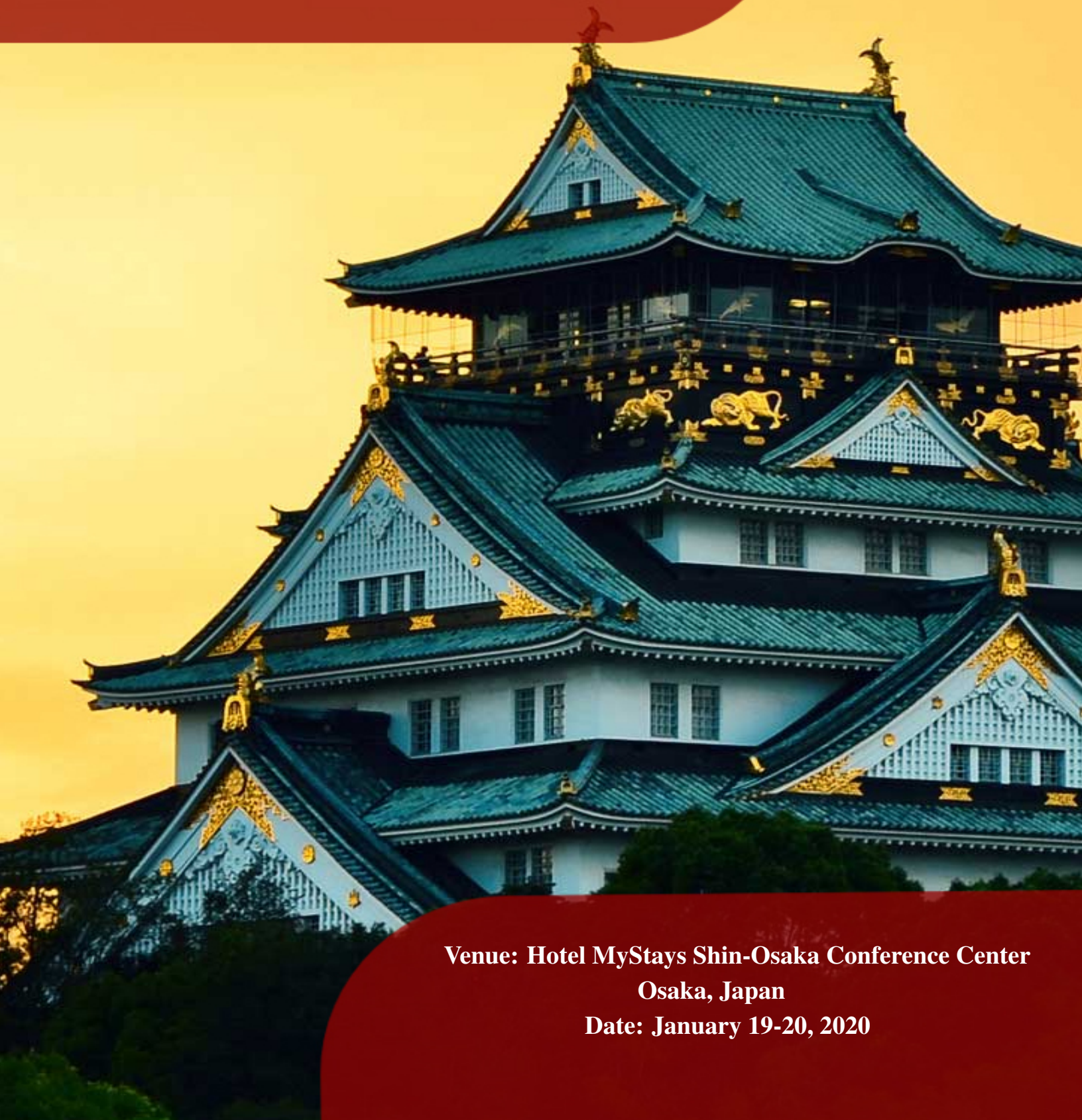


# CONFERENCE BOOK OF ABSTRACT PROCEEDING



**Venue: Hotel MyStays Shin-Osaka Conference Center  
Osaka, Japan**

**Date: January 19-20, 2020**

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# Book of Abstracts Proceedings

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Osaka, Japan | January 19-20, 2020

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Conference Supervisor

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## CONFERENCE TRACKS

- Social and Community Studies
- Arts
- Humanities
- Civic and Political Studies
- Cultural & Global Studies
- Environmental Studies
- Organizational Studies
- Educational and Communication Studies
- Economics, Finance & Accounting
- Business and Management Studies
- 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
- Medical and Health Sciences
- Paramedical Sciences
- Medicine Sciences
- Biological and Life sciences
- Veterinary Medicine and Sciences
- Food Science & Nutrition
- Agricultural sciences
- Interdisciplinary



## CONFERENCE CHAIR MESSAGE

### **Dr. Vincent W Ho**

“International Conference of Akademika Nusa Internasional ” 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, business and economics, applied sciences, engineering and technology, health and medical 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.

Dr. Vincent W Ho

Conference Chair

Email: [Conferencechair.ani@gmail.com](mailto:Conferencechair.ani@gmail.com)





## CONFERENCE SECHDULE

**ANISSH-2020**

**Venue: Hotel MyStays Shin-Osaka Conference Center**

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

**Day: Sunday**

**Date: January 19, 2020**

**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 - 10:30 am | Grand Networking Session         |



**DAY 01 Sunday (January 19, 2020)**

**First Presentation Session (10:30 am - 01:00 pm)**

**Venue: Room 1**

| <b>Presenter Name</b>   | <b>Manuscript Title</b>   | <b>Paper ID</b> |
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| <b>Track A: Business, Economics, Social Sciences &amp; Humanities</b>   |   |                 |
| EMCG-JAN-102  | The Impact of Nationality Salary Differentials and Cultural Distance on Salary  | Wenjhan Jane    |
| EMCG-JAN-103  | Income Tax Reform: Taxing the Income from Real Estate Transactions by Consolidating Housing and Land  | Ming-Hung Yao   |
| EMCG-JAN-109  | The Study on the Application of the Luminescent Lace onto the Apparel Designed for Nocturnal Admonition Purpose                                   | I Chun, Chen    |
| IRBEMSH-0120-ANI101   | Analyzing the Philosophy of Storytelling Narrative both in Ancient Theater and Modern Cinema: Case Studies of Oedipus The King and Twelve Monkeys | Peng Qingyue    |
| IRBEMSH-0120-ANI103   | Retirement preparation in the workplace in Taiwan: HR professionals perspectives  | Ya-Hui Lee      |
| OSA-JAN3120-004B  | Pricing Vulnerable Asian Options with Correlated Credit Risk under Jump-Diffusion Process   | Yuhong Liu      |
| OSA-JAN3120-009B  | The Influence of Metacognitive Experience and Self-other on Context Effect  | Chia-Jung Chang |
| <b>Track B: Engineering, Technology Computer &amp; Applied Sciences</b> |   |                 |
| ECEEE-JAN20-101   | Zero-Day Intrusion Detection System Based on Collaborative Neural Networks with Aggregation Strategy  | Chih-Lung Chen  |
| ECEEE-JAN20-102   | Decode Hand-Movement from Cortical Ensemble Activity in Motor Cortex  | Shih-Hung Yang  |
| OSA-3120-102E   | A Study on Solving Wave Propagating over Axisymmetric Topography by an Analytical Solution  | Jen Yi Chang    |

**Lunch Break & Ending Note (01:00 pm - 02:00 pm)**



## **Conference Day 02 (January 20, 2020)**

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

***TRACK A***  
***BUSINESS, ECONOMICS, SOCIAL SCIENCES & HUMANITIES***



# The Impact of Nationality Salary Differentials and Cultural Distance on Salary

\*Wenjhan Jane

Shih Hsin University, Taiwan

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**Keywords:** Culture; Hofstede; Nippon Professional Baseball; Reservation Salary; Salary Discrimination.

This article focuses on the issues of nationality and cross-cultural differences in relation to compensation levels in the Nippon Professional Baseball (NPB) league. Panel data for 1,520 players during the period from 2009 to 2017 is collected, and the two-stage double fixed-effects model is employed to investigate the impact of nationality discrimination and cultural distance on salary. The main finding indicates that, on average, foreign players are paid 54-67% more than domestic players *ceteris paribus*. Moreover, foreign players with higher cultural (1.9%) and special (0.68%) distance fare better relative to those where such distance is lower. Evidence of nationality-based salary discrimination and the effects of cultural distance on salary are found. We also find strong support for the senior-junior system that pervades the culture in the Japanese labor market and the different body mass index (BMI) requirements for pitchers and hitters in NPB.

# Income Tax Reform: Taxing the Income from Real Estate Transactions by Consolidating Housing and Land

\*Ming-Hung Yao

National Kaohsiung University of Science and Technology, Taiwan

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**Keywords:** Property Tax, Land Value Increment Tax, Real Estate Transaction Income Tax.

Taiwan's land tax is classified into land value tax (LVT), agricultural land tax, and land value increment tax (LVIT). The LVIT, which is essentially an income tax on gains from land transactions, plays an important role in financing local government services. The tax base of LVIT is determined by the government-assessed present value of land (GAPV), instead of the actual transaction value. No tax burden occurs on transactions during the period between consecutive annual adjustments of GAPV. There is thus a considerable gap between this system and fair, equitable taxation. The defect LVIT system is thought as a factor to surging real estate prices in Taiwan over recent decades. The public appealed to the government for tax reform of income from real estate transactions. The Income Tax Act was amended in 2015 to tax actual gains from real estate transactions combining house and land on a consolidated basis, and has taken effect since 2016. The LVIT tax system remains unchanged by the implementation of the income tax reform. The tax base of the real estate transaction income tax is the actual value of the properties reduced by related costs, expenses, and the increase in GAPV for LVIT purposes to avoid double taxation. This chapter aims at providing a background for different aspects related to tax levied on income from real estate transactions. In addition to introduction focusing on LVIT and the income tax reform in 2016, problems and issues of LVIT and the tax reform are addressed. Taiwan's land and tax policies in the 1950s represented a successful experience for developing countries, but also resulted in high real estate prices and wealth distribution inequality over recent decades. The 2016 income tax reform had been implemented for just two years, whether a success or failure case is still worth investigating. However, it is definitely a precious experience to developing countries, both academically and empirically.

# The Study on the Application of the Luminescent Lace onto the Apparel Designed for Nocturnal Admonition Purpose

\*Chun Chen

Kun Shan University, Yongkang Dist., Tainan City

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**Keywords:** Luminescent Lace, Female Elderlies, The Demand For The Design Of Functional Fabric, The Demand For Nocturnal Admonition.

In recent times, the craze for the functional apparel has been brought forward by the outdoor liveliness, no longer will the flexible and breezy outfit without aesthetic appease customers, especially to the growing number of female elderlies, who long for the exquisite and elegant material in addition to the function in order to exhibit individuals taste. In other respects, the meager visibility outdoors is so important that the nocturnal admonition must be affixed to the functional apparel. Nowadays, there are only wearable fluorescent bracelet and vest available in the market for the use of alerting others at night, nocturnal admonition feature cannot be weaved along with the textiles, so not only has this caused inconvenience, but also has it not been able to cope with the trend of sustainable development and smart wear. In compliance with the demand of the customers, the manufacturers focus more on the versatile textiles, and due to that reason, the study will continue with the patent of the luminescent lace, Embroidered lace fabric, applied by the researcher, with the technique of combining the luminescent yarn with yarn throwing to integrate the eco-friendly ideology with the customers demand so as to produce a functional apparel with aesthetic, function and admonition.

# Analyzing the Philosophy of Storytelling Narrative both in Ancient Theater and Modern Cinema: Case Studies of Oedipus The King and Twelve Monkeys

<sup>1\*</sup>Peng Qingyue,<sup>2</sup>Chang Woojin  
<sup>1,2</sup>Ajou university in South Korea

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**Keywords:** Oedipus The King; Philosophy; Storytelling Narrative; Twelve Monkeys

As the seventh art, film, born in 1895, is the most elaborate work in the media world today, not only because of its fascinating audiovisual expression, but also because of the stories and philosophy in it. Wonderful audiovisual expressions in films should be the result of technological advancement, which also means that the art form of film has only a history of over 120 years. However, storytelling narrative, as the core element in film, has a thousand-of-years history. Through analyzing the philosophy of storytelling narrative, the ancient play, Oedipus The King, is associated for the first time with the film, Twelve Monkeys (1995) in this thesis. Based on case studies of them through analyzing the motifs of the past events and the skills of storytelling, it is not difficult to find the similarities in philosophy both in the ancient play and the modern film, that is the fate of protagonist is impossible to change.



# Retirement preparation in the workplace in Taiwan: HR professionals perspectives

<sup>1</sup>Ya-Hui Lee,<sup>2\*</sup>Chien-Hung Hsieh

<sup>1</sup>Department of Adult and Continuing Education, National Chung Cheng University, Taiwan,<sup>2</sup>Department of Adult and Continuing Education, National Chung Cheng University, Taiwan

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**Keywords:** Retirement Preparation, HR Professionals, Workplace Learning

People live longer, it means that people have more years after retirement, thus the retirement preparation is attracting the attention. Recently, retirement education is emphasized in the workplace, and relevant research indicates that retirement preparation has a positive relation with wellbeing in the post-retirement. To understand the feasibility of retirement education realized in the workplace, the researchers adopted a qualitative method and conducted semi-structured interviews to collect qualitative data. Seven HR professionals from the enterprises were selected, and the participants who mainly take in charge of retirement preparation programs in the enterprises. The findings were as follows. 1. Based on the HR professionals perspective, the sooner the better if people engage in retirement planning. In the real situation of the workplace, the enterprises do not provide retirement education for all, but only for the employees who are ready to retire. 2. To hold retirement educational programs in the enterprises, the attitudes and perceptions of the managers play an important role. Once the managers perceive the benefits of retirement education, the program can be realized in the enterprise. 3. To build up a platform can enhance the interactions and promote experience and skill-sharing among retired employees, such as Facebook, volunteer teams. 4. The important issues related to retirement include financial planning, health promotion, and interest exploring.

# Pricing Vulnerable Asian Options with Correlated Credit Risk under Jump-Diffusion Process

\*Yuhong Liu

National Cheng Kung University, Taiwan

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**Keywords:** Geometric Average Asian Option, Vulnerable Option, Counterparty Risk, Jumpdiffusion Process

This study extends the framework of the credit risk model in Klein (1996) and the jumpdiffusion process in Merton (1976) to price the vulnerable Asian options with jump risk. Since most Asian options are traded in over-the-counter markets, the standard options valuation models may misprice options without taking counterparty default risk and the impact of rare events on counterparty assets into account. Therefore, we derive a pricing formula for vulnerable Asian options that takes not only the potential risk of default but also the potential for rare event shocks to counterparty assets into account. Furthermore, we do the numerical analysis to investigate the influence of the credit risk and jump risk on the option price. We conclude that when the credit risk and the impact of rare events on counterparty assets are encountered, there exists mispricing when using other pricing formulas to evaluate vulnerable Asian options.

# The Influence of Metacognitive Experience and Self-other on Context Effect

\*Chia-Jung Chang

National Taiwan Normal University, Taiwan

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**Keywords:** Self-Other, Compromise Effect, Attraction Effect, Context Effect, Metacognitive Experience.

People face countless choices in different categories every day. According to the traditional view of economics, people should have always approached the decision which they expected to have maximum benefits. However, in reality, plentiful options generate consumer perceived risk and lead to heuristic decision methods such as compromise effect and attraction effect (together known as context effect). This research mainly determines that the context effect is more significant for people while making consumption decisions for others (e.g., buying gifts) than for themselves. Furthermore, as the empirical evidence indicates, the metacognitive experience (processing fluency and retrieval fluency) moderates the relationship between self-other consumption and the context effect. Four hypotheses are proposed and confirmed by four experiments.

***TRACK B***

***ENGINEERING, TECHNOLOGY COMPUTER & APPLIED SCIENCES***



# Zero-Day Intrusion Detection System Based on Collaborative Neural Networks with Aggregation Strategy

<sup>1\*</sup>Chih-Lung Chen, <sup>2</sup>Jung-San Lee, <sup>3</sup>Kuo-Jui Wei, <sup>4</sup>Ying-Chin Chen

<sup>1,2,3,4</sup>Department of Information Engineering and Computer Science-Feng Chia University Taichung, Taiwan

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**Keywords:** IDS, Zero-day attack, AutoEncoder, Aggregation

Despite signature-based intrusion detection system(IDS) has played an important role in the field of cyber security, there remains a crucial challenge that the zero-day attack is hard to be solved. This drawback may bring a large amount of loss to an enterprise or an individual. In order to address above issue, we aim to propose a novel IDS framework which is able to conquer zero-day attacks. The framework consists of an AutoEncoder and a deep neural network(DNN), where AutoEncoder is applied to be the zero-day attack detector and DNN is employed as a known attack classifier, respectively. In particular, we have introduced aggregation strategy based on DBSCAN algorithm and voting system for retraining the IDS. The experimental results have demonstrated that the new method can solidly work in a zero-day attack detection.

# Decode Hand-Movement from Cortical Ensemble Activity in Motor Cortex

<sup>1\*</sup>Shih-Hung Yang, <sup>2</sup>Sheng-Wei Lee, <sup>3</sup>Jyun-Wei Huang, <sup>4</sup>Wen-Chu Huang, <sup>5</sup>Yu-Chieh Chen, <sup>6</sup>Hsin-Yi Lai, <sup>7</sup>You-Yin Chen, <sup>8</sup>Hsien-Kuang Liu

<sup>1,2,3</sup>Department of Mechanical Engineering, National Cheng Kung University, Tainan 70101, Taiwan, <sup>4,7</sup>Department of Mechanical and Computer-Aided Engineering, Feng Chia University, Taichung 40724, Taiwan, <sup>5</sup>Interdisciplinary Institute of Neuroscience and Technology, Zhejiang University, Hangzhou 310029, China, <sup>6</sup>Department of Biomedical Engineering, National Yang Ming University, Taipei, 11221, Taiwan

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**Keywords:** neural decoding, bin firing rate, nonhuman primate

Braincomputer interface (BCI) helps individuals with spinal cord injury gain assistance in activities of daily living. Invasive BCIs yield higher-quality decoding than noninvasive BCIs due to accurate recording using implanted electrodes. However, non-stationary neural signals make neural decoding more difficult. This study first analyses cortical ensemble activity recorded from motor cortex of nonhuman primate. A number of sorted units and hash unit in each channel are adopted to calculate bin firing rate as neural decoder input. Furthermore, this study analyses the effects of time lag and temporal order on neural decoding where a linear regression method is adopted as the neural decoder. The experimental results show that the hash units are indeed useful for neural decoding. The correlation between the bin firing rate and arm-movement slightly changes from session to session. Velocity decoding achieves more accurate performance than position and acceleration decoding. Furthermore, the neural decoder trained by cross session data could achieve better decoding performance than that trained by single session data. Neural decoding is more accurate when using Cartesian coordinates rather than polar coordinates. These findings help design of neural decoder for invasive BCIs.

# A Study on Solving Wave Propagating over Axi-Symmetric Topography by an Analytical Solution

<sup>1</sup>Jen Yi Chang, <sup>2</sup>Tso Jen Chen

<sup>1,2</sup>Tainan University of Technology, Taiwan

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**Keywords:** Axi-symmetric topography, mild-slope equation, submerged truncated shoal, wave refraction, wave diffraction.

In this paper, the mild slope equation is used to solve the wave scattering phenomena around a cylindrical island mounted on a general axi-symmetric topography and a general submerged truncated axi-symmetric shape. The method of separation of variables and Taylor series expansion are invoked to find the approximate solutions to the region of varying water depth which varies proportionally to an arbitrary power of the radial distances. Validation against the solution of waves scattering around cylindrical island on a paraboloidal shoal and wave energy trapped by submerged truncated paraboloidal shoal show excellent agreements as the power of radial distance being equal to two. Since the robustness of the assumption of a general axi-symmetric geometry based on an arbitrary power variability of the radial distance, the present solution can be very conveniently employed to investigate the effects of bottom topography on wave scattering and trapping patterns.



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