

**PROCEEDINGS**

# **ESMT-2018**

**Annual International Conference on  
Engineering, Smart Materials and  
Technologies**

**Venue: Osaka International Convention Center  
Osaka, Japan  
Date: April 25-26, 2018**



# ***CONFERENCE BOOK OF ABSTRACT PROCEEDINGS***

*Consortium-ET*

Consortium of Engineering & Technology



# TABLE OF CONTENTS

<b>ADVISORY BOARD</b>	<b>vii</b>
<b>ADVISORY BOARD</b>	<b>viii</b>
<b>ORGANIZING COMMITTEE</b>	<b>ix</b>
<b>CONFERENCE TRACKS</b>	<b>x</b>
<b>CONFERENCE CHAIR MESSAGE</b>	<b>xi</b>
<b>CONFERENCE SECHDULE</b>	<b>xii</b>
<b>Conference Day 02 (April 26, 2018)</b>	<b>xvi</b>
<b><i>TRACK A</i></b>	<b>1</b>
<b><i>BUSINESS, SOCIAL SCIENCES AND MANAGEMENT STUDIES</i></b>	<b>1</b>
<b>Using Importance-Performance Analysis in Food Safety Gap</b>	<b>2</b>
<b>Organizational Attractiveness and PersonJob Fit as a Predictor Intention to Stay of Employees in Commercial Bank</b>	<b>3</b>
<b>Conflict Management in Project Teams</b>	<b>4</b>
<b>The Impacts of Parasocial Interaction on Loyalty and Donation Behavior: Sense of Virtual Community as a Mediator</b>	<b>5</b>
<b>The Impacts of Travel Motivations, Constraints and Mediators on Quality of Life and Re-visit Intention for the Elderly.</b>	<b>6</b>
<b><i>TRACK B</i></b>	<b>7</b>
<b><i>ENGINEERING, TECHNOLOGY, COMPUTER AND APPLIED SCIENCES</i></b>	<b>7</b>
<b>A Wideband LNA Design of 10.7GHz-12.7GHz for Low Earth Orbit Microsatellites</b>	<b>8</b>
<b>High Conversion Gain, Low-Power, and Low-Noise Front-End Receiver Operating at 0.4, 0.8, And 0.9 Ghz for Iot Applications</b>	<b>9</b>
<b>Preparation of Stretchable Fiber-Type Transistors from Graphene Hybrid Fibers</b>	<b>10</b>
<b>Flapping Wing Actuation Using Smart Materials</b>	<b>11</b>
<b><i>UP COMING EVENTS</i></b>	<b>12</b>

# **Book of Abstracts Proceedings**

**Annual International Conference on Engineering, Smart Materials and Technologies (ESMT)**

Osaka, Japan  
April 25-26, 2018  
ISBN: 978-612-6427-04-4

Email: [info@consortium-et.com](mailto:info@consortium-et.com)

URL: [www.consortium-et.com](http://www.consortium-et.com)



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Proceedings of the Annual International Conference on Engineering, Smart Materials and Technologies (ESMT)

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*Annual International Conference on Engineering, Smart  
Materials and Technologies (ESMT)*

**Venue: Osaka International Convention Center, Japan**

**Conference Theme:** Providing Platform for enhancement of research  
and developmental activities through networking.



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## CONFERENCE TRACKS

- Computer and Software Engineering
- Mechanical & Metallurgical Engineering
- Electrical & Electronics Engineering
- Civil Engineering
- Bio-Technology & Food Technology
- Chemistry & Chemical Engineering
- Physical, Applied and Life Sciences
- Interdisciplinary

## CONFERENCE CHAIR MESSAGE

### **Michael Sasaoka**

“International Conference of Consortium of Engineering & Technology” is a platform that thrives to support the worldwide scholarly community to analyze the role played by the multidisciplinary innovations for the betterment of human societies. It also encourages academicians, practitioners, scientists, and scholars from various disciplines to come together and share their ideas about how they can make all the disciplines interact in an innovative way and to sort out the way to minimize the effect of challenges faced by the society. All the research work presented in this conference is truly exceptional, promising, and effective. These researches are designed to target the challenges that are faced by various sub-domains of the social sciences and applied sciences.

I would like to thank our honorable scientific and review committee for giving their precious time to the review process covering the papers presented in this conference. I am also highly obliged to the participants for being a part of our efforts to promote knowledge sharing and learning. We as scholars make an integral part of the leading educated class of the society that is responsible for benefitting the society with their knowledge. Let’s get over all sorts of discrimination and take a look at the wider picture. Let’s work together for the welfare of humanity for making the world a harmonious place to live and making it flourish in every aspect. Stay blessed.

Thank you.

Michael Sasaoka

Conference Chair

Email: [contact@consortium-et.com](mailto:contact@consortium-et.com)

## CONFERENCE SECHDULE

**Consortium-et-2018**

**Venue: Osaka International Convention Center, Japan**

**Time: Registration & Kit Distribution (09:00 am - 09:30 am)**

**Day:Wednesday**

**Date: April 25, 2018**

**Venue: Room 1**

09:30 am - 09:40 am	Introduction of Participants
09:40 am - 09:50 am	Inauguration and Opening address
09:50 am - 10:00 am	Grand Networking Session

**Tea/Coffee Break (10:00 am - 10:30 am)**

**DAY 01 (April 25, 2018)**

**First Presentation Session (10:30 am - 12:00 pm)**

**Venue: Room 1**

**Session Chair: Dr. Jacob Shabi**

**Track A: Business, Economics, Social Sciences and Humanities**

<b>Paper ID</b>	<b>Manuscript Title</b>	<b>Presenter Name</b>
SEEM-APR-101	The Impacts of Travel Motivations, Constraints and Mediators on Quality of Life and Revisit Intention for the Elderly	Chun Yeh Chou
SEEM-APR-102	The Impacts of Parasocial Interaction on Loyalty and Donation Behavior: Sense of Virtual Community as a Mediator	Yu Shu Kuo
SEEM-APR-109	Conflict Management in Project Teams	Zaleha Binti Yazid
SEEM-APR-111	Organizational Attractiveness and PersonJob Fit as a Predictor Intention to Stay of Employees in Commercial Bank	Miss Onanong Kaothan
SEEM-APR-113	Using Importance-Performance Analysis in Food Safety Gap	Lin Pao Hui

**Lunch Break (12:00 pm - 01:00 pm)**

**DAY 01 (April 25, 2018)**

**Second Presentation Session (01:00pm - 02:00pm)**

**Venue: Room 1**

**Session Chair: Dr. Jacob Shabi**

**Track B: Engineering and Technology, Computer, Basics and Applied Sciences**

<b>Paper ID</b>	<b>Manuscript Title</b>	<b>Presenter Name</b>
ESTM-APRIL18-101	High Conversion Gain, Low-Power, And Low-Noise Front-End Receiver Operating At 0.4, 0.8, And 0.9 Ghz For Iot Applications	Wei-Hua Cheng
ESTM-APRIL18-102	A wideband LNA design of 10.7GHz-12.7GHz for Low Earth orbit microsatellites	Mr. Tsai Min-Jung
ESTM-APRIL18-105	Flapping Wing Actuation using Smart Materials	Srinivasan G Ram
ESTM-APRIL18-106	Preparation of stretchable fiber-type transistors from graphene hybrid fibers	Dr. Jea Uk Lee

**Ending Note: (02:00 to 03:00 pm)**

## **Participants Registered as Listener/Observer**

The following Scholars/ practitioners who don't have any paper presentation, however they will attending the conference as delegates & observers.

**Official ID:** ESTM-APRIL18-104

Dr. Jacob Shabi

Israel

## **Conference Day 02 (April 26, 2018)**

Second day of conference will be specified for touristy. Relevant expenses are borne by Individual him/herself.





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***TRACK A***

***BUSINESS, SOCIAL SCIENCES AND MANAGEMENT STUDIES***



## Using Importance-Performance Analysis in Food Safety Gap

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**Keywords:** Food Safety Gap, Importance-Performance Analysis, Consumers Boycott

Incidents relative to food safety issues have damaged consumers trust in these food providers as well as their purchase intention. Consumers perception of food safety is much less satisfaction than expected, consumers are exposed to food safety gap and food safety vulnerability, finally there will be consumer protest, consumer web connection, and consumer boycott behavior. The study was to identify the attributes of critical food safety gap in Taiwan. A total number of 150 valid survey samples was analyzed by using the analytical methods of Importance-Performance Analysis. It looks at two dimensions of consumer response to food safety, moreover examines both how well a factor contributes to a given goal as well as how important that factor is to the consumers. By understanding both the importance and performance of a given factor, the managers can discover where they are succeeding and where they need to improve on food safety.

## **Organizational Attractiveness and PersonJob Fit as a Predictor Intention to Stay of Employees in Commercial Bank**

<sup>1\*</sup>Miss Onanong Kaothan, <sup>2</sup>Miss Onanong Kaothan

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**Keywords:** Organizational Attractiveness, PersonJob Fit, Intention to Stay

From the situation of the business system from the past to the present. The Thai population most often choose to work with a famous organization But the name may not be the only organization can attract the person of ability in joining the organization. The interesting thing in the industry work is another. When people come to work system with organization interesting. That person will be suitable in the job much to remain with the organization until the retirement work The attractiveness of the organization that is scheduled to be the level of interest that each person sees that a prince that wish to join the work. It can induce the appropriate for much. Business system in often focus on services to excellence. In this research, the researcher is interested in studying the person in charge of operational level to the Bank of Commerce The gravity of the organization is the key to improve the organization to be able to distract individuals capable of the service and sales to participate. For the suitability of such work is what the human resources department of each bank should realize the search. A test to measure the person is in line to the bank. Both of which factors are affecting the intent to stay of employees. This can lead to the organizational loyalty Benefits to the organization in terms of manpower planning, budget planning, the stable of the organization, and the good image of the organization of the future. The benefits of research 1. Make them aware of the relationship between organizational attractiveness determination to remain an employee in Commercial Bank. 2. Aware of the relationship between appropriate work with the intention to stay of employee in Commercial Bank. 3. To find out about research predicting Intention to Stay Commercial banks. 4. To develop procedures for recruitment and selection of staff HR and Organization for the benefit of others.

## Conflict Management in Project Teams

\*Zaleha Binti Yazid

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**Keywords:** Conflict, Conflict Management, Qualitative

Conflict is regarded as the presence of disagreement that occurs when the goals, interests or values of different individuals or groups are incompatible in order to achieve organizational objectives. This causes different types of conflict to occur such as task conflict or relationship conflict. When conflict occurs, it brings different effect to organization as it can either be beneficial or becomes a distraction to organizational process. It can be a distraction if it disturbs the working process of the parties involved. However, if it involves the generation of creative ideas and opinions given by different parties, conflict is regarded as beneficial because the solution which are produced from the different opinions will be the best solution for the organization. Thus, this research explores whether conflict is useful or harmful in organization and how organizational conflict is managed.

## **The Impacts of Parasocial Interaction on Loyalty and Donation Behavior: Sense of Virtual Community as a Mediator**

<sup>1\*</sup>Yu Shu Kuo, <sup>2</sup>Wei Hsin Hsiang

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**Keywords:** Parasocial Interaction, Sense of Virtual Community, Donation Behavior, Loyalty

Social Networking Sites (SNSs) become mainstream and increasingly attract research and managerial attention. Facebook is currently one of the most successful SNSs in the world. According to the *Foreseeing Innovative New Digiservices*(2017), it shows that the rate of visiting Facebook weekly is as high as eighty-five percentage in Taiwan. It means running an online community with SNSs is important to the businesses. For the past few years, not only general businesses, but also non-profit organizations and social enterprises begin to use SNSs. However, there is only few of studies on using social networking sites community by non-profit organizations in Taiwan. This study focus on the relationship between non-profit organization and communitys members through the Facebook fan page. The organization using the social functions of Facebook to communicate with the key publics and to let them have a sense of community to the organization. Then, maintaining the long-term relationship with the members can improve their loyalty of community and increase their donation to the organization. Its really important for the non-profit organization. It has less resources to increase their propaganda to the publics, so the social networking sites can help them to communicate with the publics and build stronger relationship between both of them. Also, the study written by Briones, Kuch, Liu, and Jin in 2011 had shown the non-profit organization named American Red Cross used social media. And these tools can be harnessed to build stronger relationships with publics such as volunteers, the media, and the community. Thus, this study want to investigate more about the development of relationship between organization and communitys member. The relationship build by the interaction which called parasocial interaction between organization and communitys member on the Facebook fan page. When the relationship getting stronger, it can increase members sense of community. Moreover, the sense of community can improve members donation behavior and the loyalty of community.

## The Impacts of Travel Motivations, Constraints and Mediators on Quality of Life and Revisit Intention for the Elderly.

<sup>1\*</sup>Chun Yeh Chou, <sup>2</sup>Mei Fang Chen

<sup>1,2</sup>Tatung University, Taiwan

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**Keywords:** Senior tourism, Travel Motivations and Constraints, Quality of Life, Revisit Intention, Involvement

For decades, the elderly population has been increasing rapidly around the world. According to the report of the Department of Economic and Social Affairs of the United Nations, the elderly population, defined as people aged 65 and above, is estimated to rise by 16.9% in 2050. Comparing with the global trend, the elderly population in Taiwan is estimated to rise by 35.7% in 2050. With the growth of the elderly population, every country attaches importance to the problem of the elderly population and this potential market also attracts attention to many industries. The researchers in both gerontology and leisure argue that quality of life for the elderly population is an important issue. More and more elderly people pay attention to search for methods to improve their quality of life after the living standards of the elderly have been raised. The main purpose of this study is to examine the impacts of the travel motivations (push and pull) of the elderly and the constraints (i.e., external resources, time, approval and social, physical condition) on their quality of life and revisit intention through involvement and satisfaction with travel experience. The target sample of this study focuses on the elderly who are over 65-year-old and live in the metropolitan cities in Taiwan. Those who had travel experience in the last six months are eligible for investigation. The measurement of the constructs adopted in this study are provided by previous studies with good reliability and validity. A pretest will be conducted at first to confirm the internal consistency of each construct before distributing the formal paper questionnaires to the respondents. Structural Equation Model (SEM) analysis is to be conducted to test for the proposed hypotheses in this study. It is predicted that the travel motivations of the elderly will have positive influence on involvement but the constraints will have negative influence on involvement. In addition, involvement will have positive influence on satisfaction with travel experience. Moreover, satisfaction with travel experience of the elderly will have positive influence on their quality of life, which will further have positive influence on his or her revisit intention. Hoping the research findings can provide the marketers have a better understanding of the senior tourism market.



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***TRACK B***

***ENGINEERING, TECHNOLOGY, COMPUTER AND APPLIED  
SCIENCES***



## A Wideband LNA Design of 10.7GHz-12.7GHz for Low Earth Orbit Microsatellites

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**Keywords:** Amplifier, Wireless Communications, Transceivers

This research presented a new method of a three-stage low noise amplifier(LNA) circuit structure, which can be used in Low Earth orbit microsatellites. The proposed circuit is designed and simulated at Ku-Band (10.7 to 12.7GHz) with the TSMC 0.18 $\mu$ m CMOS process. The first stage is a common-gate amplifier, that its input matching network is a parallel resonant network having a low network quality factor value which again helps in broadening the bandwidth. Second stage is a common-source amplifier, its purpose is to increase the gain of this stage. In the last stage, a source follower is employed for output matching. The supply voltage is 1.8V, the power gain between 9.3-14 dB, and noise figure(NF) of 3.751.5 dB. The simulation results show input return loss  $S_{11}$   $\leq$  -10 dB, output return loss  $S_{22}$   $\leq$  -10 dB and unconditional stability  $k_1 > 1$ ,  $\mu_1 > 1$  in the frequency range of 100 MHz-13 GHz. The demand of higher data rates has increased the desired operation frequency of RFIC. Among these applications Ku-Band are one of the great interest for high data rate wireless communications and radars. LNA is an important building block in RF transceivers. To achieve the acceptable receiver sensitivity, the LNA must have sufficient gain, appropriate input matching and low noise figure. To satisfy all the design goals of the wideband LNA over Ku-band is challenging, because the demand of high operating frequency and the broad bandwidth.



## High Conversion Gain, Low-Power, and Low-Noise Front-End Receiver Operating at 0.4, 0.8, And 0.9 Ghz for Iot Applications

<sup>1\*</sup>Wei-Hua Cheng, <sup>2</sup>Jeng-Rern Yang

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Taoyuan County, Taiwan ROC

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**Keywords:** CMOS, Lowlow-power Receivers, Lowlow-noise, Active active Inductor, Active active balun, Bulk Injection, Subthreshold, Inductorless, LNA, Mmixer.

This paper presents the design of a radio frequency for a low low-power, low low-noise receiver for operating operation in the Internet of Things IOT at 0.4GHz, 0.8GHz, and 0.9 GHz for communication standards. The A low- noise amplifier (LNA) and, a mixer are both operating used in the subthreshold region to achieve low power consumption for this receiver. The A receiver front-end receiver using with an Active active inductor, resistive feedback, and Active active Balun balun is used to achieve an to reach inductorless architecture. The simulations results show the a conversion gain of at least 354 dB, and a 2.98 dB Double double sideband noise figure . The chip consumes 8.63 mw mW from a 1-V supply . The front end was receiver was simulated and fabricated using the TSMC 1P6M 0.18 um CMOS process.

## Preparation of Stretchable Fiber-Type Transistors from Graphene Hybrid Fibers

<sup>1\*</sup>Dr. Jea Uk Lee

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Technology (KRICT)

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**Keywords:** Stretchable, Fiber, Transistor, Graphene

The textile-based electronic devices should be not only bendable not also highly stretchable for emerging applications such as human-friendly interactive electronics, because the movements of human joints generate strains as high as 55% upon stretching and contracting. In this study, we introduce the fabrication of stretchable fiber-type transistors based on buckled hybrid fiber electrodes by a simple prestraining-then-buckling approach. The hybrid fibers were prepared by the wet-spinning of graphene oxide and hybridization with Ag nanoparticles. And then, we prepare the stretchable fiber-type transistors by continuously embedding the buckled hybrid fibers and P3HT/TPU blend film as S/D electrodes and solution-processable p-channel semiconductor, respectively, onto conventional polyurethane monofilaments. The fiber-type transistors exhibited excellent stretchability and high electrical performance.

## Flapping Wing Actuation Using Smart Materials

<sup>1\*</sup>Srinivasan G Ram, <sup>2</sup>Mr. Jaideep Sharma

<sup>3</sup>Prof. Ramesh Gupta

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**Keywords:** Dielectric Elastomers, Flapping wing MAVs, High Voltage Generators

Flapping wing flyers perform better than traditional multi-rotors and fixed wing flyers in terms of lift generation, hovering capability, maneuverability and power requirement in the micro and nano scale. Recent developments in the field of smart materials have proven the potential for these materials to serve as actuators. Introduction of smart materials as actuators in flapping wing micro aerial vehicles(MAVs) eliminates the need for the traditional rotary power delivery mechanisms, allowing for lighter, smaller and more energy efficient designs. Our study of the kinematics of insect flight helps us relate the independent variable wing length to two dependent variables wingbeat frequency and stroke amplitude and establish a benchmark of characteristics our smart material must possess. Dielectric Elastomers due to their high actuation strain, high actuation speed, low density, compliant nature and silent operation were evaluated to be suitable for flapping wing actuation. The experimental reference design study described in this paper establishes a basis for understanding the influence of the physical parameters such as the material, actuation frequency and stimulus shapes have on the strain produced in the material. These experiments have been carried out on acrylic elastomers with the aid of a high voltage custom waveform generator. Future research goals include maximizing strains and minimizing actuation voltage in order to move towards our nature inspired benchmarks.

## ***UP COMING EVENTS***

You can find the details regarding our upcoming events by following below:

<http://consortium-et.com/upcoming-events/esmt-annual-conference/>

<http://consortium-et.com/upcoming-events/isite-annual-conference/>

<http://consortium-et.com/upcoming-events/peas-annual-conference/>

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*To disseminate knowledge and help scholars, practitioners and administrators to promote the high quality research.*

