# Taiwan Academy Of Social Sciences

## 2019

# TASS International Conference on Recent Innovation in Social Sciences Economics & Business Management

**Date: July 06-07, 2019**

**Venue: The Howard Plaza Hotel Taipei, Taiwan**

# *CONFERENCE BOOK OF ABSTRACT PROCEEDINGS*

Taiwan Academy Of Social Sciences

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# Book of Abstracts Proceedings

**TASS International Conference on Recent Innovation in Social Sciences, Economics and Business Management (RSEBM)**

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*Taiwan Academy Of Social Sciences*

Proceedings of the TASS International Conference on Recent Innovation in Social Sciences, Economics and Business Management

**Disclaimer**

*TASS International Conference on Recent Innovation in Social Sciences, Economics and Business Management*

**Venue: The Howard Plaza Hotel Taipei, Taiwan**

**Conference Theme:** Emerging Social Changes that Result from New Social Dynamics.

# ADVISORY BOARD

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# ORGANIZING COMMITTEE

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# CONFERENCE TRACKS

- Social Sciences and Humanities
- Business and Economics
- Management and Interdisciplinary
- Banking and finance Business
- Marketing
- International Enterprise
- Human resources
- Hotel and Institutional Management
- Interdisciplinary

# CONFERENCE CHAIR MESSAGE

**Tadashi Kimura**

"International Conference of Taiwan Academy of Social Sciences (TASS) " 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.
Tadashi Kimura
Conference Chair
Email: Tadashi_Kimura@academy-ss.com

## Start Time

09:00 am - 09:05 am:    Registration & Kit Distribution
09:05 am - 09:10 am:    Introduction of Participants
09:10 am - 09:15 am:    Inauguration and Opening address
09:15 am - 09:20 am:    Grand Networking Session

**Tea/Coffee Break (09:20 am - 09:30 am)**

# CONFERENCE AGENDA

**DATE:** July 06-07, 2019
**LOCATION:** The Howard Plaza Hotel Taipei, Taiwan
**DAY:** Saturday-Sunday
**Event Title:** TASS International Conference on Recent Innovation in Social
Sciences, Economics and Business Management (RSEBM)

Session:              01
09:30 am - 11:00 am:  Presentation Session
Track A:              Business, Social Sciences and Humanities

| Paper ID | Manuscript Title | Presenter Name |
|---|---|---|
| Li-Ling Yang | Impacts of An Interdisciplinary Community Engagement Project on Pre-Service Teachers Understanding Of Engineering Design And Self-Efficacy In Teaching It | RSEBM-July19-102 |
| Eva Muchova | How Likely is the European Union Enlargement ? | RSEBM-July19-103 |
| Hanna Keila Garcia | Convergence of International Investment Law and Human Rights: The Curious Case of Social Impact Investments In The Philippines | RSEBM-July19-106 |
| Hannah Isabella P. Chan | Convergence of International Investment Law and Human Rights: The Curious Case of Social Impact Investments In The Philippines | RSEBM-July19-106C |
| Yumin Zheng | Creating A Dynamic Difficulty Adjustable Game For Elderly People | RSEBM-July19-108 |
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| Panthip Apai | Should macroeconomic forecasters use daily and monthly financial data for forecasting GDP growth: Evidence from Thailand | RSEBM-July19-109 |
| **Track B: Engineering, Technology & Applied Sciences** | | |
| Yi-Chun Lin | Reversible Data Hiding Based on Multi-Dimension Difference-Histogram and Bilinear Interpolation | ETASE-JULY19-TW101 |

**Lunch Break & Closing Ceremony (11:00 am - 12:00 pm)**

## Conference Day 02 (July 07, 2019)

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

*TRACK A*

*BUSINESS, ECONOMICS, SOCIAL SCIENCES & HUMANITIES*

# Impacts of An Interdisciplinary Community Engagement Project on Pre-Service Teachers Understanding of Engineering Design and Self-Efficacy in Teaching It

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**Keywords:** Community Engagement, Engineering Design, Pre-Service Teachers, Self-Efficacy

This research project is to evaluate the impacts of a community-engaged project on the pre-service teachers understanding of engineering design and self-efficacy in teaching it. In 2012 the National Research Council (NRC) published A Framework for K-12 Science Education, which was intended to guide the development of the next-generation set of science standards, Next Generation Science Standards (NGSS) (Achieve, Inc., 2013). This new framework presents a new vision for education in the sciences and engineering in which students, over multiple years of school, actively engage in scientific and engineering practices and apply crosscutting concepts to deepen their understanding of the core ideas in these fields (NRC, 2012, pp. 9-10). Since the release of NGSS in 2013, one of the challenges many school districts have been facing while implementing the NGSS-aligned science curriculum and instruction is the elementary school teachers unfamiliarity with the engineering practices and core ideas that are explicitly included in the NGSS. To prepare future generations of teachers who can realize and implement the new vision and support their development of adequate understanding of engineering design and competency in teaching it, 48 education students in a two-semester sequence of elementary science methods course at a liberal arts university in the Northeast USA in 2018-19 academic year participated in an interdisciplinary community engagement project. In collaboration with 29 engineering undergraduates to educate local fourth graders about engineering design and wind energy, the education students deepened their own learning. Assessment was carried out through pre- and post-tests, with metrics exploring pre-service teachers content knowledge in engineering design and self-efficacy in teaching it. Project outcomes were assessed by comparison of baseline data (before the project begins) against results at the conclusion of the project. Initial results from the assessment tools will be reported at the conference presentation.

# How likely is the European Union Enlargement ?

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**Keywords:** European Union, Economic And Monetary Union, Eurozone Enlargement, Convergence

The European Union consists of twenty eights countries, which covers about eight percent of the world's population. Belgium, Germany, France, Italy, Luxembourg and the Netherlands were the first countries involved in economic cooperation in Europe after World War II. In 1999 elevens of the Member States have deepened economic cooperation and replaced their national currencies with the euro. The Economic and Monetary Union (EMU) was considered as a logical strengthening of economic and monetary ties and links within the European Union. The paper focuses on highly debated and controversial issue and that is a prospect of Eurozone enlargement. The applicants for the EU membership are obliged to meet the conditions laid down by the Treaty on the EU. The Treaty of Maastricht specifies the key conditions to be met to join EMU. The theory of optimum currency area is applied as the theoretical basis for analyzing the benefits and the cost of membership in a monetary union and compared with the official criteria of joining EMU. However, twenty years of the EMUs existence have not resulted in a significant shift towards convergence. A lack of homogeneity respectively insufficient real convergence within Eurozone is considered as a high risk of a successful and smooth euro area functioning. Nominal convergence and real convergence are analyzed for non-members of monetary union sas Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania and Sweeden. None of above mentioned countries meets the basic official requirements for joining EMU although for different reasons. It is assumed that the countries as Bulgaria and Romania would further deepen the divergent tendencies in the euro area and therefore their admission are rather questionable and contradictory. To sum up, the enlargement of the euro area in the medium-term is unrealistic taking into account the nominal and real convergence parameters.

# Convergence of International Investment Law and Human Rights: The Curious Case of Social Impact Investments in the Philippines

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Existing international investment treaties rarely include provisions that address the protection of human rights. While there are instances wherein remedies are being sought for human rights violations committed as a direct result of foreign investments, such violations are nonetheless deemed separate issues; requiring separate, and oftentimes legally tedious processes, despite the inclusion of arbitration clauses in investment agreements The rapid growth of the social impact investment industry (now estimated to be worth USD228 Billion) reflects a merging of human rights and market for the purpose of generating measurable social and development impacts while ensuring returns on investment. At the heels of the decision made in Urbaser v Argentina, it is proposed that social impact investing creates a unique opportunity to craft a rights-based business model that ensures that any party, even the government, can be held accountable for investments that result in human rights violations. This is significant in the case of the Philippines, where the weak normative function of human rights can benefit from mechanisms directly protecting such rights. If applied to government contracts, a rights-based business model could have compelled a shift in the Philippine Governments attitude in evaluating loan agreements for development projects, such as the Kaliwa Dam and the Chico River Pump Irrigation Project. This model of social impact investing could have bolstered the position of news media Rappler and its impact investor, Omidyar Network, when Rapplers License was revoked by the Philippine government in retaliation to the relentless reporting on the ongoing war on drugs. The question must be asked how various stakeholders can exact accountability not just within the realm of international human rights, but also as an adjunct of international investment law. Social impact investing, as a rapidly growing emergent field of business, presents a first step to answering this.

# Creating a Dynamic Difficulty Adjustable Game for Elderly People

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**Keywords:** Dynamic Difficulty Adjustment (DDA), Sarcopenia, Elderly People

The purpose of this pilot study is to develop a game for elder people to against sarcopenia. Sarcopenia is a situation characterized by loss of skeletal muscle mass, quality, and strength associated with aging. To maintain skeletal muscle mass and function, undertaking physical activities and excise with the game is the effective approach for elder people. The improper of game difficulty may affect elder peoples motivation to continue the game. To investigate how dynamic game difficulty adjustment affecting elderly peoples motivation, this pilot study is creating a dynamic difficulty adjustable game Fruitcollector with a wearable detective device. According to the results of observing how people ride bicycles, the wearable detective devices buttons, pressure and infrared sensors can receive and analysis data from players. Fruitcollector is a digital game with dynamic difficulty adjustment (DDA) by riding spinning bike. The goal of player is to collect fruits by riding spinning bike and using the wearable detective device. The game difficulty will be adjusted according to the players performance. For further investigation and evaluation, elderly participants will be invited to play the game.

# The Relationship between Exchange Rate and Stock Prices in case of Thailand: Evidence from Wavelet Analysis

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This study investigates the relationship between Exchange Rate and Stock market Prices in Thailand by using Wavelet analysis to examine the strength of relationship, direction of correlation, and lead-lag relationship. Most of previous researches ignore frequency domain. Thus, continuous wavelet power spectrum, cross wavelet, and wavelet coherence are more focused. These methods proposed by Torrence and Compo (1998) and Torrence and Webster (1999) are adopted, which allow us to deal with time and frequency domain analysis. Seventeen years daily data, Exchange Rate of Thailand (THB/USD) and Stock Price Index, collecting from Bank of Thailand (BOT) and The Stock Exchange of Thailand (SET), respectively, over period 1 January 2000 to 29 December 2017 have analyzed. The results can support the two important theoretical frameworks which concerning of causality between Exchange Rate and Stock market prices (Traditional approach and Portfolio-Balance approach) in sub-scale for both time and frequency domain. This study results find that there are volatility spots for both changes of Exchange Rate and Stock Prices return cases over entire sample period which do not excess 64 days scale (frequency). High co-volatility occur especially in abnormal period (Global Financial crisis) which stock prices return is leading. In correlation results, the relationship occur for all scale (short, medium, and long) along whole period and clearly appear in the upper medium scale with changes in Exchange Rate as leader followed Traditional approach except in the crisis period. During crisis, highly correlation represent in the long scale with Stock prices return as leader followed Portfolio-balance approach. Based on finding results, Government may intervene in each market to control or adjust another market in different situation. In part of investors who require to invest may use these results as another basis to predict behavior of both markets.

# Should Macroeconomic Forecasters Ase Daily and Monthly Financial Data for Forecasting GDP Growth: Evidence from Thailand

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**Keywords:** Mixed data frequency, multiple predictors, combination, real-time forecasting

This study examines the importance of combining the high frequency information contained in financial data and asset prices, in order to gain incremental forecasting accuracy for quarterly gross domestic product (QGDP). Mixed-data sampling approaches ( MIDAS) proposed by Ghysels et al. ( 2004) and Ghysels et al. ( 2007) are introduced in this study to compare the performance in predicting Thailand quarterly output growth with the benchmark ADL model. With various high frequency indicators suggested in the work of Stock and Watson (2003), the main finding suggests that financial data and asset prices leads to significant improvement in forecasting current and next quarter output growth, and that MIDAS is an effective model of exploiting high frequency information compared to alternative methods.

*TRACK B*

*ENGINEERING, TECHNOLOGY & APPLIED SCIENCES*

# Reversible Data Hiding Based on Multi-Dimension Difference-Histogram and Bilinear Interpolation

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A new difference-histogram modification reversible data hiding scheme by using bilinear interpolation prediction is proposed in this paper. First, the proposed method considers each neighboring pixels x and y to predict z by bilinear interpolation on four pixels which are near to pixel-pairs x and y. Then, according to $d\_1=x-y$, $d\_2=y-z$, and $d\_3=z-x$, a new coordinate system $(d\_1, d\_2, d\_3)$ is generated. In this three-dimensional coordinate, the proposed method uses six quadrants to embed secret information: points on the specified surface are used for embedding and the extending space surrounded the embedded surfaces are used for shifting. Finally, a new multi-dimension difference-pair-mapping is used to implement the reversible data embedding. Therefore, more embedding conditions are obtained, thereby increase the number of embedded pixels and get more embedding capacity.

# *UP COMING EVENTS*

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

http://academy-ss.com/upcoming-conferences/

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# VISION

The vision of Taiwan Academy of Social Sciences (TASS) is to be a world leading forum for research presentation and networking in academic community.