPN believes that this is best achieved through international cooperation and promotes the development of closer links among relevant institutions and individuals around the world. IPN supports that such international cooperation can help countries learn from each other and promotes the dissemination of scientific and engineering activities. IPN intends to achieve the mentioned objectives and get an international visibility by the organization of international conferences and by interacting with public and private organisms from all parts of the world.



www.ipneducationgroup.org
www.ipnconference.org

ANNOUNCEMENT

All accepted papers will be published in:

- Active Scopus Indexed Journal
- ESCI Journal
- Active ERA Journal
- International Journal of Business and Globalisation (IJBG)M (EISSN: 1753-3635/ISSN: 1753-3627)
- Journal of Industrial Engineering Research (JIER) (ISSN:2077-4559) (International Indexed Journal)
- International Journal of Recent Technology and Engineering (IJRTE) (TM) ISSN: 2277 -3878 (IJRTE JOURNAL)
- Science International Journal (SI) ISSN: 1013-5316 (Google Scholar)
- Journal of Asian Scientific Research EISSN: 2223-1331, ISSN: 2226-5724
- International Journal of Asian Social Science EISSN: 2224-4441 ISSN: 2226-5139
- Journal of Mechanics of Continua and Mathematical Sciences EISSN: 0973-8975, ISSN: 2454-7190
- Research Journal of Social Sciences (RJSS) (ISSN:1815-9125) (CNKI SCHOLAR, SIS DATABASE, ULRICH'S PERIODICALS, THOMSON GALE,DOAJ,OPEN J-GATE,INDEX COPERNICUS,ELECTRONIC JOURNALS LIBRARY,EBSCO HOST)
- International Journal of Administration and Governance (IJAG)(ISSN 2077-4486) (Google scholar, Scientific World Index, Directory of Indexing and Impact Factor (DIIF), Academia.edu.
- International Journal of Business and Management (IJBM) (ISSN 2321 8916) (Google scholar, Scientific World Index, Directory of Indexing and Impact Factor (DIIF), Academia.edu.
- Journal of Engineering and Science Research (ISSN 2289-7127) (Google Scholar, MyJurnal)
- Advances in Environmental Biology (AEB) (ISSN 1995-0756)
- Advanced Journal of Technical and Vocational Education (AJTVE) (eISSN : 2550-2174)(Google Scholar, MyJurnal)

One Best Presenter Award will be selected from each oral session. The Certificate for Best Presenter award will be awarded after presentation session.



KEYNOTE SPEAKER:



**Prof. Dr. Abdel Rahman Mohammad Said Al-Tawaha, (Ph.D)
Honorary Advisor IPN.org**



**Dato' Syed Azuan Syed Ahmad Al-Idrus, D.I.M.P., M.Eng, B.Sc, Dip
Honorary Advisory MDSG
Fellow, Institute of Materials, Malaysia
Fellow, IPN.org
Senior Member, Society of Manufacturing Engineers USA**

LIST OF THE CONFERENCE COMMITTEE

IPN Conferences 2020 Singapore, Honorary Advisor

Prof. Dr. Abdel Rahman Mohammad Said Al-Tawaha (Ph.D McGill University)

IPN Conferences 2020 Singapore, Chairman

Datin MZ Zainab

IPN Conferences 2020 Singapore, Academic Committee

Conference Chair

Prof. Dr. Abdel Rahman Mohammad Said Al-Tawaha (Ph.D McGill University)

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IPN Conferences 2019 Langkawi, Malaysia, Organising Committee

Nurul Faezah Mohd Talib

Nabihah Husin

Noor Hidayah Abdullah

INSTRUCTION FOR ORAL PRESENTATION

Devices Provided by the Conference Organizer:

- Laptop (with MS-Office & Adobe Reader)
- Projector & Screen
- Laser Sticks

Materials Provided by the Presenters:

- PowerPoint or PDF files

Duration of each Presentation (Tentatively):

- Regular oral presentation: about 15 minutes (including Q&A)
- Keynote speech: about 40 minutes (including Q&A)

Notice: Please keep your belongings (laptop and camera etc) with you!

During registration:

Original Receipt

Representative / Pass Card with lanyard

Printed Program

Lunch Coupon

Participation Certificate (collected from Session Chair after the session)

Conference Bag



IPN Conferences 2020, Singapore

Conference Program

January 17, 2020	Venue:	1000 - 1200	Registration	
January 18, 2020	Venue:	0830 – 0845	Opening Remarks	Opening Remarks
		0845 – 1000	Plenary Speech 1	Keynote Speaker
		1000 – 1030	Group Photo and Coffee Break	
	Venue:	1030 – 1230	Session 1	
	Venue:	1230 – 1400	Lunch	
	Venue:	1400 – 1600	Session 2	
January 19, 2020	Lobby hotel	0800 - 1200	Networking	

Session 1
 Time: 1030 – 1230
 Venue: Hibiscus
 Session Chair:



No	Paper ID	Presenter
1	001-sin	Experimental Analysis and Comparative Study of Extensive Green Roof in Central India Avinash Verma and Nisha Netam <i>National Institute of Technology Raipur, India</i>
2	002-sin	Challengers to Practices Affordable Sustainable Housing Project: An Insight from Construction Player in Klang Valley Nadzirah Zainordin, Noor Hidayah Elmi, Yeo Wen Yin and Ahmad Faris Omar <i>SEGi University, Malaysia</i>
3	003-sin	Evaluating Reliability of Final Exam Questions via Rasch Model N. Lohgheswary, S. Salmaliza, A. Wei Lun, A. Jedi and Z. M. Nopiah <i>SEGi University, Malaysia</i>
4	004-sin	Exploration of Building Information Modelling (Bim) Application: An Understanding among Quantity Surveyor in Malaysia Nadzirah Zainordin, Zamzarina Md Judyar and Nur Syahirah Zafarull <i>SEGi University, Malaysia</i>
5	005-sin	Smart Control of Laminated Cylindrical Panels Composed of Fuzzy Fiber Reinforced Composite Layers Rajana Suresh Kumar <i>National Institute of Technology Raipur, Raipur, India</i>
6	006-sin	CFD Based Parametric Analysis of Shell and Helical Tube Heat Exchanger Using Nanofluids Palash Soni, Fanindra Kumar Verma, Vivek Kumar Gaba <i>National Institute of Technology Raipur, India</i>
7	007-sin	Community Participation in Creating Sustainable Community-Based Tourism in Karimunjava Tri Marhaeni Pudji Astuti, Edi Kurniawan, Atika Wijaya, Kuncoro Bayu, Mohammad Syifauddin <i>Universitas Negeri Semarang, Semarang City, Central Java, Indonesia</i>

Conference Venue



Ibis Singapore on Bencoolen

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<https://all.accor.com/hotel/6657/index.en.shtml>

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(IPN Education Group Thailand)

Note



List of Abstract

No	Paper	Abstract
1	001-sin	<p>Experimental Analysis and Comparative Study of Extensive Green Roof in Central India</p> <p>Avinash Verma and Nisha Netam</p> <p><i>Department of Mechanical Engineering, National Institute of Technology Raipur, 492010, Chhattisgarh, India</i></p> <p>Abstract: India is the second-largest populated country in the world and with an increase in the population, the energy demand of the country also increases. It is observed that houses located in central India are not capable to provide thermal comfort throughout a year except for two months. In the present work behaviour of green roof (GR) as compared to the conventional bare roof (BR) is analyzed for the building located at Central India. The experiment was conducted for a green roof and a conventional bare roof. The temperature was recorded with the temperature sensors installed at different locations. There was 35.21% of the reduction in the total heat flux in the green roof while comparing it with the bare one.</p>
2	002-sin	<p>Challengers to Practices Affordable Sustainable Housing Project: An Insight from Construction Player in Klang Valley</p> <p>Nadzirah Zainordin, Noor Hidayah Elmi, Yeo Wen Yin and Ahmad Faris Omar</p> <p><i>Center of Building & Resilient Development, Faculty of Engineering and the Built Environment, SEGi University, Kota Damansara, Selangor, Malaysia.</i></p> <p>Abstract: Malaysia government had implemented several affordable housing programme such as Program Bantuan Rumah (PBR) and Perumahan Rakyat 1Malaysia (PR1MA) for low- and middle- income households to cope with the problem of mismatch between supply and demand of housing due to socioeconomic change, urbanization and evolving population. However, Malaysia still facing shortage of affordable homes for the masses. This research its to identify the</p>

		<p>challengers faced by the construction player particularly in Klang Valley to deliver affordable sustainable housing project. The structured questionnaire survey has been sent to 170 construction players around Klang Valley. The finding shows that high cost, lack of enforcement and lack of demanding from stakeholder it's the fact contribute to the challenging to be faced to deliver affordable housing project. Therefore, the recommendation to make this affordable housing project can be fully implementing its an awareness on the benefit this concept may offer as well as fully support by the ministry of housing by offering certain incentives to the construction players.</p>
3	003-sin	<p>Evaluating Reliability of Final Exam Questions via Rasch Model</p> <p>N. Lohgheswary¹, S. Salmaliza², A. Wei Lun³, A. Jedi⁴ and Z. M. Nopiah⁵</p> <p><i>^{1, 3, 4, 5} Faculty of Engineering and Built Environment, Universiti Kebangsaan Malaysia, Bangi, 43600, Selangor Darul Ehsan, Malaysia</i></p> <p><i>² SEGi University, Kota Damansara, 47810 Selangor Darul Ehsan, Malaysia</i></p> <p>Abstract: Students grade in a subject is determine mainly from the final examination marks. The final exam questions need to be reliable in order to measure the performance of students in the particular subject. Rasch model able to measure the reliability of an instrument, the final exam questions. A total of 114 students from Mechanical Engineering department sat for the Engineering Statistics subject. Marks were entered in excel and transferred as *prn format. Marks were analyzed against Rasch model, WINSTEPS. The summary statistics for person, summary statistics for item, item statistics, item dimensionality and item correlation are among the output being analyzed. One item is identified as misfit item. The Engineering Sattistics exam questios was very reliable and able to give insight view of the questions. A corrective action is taken to review the misfit item and rephrase the item.</p>
4	004-sin	<p>Exploration of Building Information Modelling (Bim) Application: An Understanding among Quantity Surveyor in Malaysia</p> <p>Nadzirah Zainordin¹, Zamzarina Md Judyar² and Nur Syahirah Zafarull³</p> <p><i>^{1,2,3} Center of Building & Resilient Development, Faculty of Engineering and the Built Environment, SEGi University, Kota Damansara, Selangor, Malaysia</i></p> <p>Abstract: This study begins with a broad literature review, on understanding towards Building Information Modelling (BIM) concept. Quantity Surveyors star as an influential role as a qualified, trained and proficient in dealing with glitches relating to construction expenditure, supervision and consultation in construction industry. When the task getting crucial, an assistant from technology may help to faster and smoother the process and task. This study aims to investigate an understanding on the application of BIM among Quantity Surveyor in Malaysia. According to the official website of Board of Quantity Surveyors Malaysia, there are 101 registered Quantity Surveying</p>

		<p>Consultant firms in 2018. This study targeted to make a survey on 1000 persons from different firms and expected to get response from at least 278 persons due to time constraint. The other criteria of the respondents include years of experience in the industry. Quantity Surveying Consultant firms would be the most suitable group of people to answer questionnaire survey for this study. The registered Quantity Surveying Consultant firms are very well proficient to the quantity surveying practice and services. Therefore, by choosing Quantity Surveying Consultant firms to be the respondent may help in getting the most consistent answer and higher accuracy of the exploration of Quantity Surveyors productivity by adopting Building Information Modelling (BIM) concept in Quantity Surveyor which will further enhance the awareness of benefits of BIM to the Quantity Surveyor profession itself.</p>
5	005-sin	<p>Smart Control of Laminated Cylindrical Panels Composed of Fuzzy Fiber Reinforced Composite Layers</p> <p>Rajana Suresh Kumar*</p> <p><i>Assistant Professor, Department of Mechanical Engineering, National Institute of Technology Raipur, Raipur, Chhattishgarh-492010, India.</i></p> <p>Abstract: In present work, vibration analysis of active constrained layer damping (ACL D) of smart laminated composite cylindrical panel composed of fuzzy fiber reinforced composite has been performed. The ACL D treatment contains the constrained viscoelastic layer placed between the substrate cylindrical panels and constraining 1-3 piezoelectric composite (PZCs) layer. The substrate cylindrical panel is composed of fuzzy fiber reinforced composite (FFRC) facings containing straight carbon nanotubes (CNTs) which are grown on the surface of the reinforcing base fibers in radial direction. In the present work layer wise displacement field has been developed considering the continuity between the individual layers of the panel using the first order shear deformation theory (FSDT). A finite element model for the overall smart laminated FFRC cylindrical panel coupled with ACL D treatment has been developed and a MATLAB routine for the same is developed using 8-noded isoparametric quadrilateral element. The effect of radially grown CNTs of FFRC of the panel on the frequency response under simply supported boundary condition has been studied. Also, the piezoelectric fiber orientation angles is varied to study the effect of the same on the performance ACL D treatment in suppressing the vibrations of laminated cylindrical panels over the passive damping.</p>
6	006-sin	<p>CFD Based Parametric Analysis of Shell and Helical Tube Heat Exchanger Using Nanofluids</p> <p>Palash Soni, Fanindra Kumar Verma, Vivek Kumar Gaba</p> <p><i>National Institute of Technology Raipur, India-492010</i></p>

		<p>Abstract: The present work is to investigate the CFD based performance of shell and helical tube heat exchanger (SHTHE) using CuO/water and Al₂O₃/water nanofluids. The solid particle is having higher thermal conductivity as compared with liquids; addition of the solid nanoparticle to the base fluid increases the thermal conductivity of the liquid. Use of that nanofluid in the heat exchanger increases its performance. The present paper deals with the key parameters that influence the performance of heat exchanger. The performance of SHTHE is studied by varying the pitch and coil diameter of the helical tube that affects the performance of heat exchanger is reported. In the present study hot water mixed with nanofluid flows inside the shell while cold water flows inside the helical tube so that maximum heat can be obtained by the cold fluid. The simulation is performed in SolidWorks flow simulation. The pitch of helical tube is varying from 0.013m to 0.018m and coil diameter varies from 0.08m to 0.12m, the other parameter is kept as constant. The tube side and shell side flow rate is taken as 2 LPM. The results indicate that the effectiveness of heat exchanger increases when increasing pitch and coil diameter this is because of the increase in the heat transfer coefficient due to the curvature of the coil. Further it was observed that CuO/water nanofluid is having higher thermal conductivity and gives better performance in heat exchanger when compared with Al₂O₃/water nanofluid.</p>
7	007-sin	<p>Community Participation in Creating Sustainable Community-Based Tourism in Karimunjawa</p> <p>Tri Marhaeni Pudji Astuti¹, Edi Kurniawan², Atika Wijaya³, Kuncoro Bayu⁴, Mohammad Syifauddin⁵</p> <p><i>Universitas Negeri Semarang, Semarang City, Central Java, Indonesia</i></p> <p>Abstract: In constructing an ideal tourism development, the local government needs to pay attention to environmental and cultural preservation. Then, they also need to prioritize the interests of local communities in order to be able to become sustainable community-based tourism. This is understood correctly by the tourism stakeholders in Karimunjawa to develop a sustainable community-based tourism. This study intended to analyze the community participation in realizing sustainable community-based tourism in Karimunjawa. This study used primary and secondary data, collected with snowball sampling techniques. The data collection methods used was in the form of participatory observation, interviews, and documentation. The data obtained were analyzed by using the interactive analysis method according to Miles (1992: 16-19) consisting of the process of data reduction, data presentation, and drawing conclusions. The results showed that based on the analysis by using the theory of Tosun (2006), the typology of community participation in realizing sustainable community-based tourism in Karimunjawa is in the Spontaneous-Induced Participation type. The participation of Karimunjawa community is the result of the incision between Spontaneous Participation and Induced Participation. In some dimensions, the participation is active and bottom-up, while in some other dimensions participation is still top-down and passive.</p>