(ETASE-2022)

4th International Symposium on Emerging Technologies ar and Advancements in Applied Sciences and Engineering

The Howard Plaza Hotel Taipei, Taiwan

July 05-06, 2022

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CONFERENCE BOOK OF ABSTRACT PROCEEDINGS

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Engineering Science Research & Development Board

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4th International Symposium on Emerging Technologies and Advancements in Applied Sciences and Engineering (ETASE-2022)

Venue: The Howard Plaza Hotel Taipei, Taiwan

Conference Theme: : Provide platform for researchers in a wide area of topics from all fields related to Engineering, Technology, Computer and Applied Sciences.

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CONFERENCE TRACKS

- Basic Science
- ICT
- Electrical Engineering
- Mechanical & Industrial Engineering
- Civil Engineering
- Business and Management Studies
- Electric Drives and Control
- Electrical Machines
- Instrumentation Engineering
- Power Generation, Transmission and Distribution
- Power System Engineering

CONFERENCE CHAIR MESSAGE

Ms. Mei Shu Lai

"International Conference of Engineering Science Research and Development Board" 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.

Ms. Mei Shu Lai
Conference Chair
Email: contact@esrdb.com

CONFERENCE AGENDA

Conference Name: 4th International Symposium on Emerging Technologies and Advancements in Applied Sciences and Engineering (ETASE-2022)

Day & Date: Tuesday, July 05, 2022

Venue: The Howard Plaza Hotel Taipei

Timeline of Day 01

09:10 am - 09:15	Registration of Participants
09:15 am - 09:20 am:	Registration & Kit Distribution
09:20 am - 09:20 am:	Introduction of Participants
09:20 am - 09:30 am:	Inauguration and Opening address

Tea/Coffee Break

DAY 01 Tuesday (July 05, 2022)

Presentation Session (09:30 am - 11:00 am)

Venue: Room 1

Track A: Business, Social Sciences and Humanitie

Presenter Name	Manuscript Title	Paper ID
Yuwei wang	The impact of directors liability insurance on board meeting attendance	RSEBM-July22-101
Chung-Yi Hsu	Research on organizational social capital, knowledge absorptive capacity and entrepreneurial opportunity	RSEBM-July22-102
Hanna Keila Garcia	Convergence of International Investment Law and Human Rights: The Curious Case of Social Impact Investments In The Philippines	RSEBM-July22-106
Yumin Zheng	Creating A Dynamic Difficulty Adjustable Game For Elderly People	RSEBM-July22-108
Track B: Engineering, Technology & Applied Sciences		
Hong-Ming Lin	The Pyrolysis Characteristics and Thermogravimetric Kinetic Analysis of the Pyrolysis of CIGS Nanocrystals	ETASE-JULY22-TW101

Lunch Break & Closing Ceremony

Conference Day 02 (July 06, 2022)

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 directors liability insurance on board meeting attendance

*Yuwei wang
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Keywords: Directors liability insurance, Board meeting attendance, D&O insurance; Firm value, Taiwan

We study the relationship between directors liability insurance and board meeting attendance. Our motivation for this study is to examine whether directors liability insurance actually positively influences directors behaviors as insured companies expected to see. We find that directors liability insurance and board meeting attendance are positively associated. This suggests that directors liability insurance may actually serve a governance role because an insurer definitely has incentives to thoroughly scrutinize the insured. As a result, directors board meeting attendance rate increases because more monitoring on directors leads to more responsible behaviors of directors. With 98,524 yearly observations at the director level, and 8,968 yearly observations at the firm level from 799 listed firms on the Taiwan Stock Exchange (TWSE) and 624 firms from Taipei Exchange (OTC) during the period from 2008 to 2015, our empirical findings suggest that, on average, board meeting attendance rate of insured firms is 2.9 percent higher than that of uninsured firms. The main contribution of this paper is that it provides direct evidence that shows this insurance indeed increases directors participation level.

Research on organizational social capital, knowledge absorptive capacity and entrepreneurial opportunity

[1*]Chung-Yi Hsu, [2]Shu-Hui Chuang
[1,2]Asia University,Taichung,Taiwan R.O.C.

Keywords: Social capital , Knowledge absorptive capacity, Entrepreneurial opportunity

This study explores organizational social capital, knowledge absorptive capacity, and entrepreneurial opportunities as well as examines whether employee market knowledge absorptive capacity plays an intermediary role in the research framework. In this study, questionnaires are used as the survey tool. 192 valid questionnaires are collected and the hypothesis are verified by the partial least squares (Smart PLS) statistical method in the structural equation model. The main findings are that social capital positively enhances the ability to grasp entrepreneurial opportunities; the employees absorptive capacity of the market has the mediating effect of communication skills and social capital. Finally, this study theoretically constructs a complete model and empirical investigation of the opportunity identification process. In practice, the researchers will put forward suggestions for entrepreneurship education and practical entrepreneurs as well as will help subsequent researchers to further explore the connotation of opportunity identification.The study has contributed theoretical and practical implications. Future directions for research are described, and its practical implications for entrepreneurship education and entrepreneurs are examined.

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

[1*]Hanna Keila Garcia, [2]Hannah Isabella P. Chan
[1,2]Lee Kuan Yew School of Public Policy-National University of Singapore, Singapore

Keywords: Rapplers License, Pump Irrigation Project, Urbaser v Argentina

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

[1*]Yumin Zheng, [2]Yen-Fu Chen
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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.

TRACK B

ENGINEERING, TECHNOLOGY & APPLIED SCIENCES

The Pyrolysis Characteristics and Thermogravimetric Kinetic Analysis of the Pyrolysis of CIGS Nanocrystals

[1*]Hong-Ming Lin, [2]Kai-Chungand Hsu,
[3]Jyh-Herng Chen
[1,2,3]National Taipei University of Technology,Taiwan

Keywords: Thermal decomposition, CuInxGa1-xSe2, Chalcopyrit

A kinetic of the thermo-oxidative decomposition of CIGS nanoparticles is investigated with a thermogravimetric analyzer with non-isothermal methods. The weight loss was measured by TGA in the air atmosphere. The samples were heated over a range of temperatures from 300 K to 1,100 K with three different heating rates of 2, 5, and 10C min-1. The results obtained from the thermal decomposition process indicate that there are two stages of thermal decomposition in the temperature range. The binary/ternary selenide is formed in the first stage. The invariant activation energy and frequency factor (lnA) in the first stage are 143.76 kJ/mol and 20.93 1/sec, respectively. In the second stage, the selenide begins to be oxidized to form a metal oxide. The invariant activation energy and frequency factor (lnA) in the second stage are 222.81 kJ/mol and 25.90 1/sec, respectively. The determined most probable g() functions are g()=(1-)-2-1 for both stage.

UP COMING EVENTS

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

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Vision

Invests in creation of 21st century engineers and discovery of technologies through transformational center-based research, research in education and inclusion, and research opportunities for students and teachers.

Mission

To increase the diversity of the scientific and engineering workforce by including all members of society, regardless of race, ethnicity, or gender, in all aspects of the centers' activities. Because ESRDBs play critical roles in academe by integrating research, education, diversity, outreach, and industrial collaboration.

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