



**EBINS 2019**  
**Conference Proceeding**  
**Book of Papers**

**2<sup>nd</sup> “Economics and Business at the Interface of Natural Sciences”  
(EBINS 2019)**

**Editor:**

**Dr Ahmad Saddam Ph.D.**, Country Director (Global Illuminators Iraq)

ISBN: 978-969-695-055- 4

Printed and Published by: Global Illuminators Malaysia

## **EBINS 2019 Conference Organizing Committee**

### **Conference Chair**

**Farooq Ahmed Jam (Ph.D.)**

*Executive Director (Global Illuminators)*

### **Conference Co-Chair**

**Tariq Iqbal Khan (Ph.D.)**

*Director Global Operations (Global Illuminators)*

### **Conference Co-Chair**

**Muhammad Abbas (Ph.D.)**

*Director Policy & Research (Global Illuminators)*

**On Chee Hoong**

*Manager Operations (Global Illuminators)*

### **Conference Coordinator**

**Dr. Renan P. Limjuco (Ph.D.)**

*Director of Research*

*University of the Immaculate Conception (UIC), Davao City, Philippines*

### **Conference Coordinator**

**Prof. Dr. Sylvia J. Pidor (Ph.D.)**

*Dean of Graduate School, University of the Immaculate Conception, Philippines Davao, Philippines*

### **Editor Conference Proceeding**

**Ahmad Saddam**

*Country Director Iraq (Global Illuminators)*

## Conference Chair Message

Farooq Ahmed Jam (Ph.D.)

2<sup>nd</sup> International Conference on “Economics and Business at the Interface of Natural Sciences” (EBINS-2019) serves as platform that aims to help the scholarly community across nations to explore the critical role of multidisciplinary innovations for sustainability and growth of human societies. This conference provides opportunity to the academicians, practitioners, scientists, and scholars from across various disciplines to discuss avenues for interdisciplinary innovations and identify effective ways to address the regional and global challenges faced by our societies. The research ideas and studies that we received for this conference are very promising, unique, and impactful. I believe, these studies have the potential to address key challenges in various sub-domains of social sciences and applied sciences. The scholars attending this conference will certainly find it helpful in refining their own research ideas, finding solutions to basic/applied problems they face and interact with other renowned scholars for possible future collaborations.

I am really thankful to our honourable scientific and review committee for spending much of their time in reviewing the papers for this event, selecting the best paper awards and helping the participants in publishing their research in affiliated journals. Also special thanks to all the session chairs from industry, academia and policy-making institutions who volunteered their time and support to make this event a success.

A very special thanks to the great scholars for being here with us as key note speakers. Their valuable thoughts will surely open the horizon of new research and practice for the conference participants coming from across the globe. I am also thankful to all the participants for being here with us to create an environment of knowledge sharing and learning. We the scholars of this world belong to the elite educated class of this society and we owe a lot to return back to this society. Let's break all the discriminating barriers and get free from all minor affiliations. Let's contribute even a little or single step for betterment of society and welfare of humanity to bring prosperity, peace and harmony in this world. Stay blessed.

### Type of EBINS Papers

For this year, EBINS has two types of papers: *Empirical Studies* and *Insight*. Research papers meet the needs of researcher and reviewed on the basis of highest academic standards. The objective of the academic paper is to contribute in the scientific body of knowledge. Contrary, Inside papers meet the needs of policy makers and professionals and reviewed on the basis of high practical standards. The objective of the Insight is to identify the real world problems and how can solve with the help of information systems.

## Reviewing Criteria

In EBINS all papers are used to judge on the criteria (relevance, significance, originality, validity and clarity). However some criteria differ between the Research papers and Insight papers.

**Relevancy:** Relevancy has a great impact on the theme of the conference. The material is relevant and according to the theme of the conference.

**Significance:** Knowledge in different researches in the conference is related to research papers and insight papers.

**Originality:** Ideas that are new for the researchers are used in the conference.

**Validity:** Research papers in the conference are based on theory while the insight papers in the research are based on experimental researches. References are according to content.

**Clarity:** Papers are according to the format, language is easy and understandable by the audience in the conference.

## Acceptance Rates

Full Research Papers				
Submitted Papers	Accepted Papers	Withdrawn	Unqualified papers	Acceptance Rate
8	4	2	2	50%

## Copy right Agreements

In EBINS 2019 proceedings all authors are agreed on the copy right agreement. This agreement shows that only authors can retain copyright. It also permits that nobody can use for non-commercial purpose such as to download, print out etc of an article published in the EBINS 2019 proceedings. All credit is given to the authors and they have copyright agreements. This copyright agreement and use license ensures, among other things, that an article will be as widely available as possible and that the article can be included in any scientific archive.

## **Acknowledgment**

A huge numbers of people helped in conducting the conferences. First of all thanks to all the members of the Conference and Program Committee and representatives of the EBINS board and their helpers. We also want to thank all the Track Chairs, Track Co-Chairs and reviewers, as well as all the member of the Scientific Committee for their help in the review process and organizing the tracks and special sessions. We thank everyone for their hard work and dedication to this conference and we look forward to the latest episode of the EBINS tradition.

Farooq Ahmed Jam (Ph.D.), Tariq Iqbal Khan (Ph.D.) and Muhammad Abbas (Ph.D.)

Program Chair & Co-Chairs

## **EBINS 2019 Scientific and Reviewers Committee**

### ***BUSINESS, MANAGEMENT AND ECONOMIC STUDIES***

***Palti Marulitua Sitorus (PhD)***  
***Chair of Scientific & Review Committee***  
*Telkom University Indonesia*

***Mej Mohd Noor Azli bin Hj. Ali Khan (PhD)***  
*University Technology Malaysia.*

***Prof. Ravindran Ramasamy (PhD)***  
*Graduate School of Business,*  
*UniRazaK, Kuala Lumpur, Malaysia*

***Prof. Madya Raja Roslan Raja Abd. Rahman (PhD)***  
*Human Resource Development/Management,*  
*University Technical Malaysia Melaka,*

***Ludmila Mládková (PhD)***  
*Faculty of Business Administration, Department of Management*  
*University of Economics Prague, Czech Republic*

***Mohd Norfian Alifiah***  
***Faculty of Management***  
*Department of Accounting and Finance,*  
*Universiti Teknologi Malaysia, Malaysia*

***Ahmed Saddam (PhD)***  
*Country Director- Iraq*  
*Global Illuminators*

***Mohammad Hamad Khalef AlKhresheh (PhD)***  
*Country Director-Jordan*  
*Global Illuminators*

***Dr. Suresh B.Gholse (PhD)***  
*VatarMeherbaba College,*  
*Rtm Nagpur University, Nagpur, India*

***Tahir Masood Qureshi (PhD)***  
*College of Business Administration*  
*American University in the Emirates, UAE*

***Ghulam Rasul Awan (PhD)***  
*UCP Business School, UCP Lahore Pakistan*

***Lau Wee Yeap (PhD)***

*Faculty of Economics & Administration,  
University of Malaya, Kuala Lumpur, Malaysia*

***Vignes Gopal***

*Faculty of Economics and Administration  
University of Malaya, Malaysia*

***J. A. Arul Chellakumar (PhD)***

*Head Department of Economics  
Bharathidasan University  
Tiruchirappalli, Tamilnadu, India*

***Girish Karunakaran Nair (PhD)***

*Programme Leader  
International Hospitality Management Faculty  
Stenden University, Qatar*

***Galla Venkata Rama Krishna Acharyulu (Phd)***

*School of Management Studies,  
University of Hyderabad, India.*

***Santi Rahmawati***

*School of Business and Management,  
Institut Teknologi Bandung, Indonesia*

***Amir Hossein Dastaviz (PhD)***

*Institute of Graduate Studies,  
University Of Malay, Kuala Lumpur, Malaysia*

***Syed Ahmed Salman***

*International Islamic University  
Malaysia, Gombak, Selangor, Malaysia*

***Dr. Wurim Ben Pam (PhD)***

*Federal University, Dutsin-ma,  
Katsina State- Nigeria*

***Wang, Yu-Mei***

*Asia University, Taiwan*

***Aglis Andhita Hatmawan***

*STIE Dharma Iswara Madiun, Indonesia*

***Hasnun Anip Bin Bustaman***

*University Teknologi MARA Malaysia*

***Bertin Chen***

*Vanung University, Taiwan*

***Susan Irawan Rifai***

*Centro Escolar University, Philippine*

***Jihoon Kim***

*Ehime University, Korea, South*

***Chien-Tu Jeff Lai***

*National Chengchi University, Taiwan*

***Haykel Hadjs Alem***

*LEM, University of Lille FRANCE,*

***Prof. Dr. Tarek Taha Ahmed***

*Faculty of Business,*

*Pharos University in Alexandria, Egypt*

***Samar J. Al-Barghouthi***

*Royal University for Women, Bahrain*

***Deus Ngaruko***

*Centre for Economics and Community Economic Development, the Open University of Tanzania*

***Mohammad Ehsani***

*Tarbiat Modares University,*

*Israel, Imam Khomeini International University, Iran*

***Ismail BILGIÇLİ***

*Sakarya University Karasu MYO, Turkey*

***Tack Hyun Shin***

*Seoul National University of Science and Technology, Korea, South*

***Sun-Young Nam***

*Department of Pharmacology, College of Korean Medicine, Kyung Hee University, Seoul, 130-701, Republic of Korea*

***Vicent Stanslaus***

*The Open University Of Tanzania*

***Partha Ray***

*Indian Institute of Management Calcutta, Institute of Management Technology, Ghaziabad, India*

***SOCIAL SCIENCE AND HUMANITIES***

***Sailesh Sharma (PhD)***

*Deputy Vice Chancellor (Academic & International)*

*Proceeding of 2<sup>nd</sup> International EBINS Conference ---, Singapore April 2019*

*A.Saddam*



*University of Malaya, Kuala Lumpur, Malaysia*

***Siamak Khodarahimi (PhD)***

*Islamic Azad University,  
Fars Province, Iran*

***Rex Balena (PhD)***

*Oceanographer and Education Specialist  
University of the Philippines in the Visayas*

***Dr. A B Sharangi***

***HOD, Research Scholar,***  
*Agricultural University, India*

***Jayson E. Lannu***

*Jose Rizal University, Philippines*

***Amandha Boy Timor Randita***

*Faculty of Medicine,  
Sebelas Maret University, Indonesia*

***Gogoberidze George***

*Russian State Hydrometeorological University (RSHU), Russia*

***Krittawaya Thongkoo***

*Chiang Mai University, Thailand*

***Tzu-yi Lee***

*Chung Yuan Christian University, Taiwan*

***Renan Limjuco (PHD)***

*University of the Immaculate Conception  
Davao City, Philippines*

***Kankan Kasmana***

*Departemen Visual Communication Design-Indonesia Computer University, Indonesia*

***Monique Musni- Tagaytay, MA. Ed***

*University of the Immaculate Conception Philippine, Philippine*

***Naidu Narainsamy***

*Department of Psychology of Education, University of South Africa (UNISA), College of Education, South Africa*

***Sultanbayeva Gulmira***

*Al-Farabi Kazakh national University Kazakhstan*

***Emilio A. Cruz***

*Bulacan State University, Malolos City, Bulacan*

*Philippines*

**Si, Li**

*Wuhan University, China*

**Dr. Nessreen A. Elmelegy**

*Royal University for Women, Kingdom Of Bahrain, Bahrain*

**Dr. Shusil Kumar Das**

*Daffodil International University, Dhaka, Bangladesh*

**Dr. Rovelina B. Jacolbia**

*Polytechnic University of the Philippines*

**Sathiamoorthy Kannan**

*Institute of Educational Leadership, University of Malaysia*

**Dr. Isabella Musyoka-Kamere**

*Maasai Mara University, Kenyatta University Kenya*

**Hadi Ebadi**

*Universiti Teknologi Malaysia 2. Razi University, Iran*

**Dr. Shusil Kumar Das**

*Daffodil International University, Dhaka, Bangladesh*

**Botabaeva Ademi Erkebaevna**

*Eurasian National University named after L.N. Gumilyov, Kazakhstan*

**Girma Y. I. Menelik**

*Penza State University Russia, K. Satbaev Kazakh National Technical University Kazakhstan*

**I-Ju Chen**

*Ling Tung University Taiwan*

**Wen, Yvonne, Ying-Ya**

*National Formosa University, Taiwan*

## **PHYSICAL LIFE AND APPLIED SCIENCES**

**Yan LI (PhD)**

*Nanyang Technological University, Singapore*

**Md. Saleh Ahmed (PhD)**

*Department of Mathematics & Statistics*

*Sultan Qaboos University, Muscat, Oman*

**Saon Banerjee (PhD)**

*Proceeding of 2<sup>nd</sup> International EBINS Conference ---, Singapore April 2019*

*A.Saddam*

*OIC, AICRP on Agrometeorology,  
State Agricultural University*

**Mohd Nizam Omar**  
*Universiti Utara Malaysia, 06010 UUM Sintok, Kedah, Malaysia*

**Amina Bakhrouf**  
*Laboratory of Analysis, Treatment and Valorisation of Environment Polluants and Products, Monastir,  
Tunisia*

**Shatrova, Olga**  
*Russian State Hydrometeorological University (RSHU),Russia*

### ***ENGINEERING AND TECHNOLOGY STUDIES***

**Nurul Akmar Binti Emran (PhD)**  
*Faculty of Information Communication Technology  
Universiti Teknikal Malaysia Melaka*

**Chee-Ming Chan (PhD)**  
*Civil and Environmental Engineering  
Universiti Tun Hussein Onn, Malaysia*

**Zhaparov Meirambek Kazimovich (PhD)**  
*Head of Micro learning Research Centre  
Suleyman Demirel University, Kazakhstan*

**Noor Zaman (PhD)**  
*College of Computer Science and IT,  
King Faisal University, Saudi Arabia*

**Kelly Whealan George (PhD)**  
*Embry-Riddle Aeronautical University (ERAU), USA*

**Prof. Dr. Hj. Dwi Kartini , SE. Spec. Lic (PhD)**  
*University of Computer Indonesia (Unikom)  
Bandung Indonesia*

**Valeria Ersilia Oniga (Ph.D)**  
*Department of Terrestrial Measurements and Cadastre  
Technical University “Gh.Asachi” from Iasi  
Romania*

**Prof. Dr. Hj. Dwi Kartini , SE. Spec. Lic (PhD)**  
*University of Computer Indonesia (Unikom)  
Bandung Indonesia*

**Mira Rahayu**

*Telkom University Indonesia,Indonesia*

***Ony Widilestariningtyas***

*Universitas Komputer Indonesia,Indonesia*

***Yully Ambarsih Ekawardhani***

*UNIKOM,Institut Teknologi Bandung,Indonesia*

***Emel Zeray***

*Selcuk University Geomatics Department, Turkey*

***Nedjah***

*Preparatory School of Sciences and Technology (EPST Annaba), Algeria*

***Tashenova***

*L. N. Gumilyov Eurasian National University, Kazakhstan*

***Farah Jemili***

*Department of Computer Sciences, High Institute of Computer and Communication Techniques, Sousse University, Tunisia*

***Nahid Sanzida***

*Bangladesh University of Engineering and Technology (BUET) Bangladesh*

### ***HEALTH AND MEDICINE STUDIES***

***Balachandar S. Sayapathi (PhD)***

*Faculty of Medicine, University of Malaya*

***Ahmed Kaid Naji Allow (PhD)***

*Head of Dept. of Human Physiology  
College of Medicine and Health Sciences  
Sana'a University, R. Yemen*

***Prof. Dr. drg. Andi Zulkifli, M.Kes***

*Faculty of Public Health Hasanuddin University,  
Makassar, Indonesia*

***Fauzie Rahman***

*Head of Health Policy Management Department at School of Public Health, Faculty of Medicine,  
Lambung Mangkurat University, Indonesia*

***Helia Rahbari***

*Faculty of Paramedical Sciences at Shahid Beheshti University of Medical Sciences, Iran*

***Dr Narjis Rizvi***

*Aga Khan University, stadium road – Karachi – Pakistan*

***Dr. Elvira Urgel(PHD)***

*Centro Escolar University,china*

***Maria Bea Lao***

*Medical Technology/Medical Laboratory Science University of the Immaculate Conception Philippine*

***Nima Kasraie***

*Children's Mercy Hospital United State*

***Haseen Fariha***

*Bangabandhu Sheikh Mujib Medical University, Bangladesh*

***Der-Hsiang Huang***

*Graduate Institute of Professional Development in Education, Da-Yeh University, Taiwan*

***kazushi Okamoto***

*Aichi Prefectural University japan*

***Abolhassani Shahla***

*Shahrekord University of Medical Sciences, Shahrekord, Iran*

***Dr. Umme Kulsum Rima***

*Hajee Mohammad Danesh Science & Technology University Dinajpur, Bangladesh*

***Mohammad A. H. Khan***

*Faculty of Veterinary Science, Bangladesh Agricultural University*

***Enayatollah Kalantar***

*Dietary supplements and Probiotic Research Center and Department of Microbiology and Immunology, School of Medicine, Alborz University of Medical Sciences, Karaj, Iran*

***Cahit Canbay***

*Yeditepe University, Turkey*

***Rahbari, Helia***

*Faculty of Paramedical Sciences at Shahid Beheshti University of Medical Sciences, Tehran, Iran*

***Cheng-Chi Chang***

*Graduated Institute of Oral Biology, National Taiwan University, Taipei, Taiwan*

***Bodin Oleg N***

*Ling Tung University Taiwan*

***Zahra Godarzi***

*Tehran University of Medical Sciences Iran*

***Zhou Rui-Hua***

*School of Public Health, North China University Of Science And Technology*

**EBINS 2019 Keynote Speakers**

**Dr. Sylvia J. Pidor (Ph.D.)**

### **VP-Academics/ Dean, Graduate School Program**

Her Bachelor of Science in Biology, Master of Arts in Science Education and Ph.D. in Education Leadership give diversity to her profile as an educationist. Besides teaching science subjects for several years, she was given supervisory position being the Department's Academic Coordinator and Chair Person at University of Immaculate Conception Davao. Due to her dedication in work, she is assigned as the Dean of the Graduate School and as the Vice-President for Academics. She has several affiliations to various organizations in Davao Region, nationally and internationally. She is the president of the Curriculum and Instruction Area of the Davao Association of Colleges and Universities Network (DACUN), President of the Council of Deans for Teacher Education (CODTEI), Region XI, President of the Philippine Association for Graduate Education (PAGE), Region XI and member of several other national and international organizations. She became a member of the Commission on Higher Education (CHED) Regional Qualification Assessment Team (RQAT), who monitors schools in Davao Region. She has delivered speeches and keynote lectures at various international platforms. She is a member of Global Illuminators scholarly community.

A compassionate and dedicated leader as others describe her is someone who loves to travel not only to experience different cultures in other countries but to expand her horizons in learning

### **Assoc. Prof. Dr. Ariffin Abdul Mutalib**

#### **Schools of Multimedia Technology and Communication, Universiti Utara Malaysia**

Dr. Ariffin started his academic career as a tutor in 1999, after finishing his Bachelor of Information Technology study in Universiti Utara Malaysia (UUM). He obtained his Master in Interactive Multimedia from Heriot-Watt University, Scotland in 2001. Then, he was appointed as a lecturer. In 2007, he began his PhD study in UUM and finished in 2009. Since 2002 until now, he has secured various research grants, funded nationally and internationally. Nevertheless, he has also been appointed as a consultant for projects by industry players. Not only he excels in research works, his postgraduate supervision is also excellent. From his first PhD supervision in 2011, eight of his students have graduated. More interestingly, four of them graduated on time. Through his research works, he has published more than 30 articles in Scopus journals, and more than 15 articles in ISI journals. All these have enabled him to be seen around the world, which eventually attracts various major conferences to appoint him as a technical reviewer. On top of that, he has also been appointed as a keynote speaker and invited speaker in various conferences. He just finished his term as the Dean of School of Multimedia Technology and Communication (SMMTC). His administrative career began in 2013 when he was appointed as a Quality Manager in UUM.

Having served for two years there, he was appointed as the Head of Department at SMMTC. Then, he was appointed as the Deputy Dean in the following year, before upgraded into the Dean in 2017. His research interests include Interaction Design, Usability, Multimedia for teaching and

learning, Emergent technology, and Game-based learning. As a reflection of his contributions and achievements, he has been awarded with “Best Professor in Multimedia Technology” in The Golden Globe Tigers Award 2018, “Education Leadership Award” in Asia’s Education Excellence Awards, CMO Asia 2018, and “100 Most Dedicated Professors” in World Education Congress 2018.

## **EBINS 2019 Track’s Chairs**

### **Business, Management, and Economics Studies**

Edna T. Salva & Thelma O. Alderite

YuLing Liu & Ridwanul Alam

### **Social Sciences & Humanities**

Ariffin Abdul Mutalib & Sylvia J. Pidor

Ronald P.Lambayan & Rona Vic O. Gutierrez

### **Engineering, Technology, and Public Health Studies**

Ariffin Abdul Mutalib & Sylvia J. Pidor

## **Best Paper Nominee List**

### **SMES’ Activities According to Dimensions of Entrepreneurial Marketing**

*Thirarut Worapishet*

Kasetsart University, Bangkok, Thailand

### **Participation and Involvement of Local Communities in Relation to the Extent of Implementation of Sustainable Ecotourism Development in Davao Region**

*Presentacion C. Acosta*

University of the Immaculate Conception, Philippines

**Risk Assessment of Heavy Metals from Edible Mushrooms**

*Prapat Pentamwa<sup>1\*</sup>, Jitlada Chimmai<sup>2</sup>*

Suranaree University of Technology, Nakhon Ratchasima, Thailand

**EBINS 2019 Best Paper Award Winners**

**Risk Assessment of Heavy Metals from Edible Mushrooms**

*Prapat Pentamwa<sup>1\*</sup>, Jitlada Chimmai<sup>2</sup>*

Suranaree University of Technology, Nakhon Ratchasima, Thailand

**List of EBINS 2019 Academic Papers**

**1. Business, Management and Economic Studies**

**ID: MSHTR-19-107**

**SMES' Activities According To Dimensions of Entrepreneurial Marketing**

*Thirarut Worapishet\**

Kasetsart University, Bangkok, Thailand

**ID: MSHTR-19-108**

**Relationship between Istiqamah and Job Satisfaction with Organizational Commitment to Employees of Call Center Banking in City X**

*Dzikri Hijriarahmah<sup>1\*</sup>, Fatkhuriah<sup>2</sup>*

<sup>1,2</sup> *Islamic University of Indonesia, Indonesia*

**2. Social Sciences and Humanities**

**ID: EBINS-19-137**

**Academe's Role in the Community-Based Rehabilitation and Aftercare Program (Cbrap): A Sequential Exploratory Approach**

*Nelca Stephany Umblero-Amatong*

University of the Immaculate Conception Davao City, Philippines



### **3. Engineering and Technology**

**ID: CEITA-19-105**

**Risk Assessment of Heavy Metals from Edible Mushrooms**

*Prapat Pentamwa<sup>1\*</sup>, Jitlada Chimmai<sup>2</sup>*

Suranaree University of Technology, Nakhon Ratchasima, Thailand

#### **EBINS Conference Committee**

##### **Conference Chair**

**Farooq Ahmed Jam (Ph.D.)**

*Executive Director (Global Illuminators)*

##### **Conference Co- Chair**

**Tariq Iqbal Khan (Ph.D.)**

*Director Global Operations (Global Illuminators)*

##### **Conference Co-Chair**

**Muhammad Abbas (Ph.D.)**

*Director Policy & Research (Global Illuminators)*

##### **On Chee Hoong**

*Manager Operations (Global Illuminators)*

##### **Conference Coordinator**

**Dr. Renan P. Limjuco (Ph.D.)**

*Director of Research*

*University of the Immaculate Conception (UIC), Davao City, Philippines*

**Conference Coordinator**

**Prof. Dr. Sylvia J. Pidor (Ph.D.)**

*Dean of Graduate School, University of the Immaculate Conception, Philippines Davao,  
Philippines*

**Editor**

Dr Ahmad Saddam (Ph.D.)

ISBN: **978-969-695-055- 4**

Printed and Published by: Global Illuminators Malaysia