INTERNATIONAL SYMPOSIUM ON RESEARCH IN INNOVATION AND SUSTAINABILITY 2018

"Leveraging Innovation and Humanity for Industry 4.0"

4-5 October 2018 | UNIBA, Solo, Surakarta, INDONESIA

Organised by:

isoris.org/isoris2018/
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Assoc. Prof. Dr. Udompophon Puetpalboon (Prince of Songkla University, Thailand)
Assist. Prof. Dr. Nugul Intrasungkha (Thaksin University, Thailand)
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CONFERENCE SPONSORS

ISoRIS’18 gratefully acknowledge the generous support of its official sponsors.
FOREWORD BY UNIBA

Assalamu’alaikum Wr. Wb.

The Islamic Batik University (UNIBA), Surakarta is delighted and honoured to host the International Symposium on Research in Innovation and Sustainability 2018 (ISoRIS’18) scheduled from the 4th-5th October, 2018. As the representatives of UNIBA, we are very proud to be able to collaborate with the Universiti Teknikal Malaysia Melaka (UTeM) for the realisation of this international symposium. The decision to host the ISORIS 18 at UNIBA is part of the series of international collaboration between the two universities. This is the first time that this symposium is held internationally at UNIBA Surakarta, after being held twice in Malaysia.

ISoRIS’18 aims to provide an avenue for researchers and academicians to share their knowledge and perspectives on innovation and sustainability. We have received participations from various countries, Indonesia, Malaysia, and the Middle East, resulting in 66 paper presentations and poster presentations, classified under six tracks: 1) Sustainable and Responsive Manufacturing, 2) Innovative Software System and ICT, 3) Social Impact on Innovation and Technology, 4) Entrepreneurship and Management Studies, 5) Educational Studies, 6) Others. We are also delighted to inform that the papers presented in the symposium have been carefully reviewed and they are ready to be published in internationally reputed journals.

As the host of the ISoRIS’18, we would like to take this opportunity to thank the leaders at UTeM and at UNIBA Surakarta, who have given their full support in making this symposium a success. In particular, I would like to name a few, they are the main initiators, among others: Prof. Datuk Dr. Mohd Razali bin Muhamad, Assoc. Prof. Dr. Massila Kamalrudin, Assoc. Prof. Dr. Safiah Sidek, Assoc. Prof. Dr. Md Nizam Abd. Rahman, all from UTeM. We also would like to express our thanks to Ir. H. Solichul Hadi A. Bakri, M.Erg, Dr. Supawi Pawenang, SE, MM, Dr. Pramono Hadi, SP, M.Sc, all from UNIBA Surakarta. We also would like to express our gratitude and appreciation to the Key Note Speakers, Participants, Sponsorship, administrative supporters, journal organizers, and others. We know, there are many more parties who support this event, because so many people are involved, so we apologize not to mention one by one.

Hopefully what we have done together can be a way to create a nobler civilization.

Wassalamu’alaikum Wr. Wb.
Surakarta, October 4, 2018
Chairman of the UNIBA Surakarta Committee

Dr. Supawi Pawenang, SE, MM
Vice Rector for Academic, Students, Cooperation
Assalamu’alaikum Warahmatullahi Wabarakatuh and sincere greetings to all.

It gives me a great pleasure to bid a warm welcome to all delegates, presenters, participants and invited guests to the International Symposium on Research in Innovation and Sustainability 2018 (ISoRIS’18). This symposium aims to provide an avenue for researchers, academicians as well as industrial professionals to share knowledge and perspectives on innovation and sustainability. The theme of the symposium is “Leveraging Innovation and Humanity for Industry 4.0”, a topic that has gained much attraction in both academic and industrial discussions during this era. By addressing this theme, it allows participants to explore the role of innovation in promoting sustainable growth of business in facing the revolution of industry 4.0.

This symposium is the result of coordinated effort by two research groups and an institute established at Universiti Teknikal Malaysia Melaka (UTeM) representing a multi-disciplinary research background of Manufacturing Engineering (SUSREM), Software Engineering (IS3), and Management (IPTK). This year, we extend our collaboration with the Universitas Islam Batik Surakarta (UNIBA), Solo.

I am very happy to note that the symposium works well with the current research direction of the both universities: UTeM and UNIBA with respect to sustainability.

I hope this symposium will provide everyone with a valuable opportunity to share ideas with researchers and practitioners from institutions around the world. Let this be the impetus for more significant and meaningful engagements, and constructive dialogue, contributing towards more impactful outcomes.

I congratulate all the parties involved in making this symposium a success, particularly the joint efforts of the two research groups and IPT with UNIBA. Finally, I wish everyone a fruitful deliberation, an enjoyable learning and sharing experience.

Assoc. Prof. Dr. Massila Kamalrudin
Chair of ISoRIS’18
Mohd Razali is a Professor of Manufacturing Engineering in the Faculty of Manufacturing Engineering, Universiti Teknikal Malaysia Melaka (UTeM). He obtained his BSc in Production Engineering and Management, and later followed by MSc in Materials Protection from Loughborough University, UK. He was awarded with a PhD in Design of Manufacturing Systems from the University of Liverpool in 1996. Prior to joining UTeM, he was a lecturer and later on being promoted to Associate Professor in the School of Mechanical Engineering and the School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia. His research interests include, sustainable manufacturing, hard coating of materials, design of manufacturing systems, and management of technology. He has published journal and conference papers, as well as supervised master and PhD students on these topics. He is a Graduate Member of the Board of Engineers Malaysia (BEM), Institution of Engineers Malaysia (IEM) and Malaysia Board of Technologist. Besides teaching and research, he has also carried out consultancy works with the private and the public sectors. He is actively contributing back to the society through voluntary works in non-governmental organization. Currently he is the Deputy Vice Chancellor (Academic and International) at UTeM.

M. Kuswandi Tirtodiharjo is Professor of Molecular Biology at Gajah Mada University, Yogyakarta. He obtained his Bachelor of Pharmacy and Professional Pharmacist, as well as a Bachelor's Degree from Gajah Mada University. Then continue the Master of Philosophy program in the field of Genetics at Leicester University, England. Doctoral degree (Ph.D) in Molecular Biology is obtained from Aston University, England. He is currently active in teaching at various universities, including: Ahmad Dahlan University, Setia Budi University, Surakarta Muhammadiyah University, Muhammadiyah University Purwokerto, Muhammadiyah University Yogyakarta, and General Sudirman University. He is active in various organizations, both domestically and abroad, including as president of the British Muslim Student Family Association (KIBAR). He also received various awards from the government, including Satyalancana Karya Satya 30 years. Some of the scientific works produced were published in various international conferences, journals and textbooks.
ABOUT ISoRIS’18 CONFERENCE

ISoRIS’18 is a research based symposium with the theme of "Leveraging Innovation and Humanity for Industry 4.0". This symposium will provide a platform for researchers to strengthen and sustain a culture of innovative and high impact research in the areas of Engineering, ICT, and Social Science. This symposium will also be a platform for research students to discuss their work with other researchers. In line with the research & innovation efforts of the country, the symposium will facilitate participants to showcase their innovative products for improvement. All papers presented at this symposium (provided meeting all editorial requirements) will be published into selected Indexed Journal Scopus/ISI.

Besides research papers: A poster and demonstration session will be held during the ISoRIS’18 programme. Researchers, industry representatives and students are invited to share and demonstrate their works progress, research demonstration and test beds, industry demonstration of new application or techniques, upcoming research challenges, future directions, and novel approaches. For students, particularly, this session provides valuable opportunities to interact with experts and receive valuable feedbacks for their on-going project.

The following tracks identified for the ISoRIS’18 conference:

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<th>Conference Tracks</th>
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<td>Track 1: Sustainable and Responsive Manufacturing</td>
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<td>Track 2: Innovative Software System and ICT</td>
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<td>Track 3: Social Impact on Innovation and Technology</td>
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<td>Track 4: Entrepreneurship and Management Studies</td>
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<td>Track 5: Education Studies</td>
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<td>Track 6: Others (Law and Agricultural Studies)</td>
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</table>
INTRODUCTION OF RESEARCH GROUPS

INNOVATIVE SOFTWARE SYSTEM AND SERVICES (IS3)

The IS3 research group is formed based on multi-disciplinary concept where the members and expertise are from multi-faculty and multi-field of interest. It is also form based on a bottom-up strategy where every member in this group is enthusiastically decided to join and form a group which aims to one direction: Sustainability. IS3 is a unique combination of innovative technology, experience and knowledge to solve the real life problems. It consists of two essential components: innovative software system and services. Innovative software system component apply and experiment innovative computing knowledge or solution to solve the problems. As for the services component, it deals with providing high value services to the nation. From our inception we have focused on the software/IT sector and its related fleet, engineering and educational as well as social sectors. The related components involve in IS3 are innovative software development, innovative software system for engineering, innovative software for education and social and as well as services and training. Each of the components in IS3 is also inter-related and inter-dependent to each other. Further, IS3 is expected could provide sustainable solution to all application domains by drives down the cost, improves efficiency and flexibility, improves control and consistency of the process and minimizes the resistance of usage of software system being developed for any application of domains.

SUSTAINABLE AND RESPONSIVE MANUFACTURING (SUSREM)

SUSREM research group originates from the need for a sustainable and responsive manufacturing for the future. Sustainable manufacturing as a concept is more comprehensive and systemic covering the three components of environment, economy and society. The concept uses both technological and non-technological solutions that include selection of materials and production processes, life cycle engineering, as well as organizational mission, structure and performance. Sustainable manufacturing will constitute the foundation of the new clean, carbon neutral global economy in the next three to five decades. Unlike TQM and Lea, which impacted mainly production organization and planning, sustainable manufacturing relies significantly on technological solution to achieve its objective, which make the contribution of the all engineering specialties and functions more important and valuable than in any of the preceding major transformations in manufacturing. We focus our research to provide manufacturing enterprise with new cutting edge findings which allow companies to outperform competitors by excelling simultaneously in six domains: product and process development; the adaptability of the enterprise to changes in its environment; ability to deal with continues change; the balance of its response under condition of uncertainty; efficiency in operating as a smart partner in an extended and increasingly global supply network; and ability to remain sustainable in relation to the environmental requirements.
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>8.00am – 8.30am</td>
<td>Registration and Refreshments</td>
<td>5th floor</td>
</tr>
<tr>
<td>8.30am – 9.00am</td>
<td>Official Opening Ceremony and Welcome</td>
<td>5th floor</td>
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<tr>
<td></td>
<td>Ir. Solichul Hadi A. Bakri, Chairman of YAPERTIB</td>
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<td></td>
<td>Dr. Pramono Hadi, Rector of UNIBA Surakarta</td>
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<td></td>
<td>Dr. Supawi Pawenang, Co Chair of Isoris’18</td>
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<tr>
<td>9.00am – 10.00am</td>
<td>Keynote Address 1</td>
<td>5th floor</td>
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<tr>
<td></td>
<td><em>Innovation for Sustainable Humanity</em></td>
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<tr>
<td></td>
<td>Prof. Datuk Ts. Dr. Mohd Razali Muhamad, Deputy Vice-Chancellor, UTeM</td>
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<tr>
<td>10.00am – 11.00pm</td>
<td>Keynote Address 2</td>
<td>5th floor</td>
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<td></td>
<td><em>Innovative Industry 4.0 Towards a Sustainable Humanity</em></td>
<td>5th floor</td>
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<tr>
<td></td>
<td>Prof. Dr. M. Kuswandi Tirtodirjo, SU, M.Phil, Gajahmada University, Yogyakarta</td>
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<tr>
<td>11.30am – 12.30pm</td>
<td>Concurrent Session 1</td>
<td>5th &amp; 6th floor</td>
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<tr>
<td>12.30pm – 1.30pm</td>
<td>Networking Lunch with Poster Session</td>
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<td>1.30pm – 3.30pm</td>
<td>Poster Evaluation</td>
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<tr>
<td>1.30pm – 4.30pm</td>
<td>Concurrent Session 2</td>
<td>5th &amp; 6th floor</td>
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<tr>
<td>4.30pm – 5.30pm</td>
<td>Closing Ceremony and Awards Giving</td>
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<td>4.45pm <em>Posters and Best Paper Awards by Advisor of ISoRIS’18</em></td>
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<td></td>
<td>Assoc. Prof. Dr. Massila Kamalrudin</td>
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<td></td>
<td>5.15pm <em>Closing Speech / Address by Co-Chair of ISoRIS’18</em></td>
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<td></td>
<td>Assoc. Prof. Dr. Md Nizam Abd. Rahman</td>
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<tr>
<td>5.30pm</td>
<td>End of Day 1</td>
<td>5th floor</td>
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**CONFERENCE PROGRAM**

**PROGRAM-AT-A-GLANCE**

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<th>Time</th>
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<tr>
<td>8.30am – 9.00am</td>
<td>Delegates meet at Hotel Lobby</td>
<td>Hotel Lobby</td>
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<tr>
<td>9.30am – 11.30am</td>
<td>Batik Industry visit (Pt. Danliris)</td>
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<tr>
<td>11.30am – 2.00pm</td>
<td>Break and networking lunch</td>
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<td>2.30pm - 4.00pm</td>
<td>PIC meeting</td>
<td>UNIBA</td>
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<tr>
<td>4.00pm – 5.00pm</td>
<td><em>Tea break</em></td>
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<tr>
<td>5.00pm</td>
<td><em>End of Day 2</em></td>
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**CONFERENCE DAY 2 : FRIDAY 5 OCTOBER 2018**
## Conference Program

### Conference Day 1: Thursday 4 October 2018

#### Track 1: Sustainable and responsive manufacturing (SRM)

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<th>Time</th>
<th>Session</th>
<th>Location</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.30am - 11.50am</td>
<td>A CUSTOMER-BASED TOOTHBRUSH DESIGN: AN INTEGRATED AHP-TRIZ APPROACH</td>
<td>ROOM A</td>
<td>S., Akmal, S. H. Yahaya, Y., Yuhazri, N. Hashim, and Dharmarajan Samy Nathan</td>
</tr>
<tr>
<td>11.50am - 12.10pm</td>
<td>SMART PHONE ASSISTED BLIND STICK</td>
<td>ROOM A</td>
<td>Sivaraos, Khairuddin Osman, T. Yasuno, K. N. Khamil, M. A. Mahasan, K.C. Lam</td>
</tr>
<tr>
<td>12.10pm - 12.30pm</td>
<td>SOLAR POWERED SYSTEM FOR BLIND NAVIGATION SYSTEM</td>
<td>ROOM A</td>
<td>Khairuddin Osman, K.N. Khamil, Sivaraos, M. A. Mahasan, N.A.M. Rahim, T. Yasuno</td>
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</tbody>
</table>

#### Track 2: Innovative software system and ICT (ICT)

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<tr>
<td>11.30am - 11.50am</td>
<td>A COMPARISON ANALYSIS STUDY OF TOOL SUPPORTS TO ANALYSE SECURITY REQUIREMENTS FOR INTERNET OF THINGS (IOT) APPLICATION</td>
<td>ROOM B</td>
<td>Asma Asdayana Ibrahim, Massila Kamalrudin</td>
</tr>
<tr>
<td>11.50am - 12.10pm</td>
<td>A STUDY ON TRUSTWORTHINESS REQUIREMENTS ELICITATION APPROACH IN BLOCKCHAIN TECHNOLOGY</td>
<td>ROOM B</td>
<td>Sayyidatina Al Hurul Aina Alzahari, Massila Kamalrudin, Romsiza Wahida Abdullah, Nor Aiza Moketar</td>
</tr>
<tr>
<td>12.10pm - 12.30pm</td>
<td>CLOUD COMPUTING-BASED E-LEARNING SYSTEM ARCHITECTURE IN EDUCATION 4.0</td>
<td>ROOM B</td>
<td>Purwono Hendradi, Mohd Khanapi, Siti Nurul Mahfuzah</td>
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#### Track 3: Social impact on innovation and technology (SIT)

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<tr>
<td>11.30am - 11.50am</td>
<td>ROLE FUNCTION OF GADGETS TO SUPPORT THE SCHOOL ACTIVITY</td>
<td>ROOM C</td>
<td>Dwi Anggoro Hermawan, Bambang Kandiawan, Budiarsi, Massila binti Kamalrudin, Safiah binti Sidek</td>
</tr>
<tr>
<td>11.50am - 12.10pm</td>
<td>ONLINE BASED ADMINISTRATION SYSTEM FOR BETTER THE SCHOOL MANAGEMENT</td>
<td>ROOM C</td>
<td>Dwi Anggoro Hermawan, Bambang Kandiawan, Budiarsi, Massila Kamalrudin, Safiah Sidek</td>
</tr>
<tr>
<td>12.10pm - 12.30pm</td>
<td>A NEW CONCEPT OF THE HUMANIST AND COMPROMISE LEADERSHIP APPROACH IN IMPROVING PERFORMANCE AT PRIVATE SECONDARY SCHOOLS IN SURAKARTA</td>
<td>ROOM C</td>
<td>Muhamad Setio Nogroho, Joko Sumarsono, Literzet Sobri</td>
</tr>
<tr>
<td>Time</td>
<td>Session Title</td>
<td>Presenter</td>
<td>Location</td>
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<tr>
<td>11.30am -</td>
<td>&quot;An Insight of Customer Satisfaction Through Service Quality in Education</td>
<td>Ngatiyono, Zuhriah Ebrahim, Mohammad Razali, Ceket Palupi Suroso, Danang</td>
<td>ROOM D</td>
</tr>
<tr>
<td>11.50am -</td>
<td>Institutions&quot;</td>
<td>Sulistyanto</td>
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<td>11.50am -</td>
<td>&quot;The Usage of IOT Technology and Its Potential In Batik Business&quot;</td>
<td>Bakri, Solichul Hadi Achmad, Massila Kamalrudin, Suwardi, Noorrezam,</td>
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<tr>
<td>12.10pm</td>
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<td>Safiah Sidek</td>
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<tr>
<td>12.10pm -</td>
<td>&quot;Factors Contributing Online Family Business to Enhance the Sustainability</td>
<td>Anita Wijayanti, Massila binti Kamalrudin, Safiah Sidek</td>
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<td>12.30pm</td>
<td>of Family Business&quot;</td>
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<tr>
<td>11.30am -</td>
<td>&quot;Advancement of Reward and Punishment in Management Based on Religious</td>
<td>Sri Supriyati, Supawi Pawenang, Sugeng Wahyudi</td>
<td>ROOM E</td>
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<tr>
<td>11.50am -</td>
<td>Ethics&quot;</td>
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<tr>
<td>12.10pm</td>
<td>&quot;Eco-Design Initiation of the Eco-Batik Development Park Model Kampoeng Batik</td>
<td>Siti Maryam, Evi Gravitiani, Joko Sutrisno, Endang Siti Rahayu</td>
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<td>12.10pm -</td>
<td>Laweyan Cluster Industry Surakarta&quot;</td>
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<td>12.30pm</td>
<td>&quot;Factors That Influence Financial Literacy on Small Medium Enterprises: A</td>
<td>Damayanti, Ratna, Ali Hussein Al-Shami Samer</td>
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<td></td>
<td>Literature Review&quot;</td>
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<td>11.30am -</td>
<td>&quot;Quranic Based Learning Approach to Internalise Islamic Values for Effective</td>
<td>Suroso, Ceket Palupi, Bin Abu Hassan, Mahadi, Bin Mohamed, Shahrulanuar,</td>
<td>ROOM F</td>
</tr>
<tr>
<td>11.50am -</td>
<td>Mathematic Teaching and Learning: A Review&quot;</td>
<td>Sulistyanto, Danang, Ngatiyono</td>
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<tr>
<td>11.50am</td>
<td>&quot;How to Internalise Islamic Values in Mathematic Learning?&quot;</td>
<td>Ceket Palupi Suroso, Mahadi Bin Abu Hassan, Shahrulanuar Bin Mohamed,</td>
<td></td>
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<tr>
<td>12.10pm</td>
<td></td>
<td>Danang Sulistyanto, Ngatiyono</td>
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<tr>
<td>12.10pm</td>
<td>&quot;Characteristics and Significance of High School Distance Learning&quot;</td>
<td>Bambang Kandiawan, Budiarsi, Hermawan, Dwi Anggoro, Massila Kamalrudin,</td>
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<tr>
<td></td>
<td></td>
<td>Safiah Sidek</td>
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#### Track 1: Sustainable and responsive manufacturing (SRM)

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<tr>
<td>1.30pm -</td>
<td><strong>IMAGE PROCESSING FOR SMILE RECOGNITION: PRELIMINARY STUDY ON HUMAN-ROBOT INTERACTION APPLICATION</strong></td>
<td>ROOM A</td>
<td>Winal Zikril Zulkifli, Syamimi Shamsuddin, Fairul Azni Jafar, Lim Thiam Hwee and Seri Rahayu Kamat</td>
</tr>
<tr>
<td>1.50pm -</td>
<td><strong>PRELIMINARY STUDY OF PARTICIPATORY MODEL FOR COMFORTABLE WORKING ENVIRONMENT TO ENCOURAGE PRODUCT QUALITY OF CREATIVE BATIK INDUSTRY</strong></td>
<td>ROOM A</td>
<td>Sri Mayasari, Diyah Dwi Nugraheni, Solichul Hadi A. Bakri, Zuhriah Binti Ebrahim, Mohd. Razali Bin Muhamad</td>
</tr>
<tr>
<td>2.10pm -</td>
<td><strong>DEVELOPMENT OF REGRESSION MODEL FOR DRIVING FATIGUE DETECTION BASED ON SEAT PRESSURE DISTRIBUTION FORCE OF THE DRIVERS</strong></td>
<td>ROOM A</td>
<td>Mohammad Firdaus Ani, Seri Rahayu Kamat, Mohamad Minhat, Kalthom Husin</td>
</tr>
<tr>
<td>2.30pm -</td>
<td><strong>PRODUCTION FACTORS AND EFFICIENCY LEVELS IN FARMING OF ORGANIC RICE IN BOYOLALI, CENTRAL JAVA</strong></td>
<td>ROOM A</td>
<td>Suswadi, E. S. Rahayu, M. Harisudin, S. Anantanyu</td>
</tr>
<tr>
<td>2.50pm -</td>
<td><strong>KINEMATIC ANALYSIS PERFORMANCE BETWEEN SHORT LONG ARM AND PARALLEL SUSPENSION FOR RACING CAR</strong></td>
<td>ROOM A</td>
<td>Mohd Khairul Nizam Bin Suhaimin, Zuhriah Binti Ebrahim, Mohd Razali Bin Muhammad</td>
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<td>1.30pm -</td>
<td><strong>Determination of Trust Requirements Attributes for Developing Acceptable Autonomous Car</strong></td>
<td>ROOM B</td>
<td>Halimaton Hakimi, Massila Kamalrudin, Suriati Akmal, Noorrezam Yusop4</td>
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<tr>
<td>1.50pm -</td>
<td><strong>WRITING A GOOD SECURITY REQUIREMENTS</strong></td>
<td>ROOM B</td>
<td>Nuridawati Mustafa, Massila Kamalrudin, Safiah Sidek</td>
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<tr>
<td>2.10pm -</td>
<td><strong>THE STATE OF THE ART OF EMOTION IN REQUIREMENTS ENGINEERING</strong></td>
<td>ROOM B</td>
<td>Ow Li Lee, Massila Kamaruldin, Safiah Sidek</td>
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<td>ROOM B</td>
<td>Mohamad Ihsan, Hariny Muthohhari, and Srie Juli Rachmawatie</td>
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<td><strong>LAND OWNER’S RIGHTS THAT CONTRACT WITH GENERAL INTERESTS BASED ON PANCASILA JUSTICE PERSPECTIVES.</strong></td>
<td>ROOM B</td>
<td>Nanik Sutarni, Adi Sulistiyono, Gusti Ayu Ketut Rahmi Handayani</td>
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<tr>
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<td>ROOM B</td>
<td>Wafa Altayari, Massila Kamalrudin</td>
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<tr>
<td>3.30pm -</td>
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<td>Hendrik, Massila Kamalrudin, Mohamad Razali</td>
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<td>1.50pm - 2.10pm</td>
<td>Protection of Personal Data in Global Era</td>
<td>Anis Rifai, SH., MH., Prof. Supanto, SH., M.Hum., Prof. Hartwiningsih, SH., M.Hum.</td>
<td>Room C</td>
</tr>
<tr>
<td>2.10pm - 2.30pm</td>
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<td>Agus Sasmito Aribowo, Halizah Basiron, Nanna Suryana Herman</td>
<td>Room C</td>
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<tr>
<td>2.30pm - 2.50pm</td>
<td>Crowdvolunteer: A Mobile Apps for Societal Wellbeing</td>
<td>Nurulhasanah Mazlan, Massila Kamalrudin, Sharifah Sakinah Syed Ahmad, Rosmiza Wahida Abdullah</td>
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<td>Hayati Hussin Abdul Rahim Ahmad Muhammad Hafiz Saleh, Zainora Daud, Khairul Anuar Mohammad</td>
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<th>Location</th>
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<tr>
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<td>Room C</td>
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<td>3.30pm - 3.50pm</td>
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<td>Pramono Hadi, Sangrani, Trimurti</td>
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<td>3.50pm - 4.10pm</td>
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<td>Diding Rahmat, Teguh Prasetyo, Sri Endah Wahyuningsih</td>
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<tr>
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<td>EMS-4</td>
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<tr>
<td>1.50pm - 2.10pm</td>
<td><strong>The Effects of the Implementation of Good Corporate Governance and Corporate Social Responsibility in the Financial Performance of Mining Company Mining Listed in the Indonesia Stock Exchange</strong></td>
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<td>EMS-5</td>
</tr>
<tr>
<td>2.10pm - 2.30pm</td>
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<td>Suci Purwandari, Setya Edi Pramana</td>
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<td>Setya Edi Pramana, Hanipah Hussin, Dr. Muhamad Afzamiman Aripin, Suci Purwandari.</td>
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<td>3.10pm - 3.30pm</td>
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<td>Pardi, T. Haryono, Suwarto and S. E. Waluyo</td>
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<td>Bakri, Solichul Hadi, Achmad, Massila Kamalrudin, Noorrezam Yusop, Slamet, Teguh Rahayu, Safiah Sidek, Mayasari, Sri</td>
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<td>Pardi, T. Haryono, Suwarto, S. E. Waluyo</td>
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<td>Sartika, Galih Ayu; Pawenang, Supawi; Sidek, Safiah; Kamalrudin, Massila.</td>
<td>EMS-12</td>
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<tr>
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<td>1.30pm</td>
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<tr>
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<td>ROOM E</td>
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<tr>
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</tr>
<tr>
<td>1.50pm</td>
<td>ACADEMIC SUPERVISION BASED ON CHARACTER TO IMPROVE TEACHER PROFESSIONALISM IN SCHOOL OF SURAKARTA CITY</td>
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<tr>
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SRM-1
S., Akmal, S. H. Yahaya, Y., Yuhazri, N. Hashim, and Dharmarajan Samy Nathan

Abstract: This study was conducted to identify design attributes that can be used as a basis for designing innovative traveler toothbrush and subsequently increase customer satisfaction. Three design factors consist of emotional toward the product, characteristic requirement, and technical attributes were considered in this study. The survey was distributed to 500 respondents to identify their customer preferences in which five emotional words that describe the design attributes of 10 toothbrush were represented. The Analytical Hierarchical Process (AHP) was used to select the design attributes that is best suit customer preferences. The results show that most of the respondents tend to prefer Design 1 with design attributes of “Simple”. Based on that design attribute, the innovative design was developed using Theory of Inventive Problem (TRIZ) and the result, ‘Dynamics’ designs have been proposed. Then, the most preferred design is Design 1 as the new design which had been modified.

Smart Phone Assisted Blind Stick

SRM-2
Sivaraos, Khairuddin Osman, T. Yasuno, K. N. Khamil, M. A. Mahasan, K.C. Lam

Abstract: In the era of industrial revolution 4.0, various types of wearable computers and assistive technologies are being created for visually impaired people who are affected at different levels. Most electronics and innovative blind sticks are designed for both blind and visually disabled people to improve their safety, especially while they are mobilizing. However, the traditional plain white cane is still the top choice for the visually impaired people due to its low cost. In this paper, we propose a blind navigation system that sends information from the controller mounted on white cane via Bluetooth connection to a smartphone alerting the user about obstacles through speech warning and vibration. In this case, Smartphone with haptic mode is chosen to enable easier detection. A Bluetooth module is used to improve the performance of control circuit and subsequently, an application was also developed to convert Text to Speech. On top of that, a Nano Arduino was used instead of common UNO Arduino in the effort to significantly reduce the size of the system which requires four ultrasonic sensors for best of its performance. The system was then embedded into a small casing, located on a strategic position of a white cane to detect below waist obstacles. The stick was the being successfully validated by personnel from Melaka of its efficiency.
Solar Powered System for Blind Navigation System
SRM-3
Khairuddin Osman, K.N. Khamil, Sivaraos, M. A. Mahasan, N.A.M. Rahim, T. Yasuno

Abstract: In this paper, presented a research work on solar powered system for the blind navigation system project mainly focus on power management of the system. Previously, the blind navigation system using an AAA battery and need to change frequently due low capacity of the battery where it does not last long. This research tested two types of solar panel commonly available in the local market, which are the monocrystalline and polycrystalline solar panel where the panel are tested outdoor with the blind system. The charging is tested on normal power bank with 10'000 mAh capacity. Results shows that the charging time from monocrystalline panel able to fully charge in 2 hours and 10 minutes while the polycrystalline took 50 minutes longer. The advantage clearly shows that, monocrystalline panel are suitable for the blind system but due to its size, it may affect the weight of the blind stick and it is not ergonomic to the user. Therefore, the polycrystalline panel is much appropriate due to its flexible structure and its weight. It may not have fast charging, but it helps prolong the life support of the blind navigation system.

Image Processing for Smile Recognition: Preliminary Study on Human-Robot Interaction Application
SRM-4
Winal Zikril Zulkifli, Syamimi Shamsuddin, Fairul Azni Jafar, Lim Thiam Hwee and Seri Rahayu Kamat

Abstract: Recent research in the field of human-robot interaction (HRI) aims at recognizing human interaction with the robot. The interaction requires a tool to analyse the outcome. Therefore, one of the analysis is by recognizing a human’s mood while interacting with the robot. A smile can be categorized as a positive emotion and image processing is one of the applications to identify the changes in the human face. The objective of this study is to identify the best software to be used in the application of image processing for HRI field. Existing algorithms that have been used include the Haar features based classifier, AdaBoost and Gabor filters for the feature extraction. These algorithms are trained by GENKI dataset, Japanese female facial expression (JAFEE) dataset and British Broadcasting Corporation (BBC) dataset and to train smile identification algorithms and improve their accuracy. Most widely used image processing software for smile detection are MATLAB and OpenCV. In this study, both software are compared with regards to suitability in HRI applications. In short, OpenCV offers a better option in term of speed, resources, cost and support.

Preliminary Study of Participatory Model for Comfortable Working Environment to Encourage Product Quality of Creative Batik Industry
SRM-5
Abstract: This paper is the first research which discuss about psychology participatory model toward comfortable working environment for increasing product quality of creative batik industry. This model is based on the relevant literature from previous researcher who had conducted the research at the same field. From result of literature study, authors argued that psychology participatory model has an important role in comfortable working environment, it influences on product quality of creative batik industry. There is 6 variable that influences on comfortable working environment.

Development of Regression Model for Driving Fatigue Detection Based on Seat Pressure Distribution Force of the Drivers

Mohammad Firdaus Ani, Seri Rahayu Kamat, Mohamad Minhat, Kalthom Husin

Abstract: The paper presents the development of the regression model for a biomechanical factor that is seat pressure distribution force of the drivers. Ten subjects participated in this study. The pressure distribution force responses were taken and evaluated using the Tekscan CONFORMAT pressure map. The seat pressure distribution force is one of the contributors to the drivers’ fatigue problem, which led to road accidents among Malaysian. The process of modelling using regression analysis was proposed to formulate and develop the regression model. The aim of this paper is to develop a seat pressure distribution force model which can predict the relationship between the process input parameters and output response. Design Expert 8.0.6 software was used for the regression analysis. The regression model was successfully developed and validated. The modelling validation runs were within the 90% prediction interval of the developed model and the residual errors compared to the predicted values were less than 10%. The significant parameters that influenced the pressure distribution force were also identified. Pressure distribution force was influenced by the time exposure, type of road, gender, the interaction between time exposure and gender, and interaction between type of road and gender. Throughout this study, the author believes there is a new contribution to the body of knowledge. In future, the author suggests that the more study on developing regression model should be focused as the published work on the application of ergonomics is too lacking.

Production Factors and Efficiency Levels in Farming of Organic Rice in Boyolali, Central Java

Suswadi, E. S. Rahayu, M. Harisudin, S. Anantanyu
**Abstract:** This study aims to determine: 1) The effect of using factors of production of land area, seeds, fertilizers, pesticides and labor simultaneously and partially on production in organic rice farming in Boyolali district. 2) Economic efficiency of the use of factors of production of land area, seeds, fertilizers, pesticides and labor in organic rice farming in Boyolali Regency. The location of this study was determined intentionally (purposively) carried out in three sub-districts namely Sambi District, Nogosari District and Simo District, Boyolali District, Central Java. Respondents were taken using quota sampling method as many as 90 farmers were members of Boyolali Organic Rice Farmers Alliance (APPOLI). Analyzer used is multiple regression with Cobb-Douglas production function. The results showed that the factors of production that significantly affected the production of lowland rice were the area of land and labor while the factors of production which did not affect organic seeds and fertilizers. Wetland paddy farmers in combining land production factors are inefficient, inefficient use of seeds, inefficient use of organic fertilizer and inefficient use of labor. The value of production elasticity (RTS) is 1,092. This means that in general, organic rice farming in Boyolali Regency can still operate on an increasing scale of business (Increasing Return to Scale).

**Kinematic Analysis Performance between Short Long Arm and Parallel Suspension for Racing Car**

SRM-8

Mohd Khairul Nizam Bin Suhaimin, Zuhriah Binti Ebrahim, Mohd Razali Bin Muhammad

**Abstract:** Presently, the implementation of suitable suspension system plays an important role in handling of the vehicle especially when it involve of racing car. Kinematic analysis of suspension especially for race car suspension is very essential to provide optimum performance and stability. However, there is still limited study on identifying the kinematic analysis performance between two types of Double Wishbone Suspensions which are Short Long Arm (SLA) and Parallel Arm Suspension. Hence, the objective of this paper is to determine the best suspension”s kinematic performance of students” racing car between both of these suspensions system. The process in choosing the best suspension design is based on step by step engineering design module. The step started with roughly sketch, detailed design in CAD and lastly analysed using Altair Motion View Software on static ride analysis that give more accurate comparison data for both left and right wheel displacement. By obtaining the data of several basic suspension geometry parameters such as the values of toe, camber, caster, and tread change from front suspension and rear suspension, the experimental results conclude that the better kinematic performance for suspension development of student racing car is SLA suspension. Thus, result of this study provides a detail analysis for the two types of double wishbone suspension which are SLA and Parallel that provide better understanding of parameter geometry for suspension system analysis performance.
A Comparison Analysis Study of Tool Supports to Analyse Security Requirements for Internet of Things (IoT) Application

ICT-1
Asma Asdayana Ibrahim, Massila Kamalrudin

Abstract: The growth of IoT has resulted in the need for analysing security requirements to ensure safe and secure IoT application experience to the users. However, poor elicited security requirements can lead to a failure in IoT development. Thus, this study evaluates various security requirement and analyses the existing gaps in security requirement tools for IoT application that exist in the market for commercial or research purposes. We report our findings from review and analysis of different studies on security requirement engineering for IoT application. The strengths and weaknesses of the features and utility are also presented to provide further understanding of the gaps and weaknesses of each tool. We conclude that these tools are still immature and need further improvements.

A Study on Trustworthiness Requirements Elicitation Approach in Blockchain Technology

ICT-2
Sayyidatina Al Hurul Aina Alzahari, Massila Kamalrudin, Rosmiza Wahida Abdullah, Nor Aiza Moketar

Abstract: Blockchain has become a new frontier and successful technology in both public and private sector. Despite that, many technical challenges such as fraud and hacking arise within this technology resulting in the lack of trust among users towards this new technology. Hence, trustworthiness aspect becomes important for requirements engineer when eliciting requirements for user acceptability. Requirements elicitation is prominent stage in software development life-cycle as it determines positive or negative result on software functions as well as the quality of requirements. In this case, requirements engineer need to be conscious of the accuracy and completeness of requirements to ensure the development of a well-function software application. There are myriads methods, approaches and tools related to requirements elicitation, nevertheless, eliciting requirements for Blockchain application is found to be challenging, as the properties of Blockchain application are different from the common software or application technology. This paper aims to present a comparison analysis of the existing methods, approaches and tools that assist requirements engineer to elicit requirements. The analysis can be used as a guidance to identify the existing work related to requirements elicitation.
Determination of Trust Requirements Attributes for Developing Acceptable Autonomous Car

Halimaton Hakimi, Massila Kamalrudin, Suriati Akmal, Noorrezam Yusop

Abstract: Automation technology has gained a special interest in the revolution of Industry 4.0, where it helps to minimize human intervention to perform a complex task such as driving a vehicle. This has resulted to the needs of trust concern among users especially when it related to driving an autonomous car. Hence, this leads to low acceptability and marketability among users on this car. Therefore, considering trust requirements from the early development of car is crucial. To do this, determination of trust requirements attributes needs to be done in order to define correct trust requirements is produced. In this paper, we discussed our findings of preliminary study conducted to analyse the attributes of trust requirements for developing acceptable autonomous car based on the perspectives of the users in Malaysia. This preliminary study was carried out with 50 potential buyers of autonomous car. The results indicated that the most effective trust attributes in trust requirements are privacy, experience and integrity the may lead to better acceptability of autonomous car.

Writing a Good Security Requirements

Nuridawati Mustafa, Massila Kamalrudin, Safiah Sidek

Abstract: A well-defined set of business requirements is the foundation for a successful software development. It is vital that requirements are clear before developing a software especially on what they are building, why they are building it, and what to expect at the end. Considering the requirements are derived from natural language, requirements engineer (RE) faced problems in eliciting and writing security requirement. This is due to their tendency to misunderstand the real needs and the security terms used that leads to vague requirements. Motivated from these problem, this paper proposed a mechanism to check clarity level of security requirements. Two requirements examples which are the real business requirements and certified product requirements are used to demonstrate the clarity mechanism. We also proposed the design of security requirements syntax tree structure (SecReqTS) and evaluate using the mechanism. Finally, we compare the results between our proposed SecReqTS with real business requirements and certified products requirements.

The State of the Art of Emotion in Requirements Engineering

Ow Li Lee, Massila Kamaruldin, Safiah Sidek

Abstract: Requirements engineering is recognized as a human intensive activity that relies much on human decision throughout the activities. In this respect, emotion and human’s feeling play an important role in deciding requirements for software development. However, emotions in requirements engineering has not received the attention it should have deserved from the researchers. This paper aims to investigate the state of the art of emotion in requirements engineering. It begins with the definitions and descriptions of emotions from selected scholars,
which is then followed by the related work of emotion in requirements engineering. An analysis of emotion in different stages of requirements and the element of emotions based on the related work were found. This paper concludes that the emotional factor needs more attention and should be considered as a key element in requirements engineering, especially in the activities other than requirements elicitation.
Role Function of Gadgets to Support the School Activity

Dwi Anggoro Hermawan, Bambang Kandiawan, Budiarsi, Massila binti Kamalrudin, Safiah binti Sidek

Abstract: Technological developments in this digital era are increasingly widespread and sophisticated. Development of gadgets, for instance, is characterized by the increasing number of features and applications offered from each company's gadget developers. This study focuses on describing and explaining the use of gadgets in schools to facilitate and support academic activities in the school environment. This research is qualitative descriptive research using case study approach. The data source in this school is the academic activity in the school environment. The research data are obtained by doing observation and interview with some resources. The research data which has been collected is then analyzed by using flow analysis technique and interactive analysis with the following stages of data reduction process, data presentation process, and the last done by conclusion drawing process. The validity of the data used by triangulation technique data. The result obtained in the research field is the role of gadgets was used to facilitate and support the learning process. Gadgets used include laptop, mobile, and computer. The three kinds of gadgets were used by students and teachers as a means of facilitating communication, information dissemination, means of obtaining and seeking references, making instructional administration and instructional media, and other supporting activities such as counting function, application development, and programming. So, it can be concluded that gadget has support and function in academic activities in school.

Online Based Administration System for Better the School Management

Dwi Anggoro Hermawan, Bambang Kandiawan, Budiarsi, Massila Kamalrudin, Safiah Sidek

Abstract: The existence of internet in modern era makes society easy to do their activities. All aspect of human life is based on online or connected to internet. The development of e-administration in school administration is one of them. This study was descriptive qualitative which aims to describe and to explain school administration concept based online to ease school management in digital era. Source of data divided into two, including document and informants referring to education expert, education implementer unit and society as education user. Technique of collecting the data were content analysis and in-depth interview. Triangulation of source of data technique were used to validate the data. The result shows that there are some school administration system based online to ease school administration process. They are school registration based online (e-registration), school payment based online integrated with certain bank account (e-school payment), teaching journal based online (e-journal), and student achievement report based online (e-raport). Besides, school is also facilitated by school administrator which can be contacted via whatsapp and telegram applications to ease education user on asking for information about school and education.
A New Concept of the Humanist and Compromise Leadership Approach in Improving Performance at Private Secondary Schools in Surakarta

Muhamad Setio Nogroho, Joko Sumarsono, Literzet Sobri

Abstract: The task of a leader is to plan, move and supervise every activity within the organization. One of the main tasks of a Humanist and Compromise leader is to be able to improve the performance of employees so that ultimately can achieve the goals and objectives of the organization he leads. Type of research used in this research is descriptive with qualitative approach. The focus of his research is 1) To illustrate the role of humanist and compromising leaders in achieving employee performance at Private Secondary Schools in Surakarta. 2) To describe the performance of Private Middle School Employees in Surakarta. The results show that the role of humanity and compromise leaders in Surakarta has been quite good where leaders have been able to perform their roles well in order to achieve better employee performance in order to realize both present and future organizations.

A Study on the Radiotherapy Errors and Its Verification Approach

Hendrik, Massila Kamalrudin, Mohamad Razali

Abstract: Radiotherapy is one of the main modalities of cancer treatment, either as a curative or palliative form, and also recommended as one of the best possible treatment for every patient with cancer by the ISCRUSA and WHO. There were few inventions of radiotherapy in the beginning of the 20th century especially for the cancer treatment of breast, stomach, skin, and nose in America, France, Austria, and Sweden. Those inventions in radiotherapy paved for the discovery of the two main techniques of radiotherapy delivery, namely teletherapy (cobalt60 or linac) and brachytherapy. Further, the invention of the CT-Scan, followed by MLC device, help to improve the certainty of the irradiation targets and improve the accuracy of the radiotherapy delivery, without exceeding the tolerance dose of normal tissues. Yet, radiotherapy is still found as a high risks treatment procedure due to the complexity of its sophisticated technology development. Therefore, the objectives of this paper is two folds: 1) to study the type of errors that normally occur in radiotherapy; and 2) to analyse the existing approaches in verifying the radiotherapy errors. Finally, the most significant errors and the gaps and limitations of current approaches to verify the errors are discussed.
Protection of Personal Data in Global Era

Anis Rifai, SH., MH., Prof. Supanto, SH., M.Hum., Prof. Hartiwiningsih, SH., M.Hum.

Abstract: In the context of the development of information and communication technology, the purpose of the state is realized in the form of protection of personal data of every citizen or citizen of Indonesia. As a form of innovation, information technology has now been able to collect, store, share and analyze data. These activities have resulted in various life sectors utilizing information technology systems, such as electronic commerce in the trade/business sector, electronic education in education, electronic health in health, electronic government in the field of government, search engines, social networks, smartphones and mobile internet and the development of cloud computing industry. Issues concerning the importance of personal data protection began to strengthen in line with the increasing number of mobile phone users and the internet. A number of cases that arise, especially those linked to a person's private data leak and lead to fraud or criminal acts of pornography, reinforce the discourse on the importance of making the rule of law to protect personal data.

Systematic Literature Review: Sentiment and Emotion Analysis Techniques on Twitter Political Domain

Agus Sasmito Aribowo, Halizah Basiron, Nanna Suryana Hermani

Abstract: The background of this systematic literature review (SLR) is to find frequently used methods that perform sentiment and emotion analysis on a political domain in Twitter. The result of SLR is to find gaps which methods should be developed or improved in terms of their performance in order to achieve better accuracy. In this review, peer review articles from leading libraries i.e. IEEE and ACM are analysed. The articles are compared on which methods are used. Pre-processing tasks, types of technique used in methods and accuracy results are compared in this review. The pre-processing tasks are tokenizing, removing unnecessary tokens and stop words, converting non-standard words and emoticons and stemming. Two main methods used for analysing sentiments are lexicon-based and machine learning. The popular classifier models for machine learning are Naïve Bayes and Support Vector Machine (SVM). As for the accuracy result, machine learning outperforms lexicon-based. The highest accuracy for machine learning approach in the SLR is 89.13%, (result of a hybrid process Naïve Bayes and SVM and use lexicon for pre-processing).
CrowdVolunteer: A Mobile Apps for Societal Wellbeing
Nurulhasanah Mazlan, Massila Kamalrudin, Sharifah Sakinah Syed Ahmad, Rosmiza Wahida Abdullah

Abstract: Volunteers is who are willing to assist without expectation of payment or being rewarded. A group of volunteers is not easy to sustain when every member of society is busy and has no financial rewards. Therefore, volunteer organizations that manage voluntary activities are not feasible because they require constant budgets and resources, while seasonal voluntary activities have different priorities. The best practice for volunteer job assignments to determine specific tasks and volunteers are needed. Hence, the purpose of this study is to allow the development system to automatically find the potential volunteers with suitable tasks using mobile applications. The system called “CrowdVolunteer” to help the volunteers to be informed real-time on the required services at anytime and anywhere.

EZ-WARSH Mobile App Design for Teaching and Learning the Science of Qiraat
Hayati Hussin Abdul Rahim Ahmad Muhammad Hafiz Saleh, Zainora Daud, Khairul Anuar Mohammad

Abstract: The Qiraat knowledge is the historical glory of the Islamic scholars which has been proud of in to this day. It is a conventional learning and teaching process which were only applied to the tahliz students. Consequently, it has led towards an ignorance phenomenon out of the community, of this knowledge. The odd Qiraat recitation could also lead to a confusion and divergence. This study aims to introduce an android application which has been developed by integrating the elements of naqli and aqli knowledge, in an effort to make known the Warsh recitation. The methodology used is qualitative in the content analysis and the application development. In completing this study, the data collection method and the android application development are being used extensively. Correspondingly, an Android application for the teaching and learning (PdP) of the Qiraat Warsh named as EZ-WARSY is successfully developed. Though, it still needs a little bit of times in order for it to work effectively. As a result, this study could contribute towards the new learning method known as M-Learning among the students of the Public and Private Institutions in general and the society in specific.
An Insight of Customer Satisfaction through Service Quality in Education Institutions
EMS-1
Ngatiyono, Zuhriah Ebrahim, Mohammad Razali, Ceket Palupi Suroso, Danang Sulistyanto

Abstract: The increasing number of educational institutions has encouraged managers to be more competitive in providing quality education services. Educational institutions must be able to meet the demanding needs and satisfaction of the desired educational service users, manifested in the form of good and satisfactory services. Although ensuring quality learning process becomes the most essential element for their sustainability, issues related to quality education have been ignored. However, there are still shortcomings in defining characteristics that differentiate with other Education Institutions that lead to the realization of national educational goals. Issues related to customer satisfaction through service quality of educational institutions have been underexplored as there have been very limited educational institutions implement service quality. This paper aims to provide an insight into the aspects of quality learning process in educational institutions that determine quality educational system. The data have been obtained through literature then analysed by descriptive analysis method. The results of literature analysis found that the quality of learning process could be improved by focusing on a commitment from school management, and to direct the school organization in an effort to improve the quality performance. The increasing number of educational institutions has encouraged managers to be more competitive in providing quality education services. Educational institutions must be able to meet the demanding needs and satisfaction of the desired educational service users, manifested in the form of good and satisfactory services. Although ensuring quality learning process becomes the most essential element for their sustainability, issues related to quality education have been ignored. Issues related five dimensions; namely: (i) Reliability, (ii) Responsiveness, (iii) Warranties, (iv) Empathy, and (v) Tangibles. In conclusion, the implementation of service quality has had a positive impact on customer satisfaction in educational institutions. The strategy to improve the quality of education services is a commitment from school management, and to direct the school organization in an effort to improve the quality performance. All personnel, leaders and staff, teachers and employees, are required to receive education about quality, in particular the emphasis on improving the quality of services in each stage and step learning process.

The Usage of IOT Technology and Its Potential in Batik Business
EMS-2
Bakri, Solichul Hadi Achmad, Massila Kamalrudin, Suwardi, Noorrezam, Safiah Sidek

Abstract: The popularity of social media platforms and their integrated usage in our daily activities have changed the way people communicate and exchange information. For this, internet plays the vital role to ensure the effectiveness of the information dissemination. Hence, this technology is found to be one of the factor on the success of today’s successful batik entrepreneurs. In order to explore the pattern of IOT usage and its potential in batik business. In this paper discuss the findings of a preliminary survey with 13 respondents who involve in Batik businesses in Solo, Indonesia. The result has shown that these respondents do have the knowledge of the business and entrepreneurial skills. It is also found that, they actually aware of the potential usage of IOT, but lacking of skills and knowledge to integrate IOT technology in their batik business.
Factors Contributing Online Family Business to Enhance the Sustainability of Family Business
EMS-3
Anita Wijayanti, Massila binti Kamalrudin, Safiah Sidek

Abstract: Business has changed radically. The Internet has an important role in business change. This business change has caused its threat and opportunities to family business. To take advantage of opportunities and solve the related problem that appears in the family business, family business needs to build an online business. Online business is not just a transaction of buying and selling (e-commerce) but also includes strategy, management, and process business. The aim of this review is to investigate the factor of online family business and to analyses the indicator of the factor of online family business. This review considers the concept of online family business. In this case, this paper will discuss the factors in the online family business and look for related indicators. The results of the paper analysis found several factors in online business. Various factor and indicator that fit the characteristics of the family business. There are strategy (goal setting, strategy, Value Corporation) business process (selling, buying, paying and accounting) and tools (web site).

Interpersonal Relationship Factors and Their Contributions in the Quality of Teamwork: A Review
EMS-4
Joko Sumarsono, Literzet Sobri, Mohammad Setio Nugroho, Shahrulanuar Mohamed, Norliah Kudus

Abstract: Teamwork is dominantly affected by the members’ interpersonal relationship quality. Maximizing the factors of interpersonal relationship quality is the best way to get ideal teamwork. This article presents a review over 26 articles selected by using literature review method. The review is displayed in the form of a construct of theory. It is found that there are six factors influencing the quality of interpersonal relationship, they are: 1) trust, 2) intimacy, 3) intention, 4) personal trait, 5) pain, and 6) forgiveness. The most influential factors are trust and intimacy while the less influential factor is intention; and the rest are adequately influential. Each factor also affects the teamwork differently one to the others.
The Effects of the Implementation of Good Corporate Governance and Corporate Social Responsibility in the Financial Performance of Mining Company Mining Listed in the Indonesia Stock Exchange

Fithri Setya Marwati, Purnama Siddi, Yuli Chomsatu Samrotun, Ratna Damayanti, Massila Kamalrudin

Abstract: Good Corporate Governance (GCG) and Corporate Social Responsibility (CSR) is important for the company, since both are needed to improve the performance of the company. Good Corporate Governance (GCG) is a rule that directs all elements of the company to run together in order to achieve its goals. Whereas, Corporate Social Responsibility (CSR) is a form of corporate responsibility in correcting social inequality and environmental damage caused by the company's operational activities. The more the liability done by the company to the environment, the higher the image of the company. The purpose of this study was to determine the effect of Good Corporate Governance and Corporate Social Responsibility on financial performance of the mining companies listed in the Indonesia Stock Exchange in 2014-2016. The sampling technique was by using purposive sampling method. The research hypothesis testing was done by using multiple linear regression test. The result of the research showed that GCG and CSR affect the financial performance of mining companies listed in the Indonesia Stock Exchange in 2014-2016.

Entrepreneurial Intention Conceptual Model Based on the Theory of Behavior and Social Environment Approach

Suci Purwandari, Setya Edi Pramana

Abstract: The interest in entrepreneurship in Indonesia is still very low, therefore it needs an approach and policy in fostering entrepreneurial interest, especially among young people. To increase entrepreneurship interest, it can be studied through the results of research relevant to the approach of various theories. This paper aims to develop a conceptual model of entrepreneurship intention, so that it can be used by policy makers and future research direction, especially about entrepreneurship. This paper uses a literature study approach to examine the conceptual model appropriate for entrepreneurship development, especially in developing a model of entrepreneurship intent. Based on the results of research with various theoretical approach, the concept of a new and more comprehensive formula will be found. Based on the results of the literature review, it was found a new concept that is a combination of the theory of planned behavior, social cognitive career theory and environmental factors. In the concept there are three independent variables, namely family support, entrepreneurship education and subjective norm, Then there are two mediation variables, they are entrepreneurship attitude and behavior control and as the dependent variable is entrepreneurial intention.
Abstract: This study aims to: (1) Analyze the marketing channel and margin also farmer's share of organic rice product on group of farmer in Boyolali District. (2) Reveal the level of consumers’ perception towards organic rice in Surakarta. The location of this study was purposively selected in Dlingo, Mojosongo, Boyolali and Surakarta. The method of this research was analytical descriptive method. The data was analyzed by using qualitative and quantitative. There were 30 farmers as respondent of this research. It was selected by random sampling. However, the purposive sampling was carried out to determine the sampling of consumers. The results show (1) the patterns of marketing channel are consisted of 2 models. The farmers sell the product to group of farmers. After then, this product is marketed through two marketing channel. The value of farmer share obtained in marketing channel model I was 27.77%, marketing channel model II was 41.82%. The margin of marketing channel model II is Rp 7,650, marketing channel model I was Rp 14,300, the efficiency level of marketing channel model I was 62.15% and marketing channel model II was 52.09%. (2) Consumers perception towards organic rice on aspect of quality is categorized in “good” to “very good” category. The availability of rice was categorized in “good” category and some of consumers assume “less-good” category on rice-availability. Price aspect of organic rice was categorized in “less-good” category by majority of consumers. However some consumers categorized the price of organic rice in “good” category.

Enhancement to Entrepreneurship Competency: Case Study at Central of Java Indonesia
EMS-8
Setya Edi Pramana, Hanipah Hussin, Dr. Muhamad Afzamiman Aripin, Suci Purwandari.

Abstract: The concept of education in substance is the establishment process of personal so that acquired the ability that more than ever. Target for all of its establishment, such as intellectual, attitudes and skills. The technology advancement is not limited occurring every day, minute, even in second. Technology development occurred in every parts of the world. Education becomes a thing for developing knowledge and ability through teaching which is given. But the competition condition is more intense. It is not enough to stop on the level of high school education only. Education which is taken and focused on one field concentration and is expected to be implemented in the world of work. Here to find advantages and disadvantages of the entrepreneurial competencies of college students as prospective entrepreneur or whom has started their business. The second is to see if there is the influence of entrepreneurship education given to the college students by seeing the difference in scores of competence generated from the program of entrepreneurship education that has been established. Entrepreneurship education creates a positive image for the entrepreneurs and giving the contribution that entrepreneurship can be an alternative option of profession to the graduates. Higher education institution could improve their education processes to enhance the development of certain specific competencies. The Entrepreneurial competencies consist of characteristics and skills to become a successful entrepreneur. The students need those characters for achieving entrepreneurship competency. In the relationship with entrepreneurship education, self efficacy has been applied in order to explain entrepreneurial attitude and intention of students. Several factors influencing in the enhancement to entrepreneurship competency among students, as following; awareness of entrepreneurship education, need dimensions of entrepreneurial competencies, individual characteristics, entrepreneurial behaviour is the result of a motivation to achieve a goal and need characters.
Institutional Strengthening of Village-Owned Enterprise through Community Empowerment

EMS-9
Pardi, T. Haryono, Suwarto and S. E. Waluyo

Abstract: This research aims to analyze the institutional organization of Village – Owned Enterprise through community empowerment and the role of Village – Owned Enterprise as a “law of village administration” or the economic activities of the enterprise in community empowerment. This research uses qualitative approach, with subjective and historical information, and case study strategy. The data are obtained by observation, documentation, physical device, and data transcription analysis. The data are organized, identified, coded, and validated using triangulation technique. The result of this research shows that the economic institutional organization benefits the business units, so it increases the community income. Village – Owned Enterprise functions like a “law of village administration” so it is able to support the village authority in achieving the prosperity of its people.

Challenges and Potential Development of LAWEYAN Batik Industry

EMS-10
Bakri, Solichul Hadi Achmad, Massila Kamalrudin, Noorrezam Yusop, Teguh Rahayu Slamet, Safiah Sidek, Sri Mayasari

Abstract: The development of Batik industry depends on its industrial developments and is strongly related to entrepreneurship. With development of batik businessmen becomes a priority, there is a need to keep reinventing while keeping the priority in mind. Therefore, failure in this development would in future causes a trickle-down effect of struggles in adapting to market changes. Thus, it is proving a hindrance in making and distributing batik. This paper discusses challenges pertaining to entrepreneurship development of Batik Industry in Indonesia. The study was carried out in LAWEYAN, Indonesia with targeted respondents of batik entrepreneurs. This study is qualitative in nature, with analysis done on survey result of interviewing 22 batik businessmen in LAWEYAN. The purpose of this study is to identify the challenges and potentials in development of LAWEYAN Batik in Indonesia. The challenges discussed include three components, namely: 1) Labour component, 2) Marketing component and 3) Finance component. Based on analysis on those components, this study found that there is a need training session especially for new starter, along with stronger capital support, infrastructure support and a need for workshop designed integrated with Internet of Things (IoT).
Strengthening Village Funds and Role of Village-Owned Enterprise for Village Autonomy in Klaten Indonesia

EMS-11
Pardi, T. Haryono, Suwarto, S. E. Waluyo

Abstract: This research aims to investigate: (1) the effect of village financial management strengthening on village autonomy; (2) the effect of role optimization of Village – Owned Enterprise on village autonomy. The data is quantitative data. The source of data is primary data collected using questionnaire technique. The research population is all villages that have Village – Owned Enterprises in Klaten Indonesia. Purposive sampling is used with a total of 60 Village-Owned Enterprises and a total of 100 respondents. The data are analyzed using SPPS program. The result shows: (1) Village funds management strengthening gives positive and significant effect to village autonomy; and (2) Role optimization of Village – Owned Enterprise shows gives positive and significant effect to village autonomy. Based on the research result, these two independent variables have significant effects on village autonomy.

The Power of Personal Approach on Property Marketing

EMS-12
Sartika, Galih Ayu; Pawenang, Supawi; Sidek, Safiah; Kamalrudin, Massila

Abstract: The purpose of this article is to discuss the role of a personal approach that is so important in the property business. The role of this personal approach to complement the limitations of the 4P model in marketing theory. The role of personal approach is described in the form of a model named Power of Personal Approach on Property Marketing. The resulting model is derived from looking at the theory and empirical data of the principals, which are then abstracted and poured in the form of models. This model is used to explain its role in total business scope and in marketing. The relationships and responsiveness with governments, buyers, competitors, and with suppliers of resources can be explained in this model. Likewise, his personal self-determination as an amplifier of the personal approach is also explained. The linkage with market characteristics in the property business can also be explained, by looking at the level of dominance that can be caused by the influence of government variables and competitors, as well as responses from consumers and producers.

Advancement of Reward and Punishment in Management Based on Religious Ethics

EMS-13
Sri Supriyati, Supawi Pawenang, Sugeng Wahyudi

Abstract: This article aims to reconstruct the concept of reward and punishment which was originally a behavioristic pattern, become based on religious ethics. Weaknesses in behavioristic characters are complemented by religious aspects. Thus the review becomes more comprehensive. The way to complete it is done by first understanding the background concepts and ethics that are used as a basis for review. After that an analysis is conducted to find out the aspects of strengths and weaknesses that exist. This weakness is then strengthened, by completing aspects of religiosity.
into existing concepts. That is the stage of the reconstruction process. The implementation of the results of the reconstruction can be carried out in stages, starting from the interaction and then continued with integration, and it is expected that the evolution process will continue.

**Eco-Design Initiation of the Eco-Batik Development Park Model Kampoeng Batik Laweyan Cluster Industry Surakarta**

*Siti Maryam, Evi Gravitiani, Joko Sutrisno, Endang Siti Rahayu*

**Abstract**: In the development of the Eco-Batik Development Park Industri model Kampoeng Batik Laweyan Cluster Surakarta as one of the local economic potential in Central Java, it is necessary to analyze the condition of the Batik Industry Cluster in Kampoeng Batik Laweyan Surakarta today, with an emphasis on analyzing the factors that influence its growth then provide a recommendation that can optimize the growth of the cluster compared to its current growth. Three factors that influence cluster growth are the existence of supporting or related industries, strategies and business competition, and the role of the government. Of the three factors, the most influential factor for cluster growth is the existence of strategies and business competition. Furthermore, Eco-batik development park model is an inseparable part of industrial ecology, so that its basic concepts are inherent in a system approach study model that integrates between industrial and natural systems by creating a new concept that implements sustainable development by considering industrial systems, activities economics and fundamental relationships with natural systems then become part of the Eco-Design principle. The principle of Eco-Design is a representation of the issue of sustainability and reliability in managing the existing infrastructure system by adopting a construction engineering approach that is environmentally friendly (eco-friendly engineering).

**Factors That Influence Financial Literacy on Small Medium Enterprises: A Literature Review**

*Ratna Damayanti, Sayed Samer Ali Hussein Al-Shami, AB Rahim Rahim, Fithri Setya Marwati*

**Abstract**: Financial literacy is an important attribute is not only for the individual but also the level of business. At the business level, the key to success lies in a company manager or company owner. SMEs as a business has the power to move the economy of a country. SMEs are facing many problems and shortcomings. One of them is financial illiterate for SMEs managers or owners. The purpose of this research is to explore what factors are affecting financial literacy for SMEs owners or managers. Based on the results of the review from 25 journals then it can be noted that the factors affecting financial literacy for SMEs owners or managers can be summarised in 3 dimensions, namely financial knowledge (education, experience, perception and opinion, knowledge product and service, socialization agents), financial attitude (money attitude, expenditure, income level) and financial awareness (saving and investment, retirement plan. It can be concluded that this framework can be used as a consideration to measure the level of financial literacy manager or owner of SMEs that will be used as a management strategy to enhance competition for the sustainability of growth.
Factors Affecting the Resistance of Street Vendors (PKL) Toward the Restructuring Undertaken by the City Government and Solving Problems of Street Vendors (PKL) in Sidodadi Market Kleco Surakarta

EMS-16
Sri Hartono, Eny Kustiyah, Fithri Setya Marwati

Abstract: Factors Affecting the resistance of street vendors (PKL) toward the restructuring conducted by the City Government and problem solving of street vendors (PKL) in the Sidodadi Market Kleco Surakarta. The purpose of this study was to determine the factors that cause the resistance to the arrangement of street vendors by the Government of Surakarta and solutions to overcome the problems in Sidodadi Market Kleco Surakarta. This research applied descriptive analysis, which is a study that aims to describe social phenomena, practices and customs of the people while the approach in this study was a normative juridical approach based on the Regulation on Management of Street Vendors. According to the analysis carried out, it can be concluded that the occurrence of resistance of PKL on the settlement of Surakarta City Government was due to the process of disobedience of PKL which basically triggered by two great aspects namely physical factors of buildings and facilities that are implicated in non factor of physical particularly the income level of traders which were small if they open their wares inside the market location.

The Effect of Technology Accessibility on Marketing Performance: The Mediating Role of Product Innovation

EMS-17
Sudarwati, Ahmad Ikhwan Setiawan, Puji Nurhayati, Atika Fikri Tsani

Abstract: This aim of this research is to know the influence of technology accessibility and innovation toward the improvement of marketing performance. Relevant research framework is applied in small and medium enterprises (SMEs) of batik, from the data of 320 SMES of Batik that is taken from the Department of Cooperatives of Surakarta, the researcher chooses 200 SMES as the sample which the technique used is simple random sampling. In testing the data quality, the researcher uses software SPSS 21.0 while the data analysis uses Partial Least Square (PLS) with software WarpPLS 5.0. The result of the research showed that the technology accessibility has a positive effect toward the marketing performance through product innovation. The accessibility of technology as the newness of this research contributes the performance of marketing through the product innovation.

Transformation Model of Human Resources in Private Universities in Indonesia

EMS-18
Supawi Pawenang; Sri Supriyati; Solichul Hadi A. Bakri
Abstract: This article describes the transformation process in private higher education institutions in Indonesia. The 10 higher education institutions that were observed consisted of 5 universities, 3 colleges, and 2 polytechnics. The Higher Education Institutions observed were formerly had fewer than 1,000 students but could continue to increase the number of students, so that they could no longer be classified as small private higher education institutions. Existing data show that the transformation process is carried out by transforming HR first. From this process, it will have an impact on operational, marketing, and financial institutions. The success of this HR transformation process is determined by leadership factors characterized by the notion of knowledge leadership. This type of leadership has a comprehensive ability and willingness to structure culture, efficacy, motivation, remuneration, whose impact is an increase in HR performance and institutional performance.
The Role of Perception in the Mediated Influence of Brand Awareness and Lifestyle towards Consumer Satisfaction (Study on the Vans Store Solo Paragon)

Ida Aryati Diyah Purnomo Wulan, Djumali, Bambang Mursito, Siti Maryam

Abstract: This research aims to know and explain the role of perception in the mediated influence of brand awareness and lifestyle towards consumer satisfaction on a Vans Store Solo Paragon. This research uses quantitative research. Its population is consumers Vans Store Solo Paragon, a sample is determined by the formula expressed Sarwono and 100 respondents. Using a nonprobability sampling method accidental sampling. The questionnaire used in data retrieval. Data analysis technique used is a path analysis. The results showed that the brand awareness of positive and significant effect against the consumer perception of the Vans Store Solo Paragon. Lifestyle positive and significant effect against the consumer perception of the Vans Store Solo Paragon. Brand awareness positive and significantly to consumer satisfaction Vans Store Solo Paragon. The perception of a positive and significantly to consumer satisfaction Vans Store Solo Paragon. The lifestyle of a positive and significantly to consumer satisfaction Vans Store Solo Paragon. There is the influence of perception in mediating brand awareness towards consumer satisfaction on a Vans Store Solo Paragon. There is a perception of influence in mediated lifestyle against consumer satisfaction on a Vans Store Solo Paragon.

Gender Based Election System toward Modern Democracy

Ristina Yudhanti, Adi Sulistiyono, Isharyanto

Abstract: The study aims to analyze election system in Indonesia, which is gender responsive. Gender issue in election becomes a long discourse in election system implementation stage. Woman has same right to man in taking part in political sector. The implementation of affirmative action policy with quota of 30 % (Thirty Percent) for woman in election has not fulfilled woman representative in parliament. It is caused by patriarchal culture, which is still tight in the community and in recruitment process in internal of political party, which is not maximized. The method of the study used is juridis-normative. Normative legal study is done by analyzing references and legal source that is UUD NRI 1945 and UU Pemilu as well as other related regulation. The result shows that woman representative in parliament has not fulfilled 30 % quota, although it has implemented positive discrimination in form of affirmative action. It is due to the existed election system does not support gender responsive election. It can be seen from political party seriousness in preparing their candidates to achieve the quota, not on the election result. By gender responsive election system planned and implemented well, the woman representative in parliament is achieved.
Strategies to Create Sustainability for Family Companies
EMS-21
Istiatin, Burhanudin Ahmad Yani and Istiqomah

Abstract: The sustainability of family business is a goal that must be achieved because it has a very important role and contribution in the economy of a country. One thing that really determines the sustainability of a family business is succession and mentoring, which are factors that must be considered and carried out correctly. This study discusses the important things in the succession and mentoring process carried out by PT Dan Liris, which is a family business, moves in the batik industry and has arrived in the third generation. The design of this research is descriptive qualitative, data collection techniques by observation and interview. Determination of informants or resource persons with proposive sampling, and validity of the data were tested by source triangulation. The results showed that PT and Liris had carried out succession and mentoring processes well. Successful succession and mentoring processes are followed by successor well. At the moment Dan Liris is led by a third successor and has achievements in both business performance and family harmony. Business performance is shown by the development of 4 subsidiaries, namely PT. Efrata Retailindo, PT.Mas, PT Tabor and PT. Ambasador Garmindo. While family harmony is shown by the closeness of the leadership relationship with employees and considers employees as assets and is considered as a family.

Occupational Safety and Health (O.S.H) Towards Green Environment Practices At Malaysia Small and Medium Manufacturing Sector
EMS-22
Khoo Nee kah, Hanipah Hussin, Norida Abdullah

Abstract: Implementation OSH is so important in Malaysia workplace, especially in Small and Medium (S&M) Melaka manufacturing sector, In this paper we would like to include the New Strategic practices as a new parameter in order to improve the number of percentage of accident in work place. There are four components as understanding, commitment, practice and behavior influence the improvement of this research towards green environment practices. Primary data from 20 S & M manufacturing sector in Melaka was taken through Phone call interview survey on 14-15/12/2017. These research highpoints the problems in the Melaka manufacturing sector such the high occupational accidents which are probably due to lack of non-compliance of the requirements of Occupational Safety and Health Act (OSHA) 1994, Guided Self Regulation Environmental Mainstream Tools (EMT). This study is to promote several management practices such training and safety management, understanding on self-regulation, enforcement and auditing towards EMT practices. From the analysis we found that with good compliance will reduce the accident case at work place.
Quranic Based Learning Approach to Internalise Islamic Values for Effective Mathematic Teaching and Learning: A Review

EDU-1
Suroso, Ceket Palupi, Bin Abu Hassan, Mahadi, Bin Mohamed, Shahrulanuar, Sulistyanto, Danang, Ngatiyono

Abstract: Mathematical skills have become an important skill to be mastered by almost all students nowadays and many approaches have been adopted to ensure the success of teaching and learning of the subject. However, the success rate of mathematical skills among students are found to be relatively low. Considering that there have been extensive studies related to the teaching and learning approach of mathematics with diverse recommendations of effective teaching and learning approach, there is a need to investigate the strengths and weakness of these approaches so that a new mathematical teaching and learning approach can be proposed. This paper aims to review the existing mathematical teaching and learning approaches based on 33 papers. This review found that the majority of the teaching and learning approaches emphasise on the worldly benefits, ignoring the spiritual development. Specifically, appreciate and live the teachings of religion, in this context it is Islam that is through the Qur'an and Assunnah. In this case, a new mathematical teaching and learning approach that integrates the Islamic values, namely Qur'an-based learning approach (QBL) is proposed. The new proposed mathematical teaching approach is expected make learning more meaningful, internalizing Islamic values and effective.

How to Internalise Islamic Values in Mathematic Learning?

EDU-2
Ceket Palupi Suroso, Mahadi Bin Abu Hasson, Shahrulanuar Bin Mohamed, Danang Sulistyanto, Ngatiyono

Abstract: The function of the national education of Indonesia is to develop the ability and form the character and civilization of a dignified nation in order to educate the nation's life, aims to develop the potential of learners in order to become human beings who believe and piety to God Almighty, noble, healthy, knowledgeable, skilled, creative, independent, and become a democratic and responsible citizen. This requires the learning process not to dichotomize between duniawi affairs and ukhrowi. In terms of mathematics, the learning process must integrate the material with the values in religion. However, the internalization of Islamic values in the learning of mathematics in various educational institutions has not been implemented optimally. This is because there is no formulation of internalization strategy and model of integration between Islamic values (Al-Quran) and mathematics that can be used as a reference. In this article, some strategies of internalizing Islamic values in mathematics learning and integration model are expected to provide insight and reference to be applied in learning practice, so that the educational objectives that have been proclaimed can be achieved. The strategies presented are Infusion, Analogy, Narration, Interpretation and Uswah Hasanah by using the mathematical integration model from, for, to, as, and with the Qur'an.
Characteristics and Significance of High School Distance Learning

EDU-3

Bambang Kandiawan, Budiarsi, Hermawan, Dwi Anggoro, Massila Kamalrudin, Safiah Sidek

Abstract: In today’s world where technology penetrates every part of society, the link to guidance and counselling is no different. One major advantage that all learners have, including counsellors, is the benefits that technology allows in learning more about their functions. Schools, Colleges and Universities have taken advantage of using technology through distance learning options. Future counsellors and or teachers can benefit in many ways from successful distance learning program. This Article will focus on discussing the characteristics of Distance Learning for High School. It is found that the most significant characteristics for High School Distance Learning are separation from participants (students) with tutors or teachers, using technology device or gadget, difference of time and different learning modules and resources from classical learning modules.

The Impact of Online Learning on Learning Motivation: A Conceptual Framework

EDU-4

Budiarsi, Bambang Kandiawan, Hermawan, Dwi Anggoro, Safiah Sidek, Massila Kamalrudin

Abstract: The development of Information and Communication Technology has facilitated the widespread utilization of online learning in all sectors of education. In Indonesia, specifically, the online learning has been widely recognized as an important platform for teaching and learning as it is able to provide easy-to-use learning techniques that could help students to achieve their learning goals. It has been widely recognized that online learning has a significant impact on the learning motivation and outcomes. Although there are extensive studies on the adoption of online learning and its impact on the effectiveness of learning, the impact of online learning on learning motivation is still lacking. As such, this paper aims to present a review of studies related to online learning and its impact on learning motivation. For this purpose, 21 (twenty one) papers have been analysed for the development of a conceptual framework on the impact of online learning on the learning motivation. It is found that there are 3 (three main) concepts that are interrelated to each other which are, online learning, learning motivation and its antecedents or impact between online learning and learning motivation. A conceptual framework has been developed framed within these concepts. This conceptual framework is used as a frame for future research on the impact of online learning on learning motivation. Therefore the objective of this study is analyzing the strength of the relationship between online learning and students’ motivation among students participating in the research for better learning achievement to students in vocational schools in Indonesia. Overall, the outcomes of this study have confirmed that online learning is an element which affects students’ motivation.
Academic Supervision Based on Character to Improve Teacher Professionalism in School of Surakarta City

Sulistyanto Danang, Mohamed Shahrulanuar, Aripin, Muhamad Afzamiman, Ngatiyono, Suroso Ceket Palupi

Abstract: Academic supervision is a process of guidance for teachers in planning, implementing and evaluating learning. Considered as a form of coaching, many have argued that academic supervision is important to nurture teacher’s competencies. Although it has been recognised as an important practice to improve professionalism among teachers, many claim that the process of academic supervision is merely a taken for granted administrative process. Specifically, the academic supervision process is more concerned in developing the teachers’ abilities to carry out the learning process rather than emphasising the teachers’ positive character building. Advocating that character building can be achieved through interactions with the socio-cultural environment, this paper presents a study that investigates the impact of academic supervision on teachers in selected schools at the city of Surakarta. A survey/interview involving of supervisors implementing academic supervision has been conducted. The transcribed data were analysed categorically focusing on the identifying whether supervisors emphasise character approach. It was found that supervisors did not carry out a character-based approach in carrying out academic supervision.

Landscaping the Factors and Styles of School Leadership: A Review

Literzet Sobri, Sidek, Safiah, Joko Sumarsono, M. Setio Nugroho, Kudus, Norliah

Abstract: It has become a common understanding that the success of any organization depend on the leadership style of the leaders. In fact, considering the dynamism of the education landscape and the emergence of variety of leadership styles documented in the literature, it is an utmost important for educational leaders to be adept to the leadership styles in order to develop their skills to become better leaders. Advocating that the existing leadership styles deemphasize the spiritual element of leaders, this paper aims to propose a new leadership style appropriate for the 21st century education drawn from a critical analysis of the existing leadership styles. For this purpose, 33 papers have been reviewed and a comparison analysis of the existing leadership styles and factors related to the studies of school leadership have been conducted. It has been found that the widely investigated factors are the attributes of leadership and the organisational effectiveness. With respect to the leadership styles, 14 leadership styles have been identified and most of these leadership styles emphasise on the moral, ethics or spiritual values. It can be concluded that the trend of leadership styles tends to focus on emotional and human rather than objective values. This review provides as a changing landscape of the study of school leadership useful for researchers intend to engage in school leadership research.
Superleader Leadership: School Leadership Model

Literzet Sobri, Supawi Pawenang

Abstract: This article aims to explain the incompleteness of leading leadership theory today called the Full Range Leadership Theory, in which there is a combination of transactional and transformational leadership at once. Although both are important and can be applied, it’s just that they have enough vital weaknesses. The spiritual element of religiosity is absent in this concept. So, for this theory to be more comprehensive, it is necessary to add elements of religiosity to it, and the philosophy underlying the theory needs to be changed. The perspective of homogeneity needs to be transformed into diversity, then followed by an expansion of the perspective, its orientation is no longer only to the shareholders but expanded to the interests of all stakeholders. The logic of difference is changed to the logic of equality, and the individual point of view needs to be changed to a social point of view.

Continuous Professional Development to Build Teacher Competencies

Suntoro, Agus, Kudus, Norliah, Hussin, Hanipah

Abstract: Considering the success of students’ learning is strongly dependent on the quality of teachers, it is crucial to ensure that teachers are competent so that they are prepared to make school a productive learning environment. Several approaches have been adopted to ensure teachers build their competencies continuously and the most common approach is the professional development programme. Although there are various models being developed to facilitate teacher competencies, the effectiveness of these approaches are still questionable. This paper aims to present a discussion on the teacher competencies and the various models of continuous professional development for teachers. Contextualised within the Indonesian education context, four aspects of competencies that teachers in Indonesia are expected to achieved have been presented. Additionally, the various continuous professional development model documented in the literature have also been discussed.
Teaching Approaches and Methods for Entrepreneurship Education in High Schools: A Review
EDU-9
Slamet, Teguh Rahayu Sidek, Safia2, Hussein, Samer Ali

Abstract: Many claim that entrepreneurial skills are an important skill for every individual to survive in this challenging, competitive and limitless world. It was also stated that entrepreneurship skills are important skills to drive a country's economic growth. In connection with this, many countries, including Indonesia, have made entrepreneurship education a compulsory subject in their secondary school education. Aiming to develop students to become independent, responsible, creative, innovative and entrepreneurial individuals, many teaching approaches have been adopted. However, the effectiveness of this teaching approach is still questionable. As such, there is a need to investigate various approaches to propose new teaching approaches that are tailored to the needs of students in Indonesia. The purpose of this study was to review various documented teaching methods for entrepreneurial education to identify their emphasis, strengths and weaknesses. For this purpose, 32 articles have been reviewed. It was found that the entrepreneurial teaching approach in high schools uses a scientific, technological and community approach. This newly proposed entrepreneurial education model is in line with the demands of national education goals what is needed to prepare the school for implementing an entrepreneurial education program.

Entrepreneurship Education Model of Pesantren Based on Theopreneurship
EDU-10
Suliswiyadi, Marlina Kurnia, Agus Miswanto, Irham Nugroho

Abstract: This study aims to produce a learning model that integrates students' entrepreneurial abilities with the Theopreneurship values that are able to foster need for achievement, calculated risk taker, creativity, independency, and innovativeness so that after graduation not only looking for work but able to start and run a business, both individually and collaboratively with other people / parties. This study aims to produce a learning model that integrates students' entrepreneurial abilities with the Theopreneurship values that are able to foster need for achievement, calculated risk taker, creativity, independency, and innovativeness so that after graduation not only looking for work but able to start and run a business, both individually and collaboratively with other people / parties. The method of the research is a qualitative descriptive qualitative by conducting a survey of pesantren students from several Islamic boarding schools in Central Java. From this research, it is hoped that determinants and constructs of entrepreneurship-based education will be found, which will later be used to develop the theopreneurship-based entrepreneurship education design and model.
Integrated Agricultural System Development Based on Local Potential to Improve Food Security and Increase in Farmers Income: Case Study at Jatisari Village, Jatisrono Sub-District, Wonogiri Regency

OTH-1
Srie Juli Rachmawatie, Libria Widiastuti

Abstract: Food crops and horticulture have an important role to meet the food needs of Indonesian society. Food crops and horticulture also have a strategic value for agricultural development in Indonesia. Significant impacts are on improving food security, gross regional domestic product (GDRP), employment opportunities, income sources, and regional and national economies. The agricultural sector becomes one of the important sectors for the upstream industry growth and the growth of the downstream industry whose contribution to the national economic growth is considerable. PKPT program is expected to assist in the development of integrated agriculture in Jatisari Village, Wonogiri Regency. This research lasted for 2 (two) years and research location in Jatisari Village, Jatisrono Subdistrict, Wonogiri Regency by taking research subject of farmer and breeder joined in PKBM Jatisari group. This grant program is a collaboration with a team of experts in the field of integrated agriculture, so that there can be synergy of science and experience between TPP and TPM. The method used is the development of research and development research. Stages performed are integrated agricultural evaluation that has been implemented, the mapping of local potential, development of integrated farming system model of the evaluation, implementation and evaluation based on the implementation results.

Study Of Cassava Leaves Type As An Alternative Silkworm’s (Samia cynthia ricini . Boisd) FEED

OTH-2
Pramono Hadi, Trimurti, Sangrani, Trimurti, Gunawan S

Abstract: Feed is a major factor influencing the success of silkworms cultivation. The ability to manage feed supplies will have a positive impact on the growth of silkworms, especially for the eight parameters as follows: Hatch Percentage, Silkworm Death Rate, Eating rate (ounces per day), Number of empty Cocoons per kg, Cocoon Length (cm), Cocoon Diameter (cm), Speed of formation of cocoon (Day), Number of Eggs produced (grain). This study was an experimental type with 3 treatment the major observed factor is cassava leaves with 2 levels namely rubbery cassava leaves and sweet potato leaves. The data analyze using 3-path variance analysis followed by a real difference test of multiple rank test key with the eight observation parameters of these parameters. From the results of the analysis, it can be concluded that rubber cassava leaves have the best influence on the parameters of observation.
Advocate Policy in Guidance for Accompaniment Child Case in Indonesia

OTH-3
Diding Rahmat, Teguh Prasetyo, Sri Endah Wahyuningsih

Abstract: In the case of children, the role of advocates is very necessary for legal protection for children which is the most important part in maintaining a generation of children who are free from discrimination, violence, and exploitation so as to be able to build a generation of children happy and prosperous. The purpose of this study is to find out the various regulations regarding advocate policy in legal assistance in criminal cases, especially on child cases and how the policy of the role of advocates in assisting child cases in Indonesia is implemented. The research method used by the compiler in the discussion of this research is the Evaluative Analysis method, which is a method of collecting and presenting the data obtained to analyze the actual situation and subsequently carried out rational analysis based on juridical references through library research and field research. The results of this study are First, Article 23 paragraph (1) of Law Number 11 of 2012 concerning the Criminal Justice System of Children, Secondly, the implementation of the role of advocates in mentoring child cases in Indonesia has not been implemented optimally in Indonesia because of the Legal Apparatus Factors and Public Awareness Factors.

Development Method of Handeuleum Graptophyllum Pictum L. (Griff.) in Vegetative to Improve the Quality of Seedling

OTH-4
Tri Rahayu, Mohamad Ihsan, Tri Pamujiasih

Abstract: The research titled, development method of handeuleum (Graptophyllum pictum L. (Griff.) in vegetative to improve the quality of seedling has been implemented on polybag and under the paranet at Sukoharjo. The research used completely randomized design, consisting of two factors. The first is the material cutting factorial of seedling (first segment S1, second segment S2, third segment S3) and the second factor kinds of media of seedling bed (sand M1, rockwool M2 and cocopeat M3). Further test done by Duncan’s Multiple Range Test (DMRT). Results obtained that treatment S (of material cutting) only has a significantly impact on the variables the number of branch, leaves and leaves area in each seedling. The highest number of branches and number of the leaves reached by treatment 3 (from segment 3) followed by S2 (from segment 2) and S1 (segment 1). Material cutting factor has significantly effect to observed parameter. On variables, the highest leaves area reached by S1 (segment 1) then followed by S2 and S3. Three of that have a significantly differences S treatment shows, it has no significantly effect in time the appearance of the buds, the total weight of the fresh leaves and weight of the dried leaf. The kind of media has a significant effect on leaves area of each seedling. Cocopeat media (M3) produce the highest leaves area, then followed by treatment M1 (the sand media) and M2 (the rockwool media). There is no any interaction between the material cutting and the kinds of media at all variables that was observed (time the appearance of the buds, number of leaves, the number of branch, the weight of fresh leaves and dried leaves and also on leaves area of each seedling).
Improving Organo Sulfur Contents in Garlic (Allium Sativum L.) Tuber with Sulfur Fertilization

Mohamad Ihson, Hairiy Muthohhari, and Srie Juli Rachmawatie

**Abstract:** Garlic has been known as a medicinal plant. The most nutritious part of garlic plants was tuber, because in garlic bulbs contained allicin compound, a substance that acts as an antibiotic and can help improve the human immune system. Allicin is the organosulfur compound. The aim of this study was to determine the effect of sulfur on increasing organosulfur content in garlic plants cultivated by phosphate fertilization. This study using a complete randomized block design factorial, consisting of two treatment factors, giving phosphate fertilizer three levels (S1 : SP-36 150 kg/ha, S2 : SP-36 200 kg/ha, S3 : SP-36 250 kg/ha) and sulfur fertilizer on three levels (B1 : 40 kg/ha, B2 : 80 kg/ha, B3 : 120 kg/ha). From the experiment, it was obtained the results that sulfuric acid has a very significant effect on plant height and number of leaves and gives differences in organo sulfur content in the tuber even though it is not significant. There is also no significant difference between the application of phosphate fertilizer and sulfur to the sulfur content in garlic tubers. The highest sulfur organo content in the tuber is 341.12 mg/kg obtained in treatment SP-36 150 kg/ha and sulfur as much as 80 kg/ha).

Land Owner’s Rights That Contract with General Interests Based on Pancasila Justice Perspectives

Nanik Sutarni, Adi Sulistiyono, Gusti Ayu Ketut Rahmi Handayani

**Abstract:** This study aims to find out how restorizing the rights of landowners who collide with the public interest in the perspective of Pancasila justice. This research is a normative legal research with statute approach, conceptual approach, analytical approach, and philosophical approach. The results show that the rights of landowners who collide with the public interest can be replaced with the compensation form restoration of original function to landowners where landowners have the right to land whose element as worshiping God Almighty, as a social tool of humanity, as a means of unity, as a political means and as a means of creating social justice.
The Role of DNA Based-Methods in the Presentation of Forensic Evidence: A Systematic Literature Review

OTH-7

Wafa Altayari, Massila Kamalrudin

Abstract: Forensic science including Forensic DNA, which is one of the most important fields in the forensics, is at a critical juncture. The increasing number of high profile forensic evidence failures together with the growing critique of the literature on forensic methodologies, draw attention to questions regarding the fundamental ideologies of forensic science. Criminal adjudication is not an area worth compromising. It has, therefore, remained imperative to resolve the shortcomings of forensic science and other expert advice. In forensic evidence presentation, the presence of scientific foundation is a key. Sound forensic science is critical to the conviction of the guilty and the acquittal of the innocent where the science and technology present an avenue to accompany the paradigm shift in the relationship between criminal adjudication and forensic expertise. The aim of this study is to identify the factors that affect DNA evidence presentation and to determine whether the DNA based methods and technologies have contributed positively, neutrally or negatively to the presentation of evidence in law courts. A systematic literature review had been conducted in order to identify and analyse related literature on DNA evidence presentation and technologies. It was found that the establishment of causation and removal of coincidence makes significant contribution to the effective presentation of evidence. It is concluded that further studies in the field of DNA evidence presentation with regards to the technology is required.

The Contribution of Technology Standardization in Forensic Process Automation to Forensic Test Accuracy: A Systematic Literature Review

OTH-8

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Abstract: Forensic and laboratory practices are going through various levels of automation and efficiencies with new applications of technology. Technology has increasingly gained the reputation as suitable and efficient for the analysis, tracking and profiling of forensic evidence. Nonetheless, no insight exits on the overall orientation of effectiveness in terms of the contribution of standardization in technology to the accuracy of forensic tests. The main aim of this study is to assess how forensic performance accuracy can be achieved through technology standardisation in forensic process automation. A systematic literature review is conducted in a structural manner to arrive at papers in this area. These scholarly papers are then discussed with regards to overall findings and components of technology in place. Generally, Studies on technology automation standardization have focused in this area in relation with case management, sample management and staff competency. It is concluded that standardization does improve overall forensic test accuracy.