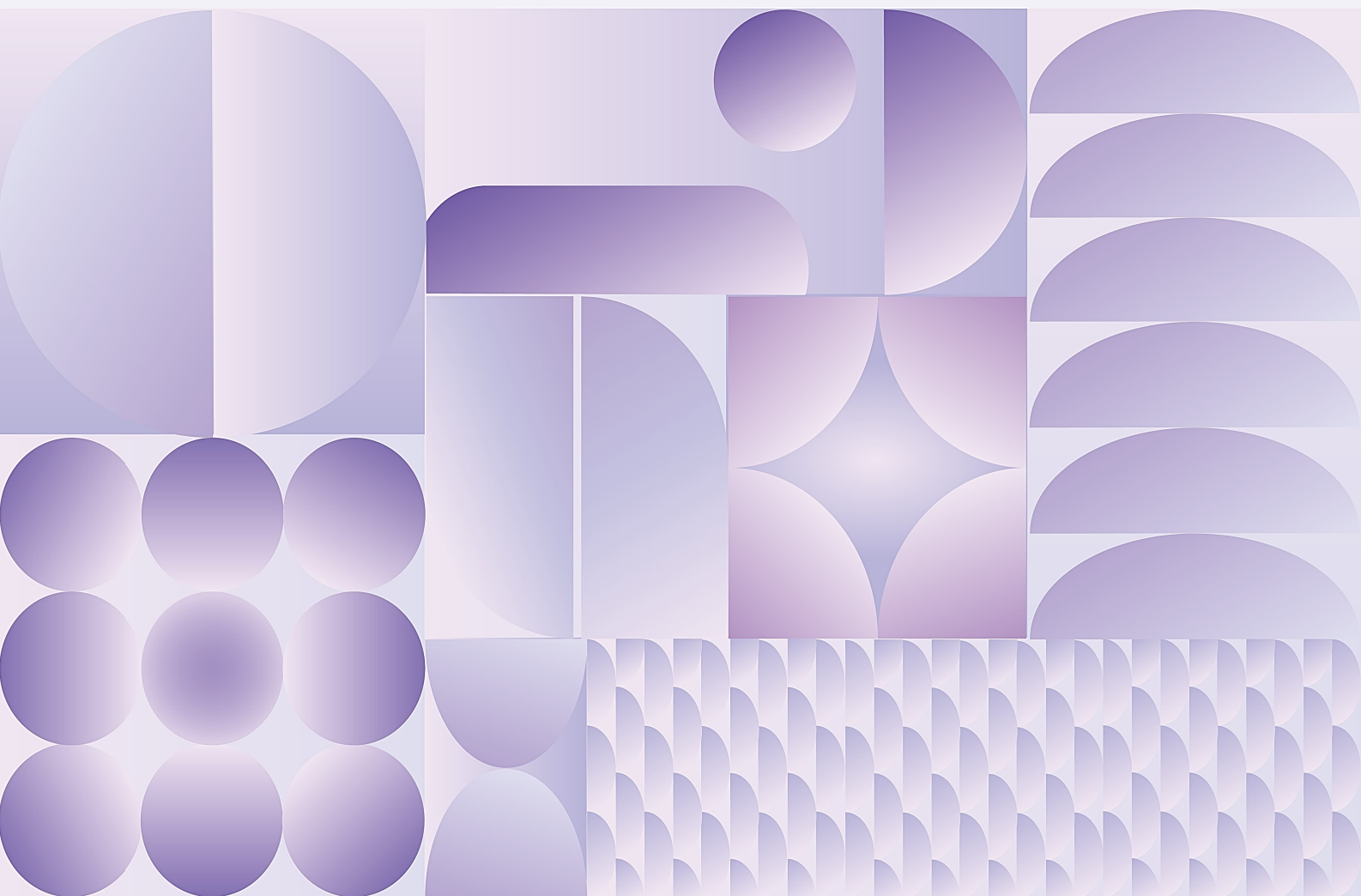


# Honours Project Symposium

# Abstracts Abstracts Abstracts

Academic year 2023/2024

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**SYMPOSIUM AGENDA**  
**Wednesday, April 24, 2024**  
**Honours College, University of Macau**

.....  
9:30 am - 12:50 pm ... Oral Presentation (Morning Session)  
Session A: *Room E12-1016*  
Session C: *Room E12-1017*  
Session E: *Room E12-1018*

1:00 pm ... Group photo-taking  
*E12 HC Lobby*

1:15 pm - 2:15 pm ... Lunch  
*Room E12-G025*

2:30 pm - 6:30 pm ... Oral Presentation (Afternoon Session)  
Session B: *Room E12-1016*  
Session D: *Room E12-1017*  
Session F: *Room E12-1018*

9:30 am - 6:30 pm ... Poster Exhibition  
*Room E12-G025*

.....  
***\*Please arrive at E12 HC Lobby 10 mins prior to your oral presentation schedule for registration***



## **Welcome Note from Dean and Programme Coordinator**

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Welcome to the Honours Project Symposium 2023/2024!

This Symposium is an opportunity for our final year Honours College students to present their individual research results on topics of their own disciplines with real life applications. The goal is to demonstrate their academic competence in the skills of research, comprehension, and analyses. The Symposium includes both the poster and presentation sessions.

Here, we would like to express our sincere congratulations to our students for the completion of your Honours Projects. We are confident that you have acquired the experience in going through the research process, having presented your work, and gained insights from the feedback from your peers and teachers. We would also like to convey our heartfelt gratitude to all our project advisors. No matter how intelligent and outstanding our students are, they will not have completed their projects without your relentless support and guidance. Thank you all for your contribution all along. We harbor our hope on your continuous support to build the successful history of the Honours College in the years to come.

**Rose Neng LAI**  
**Dean**

**Dennis Ping-Cheng WANG**  
**Programme Coordinator**

## Acknowledgement

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We would like to thank all Faculty Coordinators for their organizational work behind the scenes, such as their efforts to identify and match advisors for our students in their respective disciplines. We applaud the Honours College staff for their diligence in every detail of organizing this event. We could not have done it without you all!

We would also like to take this opportunity to thank the University of Macau for their commitment to the students of the Honours College.

In gratitude for all of our Project Advisors & co-advisors:

CAI Yongqing, IAPME	LAM Chi Chiu, FST	PAN Mi, FST
CAMPOS Paula Cristina Figueiredo, FAH	LEE Tien Tsung, FSS	REYNOLDS Barry Lee, FED
CHEANG Ka Ian, FSS	LEI Iek Man, FST	SAM Kin Meng, FBA
CHEN Bimmeng, IAPME	LEI Ka Meng, IME	SHEN Hongchuan, FBA
CHEN Can, FBA	LEI Siu Long, FST	TAM Hon Keung, FBA
CHEN Fangyuan, FBA	LEUNG Chung Hang, ICMS	TAM Kin Yip, FHS
CHI Peilian, FSS	LI Gang, FHS	TAO Yubo, FSS
CHING Ho-Hong, FED	LI Shaozhi, FBA	WONG Garry, FHS
CHU Teresa, FBA	LIAN Zhaotong, FBA	WONG Man Chung, FST
DIAS Ana Cristina, FAH	LIN Xin, FED	XIANG Yutao, FHS
FONG Hoc Nang, FBA	LIU Jiancheng, FBA	XING Guichuan, IAPME
FONG Simon James, FST	LIU Morris Ming, FBA	YANG Xi, FBA
GONG Shuaishuai, FBA	LIU Nai-Hua, FED	YEUNG Siu Kwai, FED
HO Ying, FBA	LU Chunhui, FAH	YU Shulin, FED
HONG Ze, FSS	MA Xiaorong, FBA	ZHANG Haoyun, ICI
HUANG Huiling, FBA	MING Chen, FHS	ZHANG Huiquan, FSS
IEONG Meng U, FSS	MOODY Andrew, FAH	ZHAO Guanfang, FAH
JATOBÁ Júlio Reis, FAH	NORONHA Carlos, FBA	ZU Yang, FSS
KIM Younhee, FAH	NUNES Mario, FAH	



## About the Symposium

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### **Presentation Information**

*Oral Presentation* – Each oral presentation should last for 15 minutes plus a 5-minute Question and Answer discussion session. Three parallel sessions are to be conducted.

*Posters Exhibition* – Posters are displayed in the exhibition room. The poster boards allow up to standard-sized posters printed in International Standard of A3 size (297mm X 420mm).

### **Honours Project Symposium Organizing Committee**

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LAI Neng, Rose, Dean, Honours College (HC)

WANG Ping Cheng, Dennis, Programme Coordinator and HC Faculty Coordinator for Faculty of Education (FED)

LEI Lai Cheng, Victoria, HC Faculty Coordinator for Faculty of Arts and Humanities (FAH)

VONG Pou Iu, Anna, HC Faculty Coordinator for Faculty of Business Administration (FBA)

ZHANG Hongjie, HC Faculty Coordinator for Faculty of Health Sciences (FHS)

NG Kei Kei, HC Faculty Coordinator for Faculty of Law (FLL)

HODGES, Benjamin Kidder, HC Faculty Coordinator for Faculty of Social Sciences (FSS)

MAK Peng Un, HC Faculty Coordinator for Faculty of Science and Technology (FST)



## Symposium Programme

Poster Exhibition • Room E12-G025 • 9:30 am - 6:30 pm

Group Photo-taking and Lunch • E12 Lobby • 1:00 pm - 2:15 pm

Oral Presentation (Morning Session) • Session A • Room E12-1016 • 9:30 am - 12:50 pm

- A-01 9:30 am *Portuguese Language within the Governance of Artur Tamagnini de Sousa Barbosa*  
**KAM I Lam**, Portuguese Studies, FAH
- A-02 9:50 am *Exploring the Relationship between Students' Attitude toward Translanguaging and English Language Proficiency in English-Medium Instruction (EMI) Setting*  
**SUN Zhuotong**, English Studies, FAH
- A-03 10:10 am *Exploring the Relationship Among L2 Speakers' Working Memory, Productive Vocabulary Diversity and Speech Fluency*  
**ZHOU Yushen**, English Studies, FAH
- A-04 10:30 am *The Development of English Education Policy in China (From 1983 to 2024)*  
**HOU Junyu**, English Studies, FAH
- A-05 10:50 am *Negotiation of Punchline in Storytelling in L2 English Conversation*  
**WANG Son Mei**, English Studies, FAH
- A-06 11:10 am *Florbela Espanca and the Portuguese Modernism*  
**CHAN Sam In**, Portuguese Studies, FAH
- A-07 11:30 am *The Hybrid Matrix of the Macaenses (Macanese): A Brief Survey and Analysis of the Sociocultural and Linguistic Stereotypes Prevailing in Texts Written in Patuá*  
**LEONG Fernandes Carlos Miguel**, Portuguese Studies, FAH
- A-08 11:50 am *Analysis of the Translation of the Cultural Words in O Meu Pé de Laranja Lima*  
**XU Qianyi**, Portuguese Studies, FAH
- A-09 12:10 pm *The Linguistic Landscape of Historic Center of Macao*  
**XIE Yuqing**, Portuguese Studies, FAH
- A-10 12:30 pm *The Choice of Master Course for Portuguese Students in Macau and the Reasons behind It*  
**ZHANG Mingzhu**, Portuguese Studies, FAH

## Symposium Programme

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### Oral Presentation (Afternoon Session) • Session B • Room E12-1016 • 2:30 pm - 6:30 pm

- B-01 2:30 pm *The Analects of Confucius: "Having Learned Something, to Try It Out at Due Intervals" Chapter Annotations in Past Dynasties and Its Contemporary Educational Significance*  
**CHAN Weng Chi**, Education (Chinese), FED
- B-02 2:50 pm *The Relation Between Growth Mindsets toward English Writing and the Perception of Written Corrective Feedback among Macau Secondary Students*  
**CHIO Ka Hou**, Education (English), FED
- B-03 3:10 pm *Understanding the Impact of Virtual Influencers on Guest Decision-Making: Insights for Managerial Decision-Making*  
**DEMYANOVICH Dana**, International Integrated Resort Management, FBA
- B-04 3:30 pm *Exploring Teachers' Utilization of Adjustments to Support the Learning and Assessment Needs of Students with Disabilities: A Cross-Regional Analysis between Eastern and Western Regions of China*  
**WANG Yizhu**, Education (English), FED
- B-05 3:50 pm *Reading Vocabulary Levels Mastery in Relation to CEFR: Implications for Student Admissions and English as a Medium of Instruction*  
**LI Zhiyou**, Education (English), FED
- B-06 4:10 pm *Mastery of Listening Vocabulary Level in Relation to CEFR: Insights into Student Admissions and English as a Medium of Instruction*  
**LI Zhiqing**, Education (English), FED
- B-07 4:30 pm *Parental Involvement in English Language Learning in Macau*  
**KUONG Weng I**, Education (English), FED
- B-08 4:50 pm *Investigating English Teachers' Understanding of Feedback and Assessment Policies and Regulations in Macau*  
**CHEANG Ka I**, Primary Education, FED
- B-09 5:10 pm *Enhancing Corporate Bond Factor Construction*  
**CHEN Junyi**, Economics, FSS
- B-10 5:30 pm *Evaluating Economic Forecast*  
**WANG Yale**, Economics, FSS
- B-11 5:50 pm *The Shortage of Qualified Translators for Domestic Workers during Labor Disputes*  
**TANG Cheok Man**, Government And Public Administration, FSS
- B-12 6:10 pm *The Problems of the 2023 Talent Recruitment Policy in Macao SAR*  
**LAI Cheuk Yin**, Government And Public Administration, FSS

## Symposium Programme

### Oral Presentation (Morning Session) • Session C • Room E12-1017 • 9:30 am - 12:50 pm

- |      |          |  |
|------|----------|--|
| C-01 | 9:30 am  | <i>The Power of Concept Momentum: Evidence from China's A-Shares</i><br><b>YIN Qinkai</b> , Finance, FBA   |
| C-02 | 9:50 am  | <i>A Study of the Financial Performance of Market Participants Committed to the Environmental Social and Governance (ESG) Framework</i><br><b>LI Zhijie</b> , Finance, FBA |
| C-03 | 10:10 am | <i>Assessing the Impact of the Russian-Ukrainian War's Energy Crisis on European Energy Companies: A Comparative Study</i><br><b>FAN Tingxuan</b> , Finance, FBA           |
| C-04 | 10:30 am | <i>Factor Model in Cryptocurrency Market</i><br><b>DU Yuxin</b> , Finance, FBA   |
| C-05 | 10:50 am | <i>Green Mergers and Acquisitions in Energy Sector's Companies Their Value Creation Impact on Stock Price</i><br><b>LAM Chi Kin</b> , Finance, FBA                         |
| C-06 | 11:10 am | <i>Machine Learning Approaches to Predict the Netflix APP Ratings</i><br><b>CHEN Xinyu</b> , Business Intelligence And Data Analytics, FBA                                 |
| C-07 | 11:30 am | <i>The Effect of ESG Performance on Financial Performance in Healthcare Industry in Asia</i><br><b>GUERRA Viana</b> , Accounting, FBA                                      |
| C-08 | 11:50 am | <i>A Research on the Current Situation of Senior Kindergarten Teachers' Feelings on Professional Burnout in Macau</i><br><b>VONG Hao Lam</b> , Pre-Primary Education, FED  |
| C-09 | 12:10 pm | <i>The Impact of the Application of Artificial Intelligence Chat-Bot on Consumers in the Luxury Goods Industry</i><br><b>LIU Zhenji</b> , Marketing, FBA                   |
| C-10 | 12:30 pm | <i>Research on the Influencing Factors and Strategies of Chinese TV Series "Going Out"</i><br><b>HE Suixin</b> , Marketing, FBA  |

## Symposium Programme

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### Oral Presentation (Afternoon Session) • Session D • Room E12-1017 • 2:30 pm - 6:10 pm

D-01	2:30 pm	<i>ESG Disclosure Mandate and Corporate Investment Decisions</i> <b>SHAN Linya</b> , Accounting, FBA
D-02	2:50 pm	<i>The Relationship between Management Forecasts and Equity Analyst Coverage</i> <b>LI Zhujin</b> , Accounting, FBA
D-03	3:10 pm	<i>Assessing Environmental and Social Disclosure Compliance: A Comparative Analysis of Energy and Utilities Industries Among Hong Kong Listed Companies</i> <b>LEI Chi Sin</b> , Accounting, FBA
D-04	3:30 pm	<i>Ownership and Performance: Exploring the Relationship between Ownership Types and Profitability and Dividends Paid-out Rate within the Healthcare Industry in Hong Kong</i> <b>TAN NGO Shi Khai</b> , Accounting, FBA
D-05	3:50 pm	<i>Optimizing Parkinson's Disease Diagnosis: Cost-Effectiveness Analysis of Non-CSF Biomarker Selection Strategies</i> <b>JIA Zhiqi</b> , Accounting, FBA
D-06	4:10 pm	<i>Decoding Senses and Message Strategies in Virtual-Influencer Marketing</i> <b>HUANG Linqian</b> , International Integrated Resort Management, FBA
D-07	4:30 pm	<i>How the Contribution to Non-Gaming Factors Affect the Overall Profitability of Macau's Gaming Industry</i> <b>YAM Yu Liang</b> , Accounting, FBA
D-08	4:50 pm	<i>Effectiveness of Food Waste Reduction Interventions in Restaurant: A Customer Perspective</i> <b>NG Cheng U</b> , International Integrated Resort Management, FBA
D-09	5:10 pm	<i>Comparative Analysis of Mean Reversion and Momentum Strategies for Cryptocurrencies in High Market Capitalization: A Buy and Hold Benchmark Study</i> <b>CHONG Nga Man</b> , Business Intelligence And Data Analytics, FBA
D-10	5:30 pm	<i>An Empirical Study of the Influence of Big Data Analytics on Consumer Behavior in E-commerce</i> <b>LOU Lok I</b> , Business Intelligence And Data Analytics, FBA
D-11	5:50 pm	<i>Comparative Analysis of Tax Implications for Start-up Companies in Malaysia, Singapore, Macau, and Hong Kong</i> <b>CHAN Ren Chern</b> , Accounting, FBA

## Symposium Programme

### Oral Presentation (Morning Session) • Session E • Room E12-1018 • 9:30 am - 12:50 pm

- E-01 9:30 am *The Transmission Layer Matching System of Perovskite Optoelectronic Devices is Developed based on Existing Database and Neural Network*  
**ZENG Ge**, Applied Physics And Chemistry, FST
- E-02 9:50 am *Fabrication of Nano-encapsulated Phase Change Material for Heat Control*  
**CHUI Teng Hei Desmond**, Applied Physics And Chemistry, FST
- E-03 10:10 am *Sustainable Campus Assessment and Development of the University of Macau*  
**WANG Zixuan**, Civil Engineering, FST
- E-04 10:30 am *Urban Planning for Zone C in Macau*  
**CHAN Nga Lai**, Civil Engineering, FST
- E-05 10:50 am *Charge Recycling For CMOS Ring Oscillator in Ultra-Low Voltage IoT Applications*  
**ZHANG Peirui**, Electrical And Computer Engineering, FST
- E-06 11:10 am *Parallel Miniaturized Rotational Probe for Expedited Magnetic Field Mapping*  
**MIAO Yuxuan**, Electrical And Computer Engineering, FST
- E-07 11:30 am *Non-intrusive Smart Meter Application on Residential College*  
**AO IEONG Weng Chi**, Electrical And Computer Engineering, FST
- E-08 11:50 am *Development of a Customizable Soft Material Printer for Advanced Functional Material Fabrication*  
**JIANG Dechao**, Electromechanical Engineering, FST
- E-09 12:10 pm *Butterfly Effect Inference Forecasting (Beif): A Synergistic Approach to Augmented Topic Modeling in Text Mining*  
**LI Geyue**, Mathematics, FST
- E-10 12:30 pm *Image Encryption and Decryption through Toeplitz Matrix*  
**SAM Ka Tai**, Mathematics, FST

## Symposium Programme

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### Oral Presentation (Afternoon Session) • Session F • Room E12-1018 • 2:50 pm - 6:10 pm

- F-01 2:50 pm *Analysis of Females' Escape on Social Media: A Case Study of Hashtag on Xiaohongshu as A Female Self-protection*  
**CHEN Yifan**, Communication, FSS
- F-02 3:10 pm *The Intercultural Adaptation of Macau Students Studying Abroad*  
**MAK Weng Tong**, Communication, FSS
- F-03 3:30 pm *Exploring Psychological Distress and Resilience in Parents of Children with Special Educational Needs in Macau: A Comparative Study*  
**LIO Iat Cheng**, Psychology, FSS
- F-04 3:50 pm *The Cultural Evolution of Ghost in Chinese Classics*  
**LIANG Haoran**, Sociology, FSS
- F-05 4:10 pm *Brothers and Dropout Risks among Girls in China: How Does Marketization Matters?*  
**FANG Ge**, Sociology, FSS
- F-06 4:30 pm *Prediction of AMPK Substrates*  
**JIANG Zhihui**, Bioinformatics, FHS
- F-07 4:50 pm *Gene Co-Expression Network of AD Patients*  
**CAI Yicheng**, Bioinformatics, FHS
- F-08 5:10 pm *Prevalence of Internet Addiction in Chinese University Students: A Meta-Analysis And Bibliometric Analysis*  
**ZHENG Xin**, Biomedical Sciences, FHS
- F-09 5:30 pm *Dietary Patterns Associated with Body Mass Index (BMI) and Lifestyle in Students in University of Macau*  
**LU Bei**, Biomedical Sciences, FHS
- F-10 5:50 pm *Development of SET7/9 Inhibitor for the Reduction of Inflammation in Rheumatoid Arthritis*  
**CHANG Mei Ian**, Biomedical Sciences, FHS



Oral Presentation (Morning Session) • Session A • Room E12-1016 • 9:30 am - 12:50 pm

### **A-01 Portuguese Language within the Governance of Artur Tamagnini de Sousa Barbosa**

**KAM I Lam**, Portuguese Studies, FAH

**Advisor:** CAMPOS Paula Cristina Figueiredo, FAH

With the growing interaction between China and the Portuguese-speaking countries, Portuguese has become popular for language learners within China. The increased interest in Portuguese Studies has produced numerous cooperative research in the fields of linguistic and literary studies. Macau, known as the last Portuguese colony in the world, based on its unique history, it has a strong connection to Portugal. Meanwhile, the influence from Portuguese is extremely visible in this small city, such as in architecture, painting, cuisine, language and toponyms. In this study, we will focus on the use of the Portuguese language within the periods of the government of Artur Tamagnini de Sousa Barbosa, in order to elaborate on the political initiatives that promoted the use of the language and improved teaching so that students could gain access to education. During the research, it is understood that the governor's actions towards education were never unpractical, several decisions have an impact on the present educational landscape of Macau. Hence, we hope to further deepen knowledge about Macau's linguistic landscape, as well as its development throughout the history, based on published studies and documentation, to serve as foundations for further research.

## Abstracts

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### **A-02 Exploring the Relationship between Students' Attitude toward Translanguaging and English Language Proficiency in English-Medium Instruction (EMI) Setting**

**SUN Zhuotong**, English Studies, FAH

**Advisor:** ZHAO Guanfang, FAH

Amidst the growing demand for internationalization in universities to align with the needs of globalization, an escalating number of universities in non-English-speaking regions are embracing English-Medium Instruction (EMI). Nonetheless, the implementation EMI and its efficacy are influenced by the English language proficiency and multilingualism dynamics among teachers and students. Translanguaging, thus, is considered as one of the effective strategies to the multilingual situation that are garnering increased interest. However, existed studies about translanguaging focus more on the teachers' side such as translanguaging teaching pedagogy and teacher's training, with less attention to students' perspective. This study investigated the relationship between students' perceptions of translanguaging practice and their English proficiency in EMI higher education setting, utilizing an online questionnaire to collect data from students at a Macau university. Quantitative analyses were used to examine the extent to which students' perceptions of translanguaging is associated with their English proficiency. The study elucidated students' attitudes towards and experiences with translanguaging and revealed the interaction between students' perceptions of translanguaging and their English language proficiency, which contributes to the empirical foundation of translanguaging pedagogy and provides language educators and policy makers with information about effective strategies for utilizing students' linguistic repertoire to promote English acquisition in multilingual contexts.

### **A-03 Exploring the Relationship Among L2 Speakers' Working Memory, Productive Vocabulary Diversity and Speech Fluency**

**ZHOU Yushen**, English Studies, FAH

**Advisor:** ZHAO Guanfang, FAH

**Co-advisor:** ZHANG Haoyun, ICI

Working memory (WM) and vocabulary knowledge are critical elements contributing to speech fluency. As such they have received much attention in empirical investigations into L1 speaking abilities. However, fewer studies tested the relationship among the three elements in L2 settings. Among these studies, most ignored the multiple dimensions of speech fluency, as well as the congruence in test format when assessing vocabulary and speaking skills. To fill the gap, this study aims to explore the extent to which working memory and aural productive vocabulary diversity influence L2 learners' speech fluency (including speed fluency, breakdown fluency and repair fluency), and whether there is any relationship among the three variables. A total of 77 English as a foreign language (EFL) Chinese learners participated in the study. They first completed a backward digit span test (BDST) measuring their working memory, then produced a spontaneous speech in a topic narration task, based on which aural vocabulary diversity and three types of speech fluency were assessed. Correlation and regression analyses were conducted to explore the potential associations among the three variables. The results would be discussed in the light of previous studies, which suggested no relationship between L2 speech fluency and WM. Hence, it may point out the possible directions for future study in L2 acquisition. Meanwhile, this study provided methodological and practical implications in testing speech fluency and aural vocabulary diversity. It would also contribute to improving the pedagogical strategies for effective L2 teaching and learning.

## Abstracts

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### A-04 The Development of English Education Policy in China (From 1983 to 2024)

**HOU Junyu**, English Studies, FAH

**Advisor:** MOODY Andrew, FAH

The research will explore the changes and developments of the English education policies in China, especially focus on the period from 1983 to 2024. 1983 was the year that China included English as a major subject in the college entrance examination which is considered as the most important test for Chinese students. Initially, the policy that confirmed and enhanced of the status of English education was related to China's need to integrate with international standards and comply with the trend of globalization. In recent years, with the changes in the international situation and the development of China's economy, discussions on cultural identity have pointed at today's English education policies and attempted various reforms. Coupled with the "double reduction policy" to reduce the burden on students, China's English education situation has also been greatly affected. This research will explore such changes and try to discuss the factors that lead to the changes, how the specific provisions reflect this policy change and the possible impact of the policies.

### **A-05 Negotiation of Punchline in Storytelling in L2 English Conversation**

**WANG Son Mei**, English Studies, FAH

**Advisor:** KIM Younhee, FAH

The communication process primarily consists of verbal expression and attentive listening, which encourages the participants to articulate their views and elicit reactions from others, thereby facilitating the natural occurrence of storytelling during the conversation. Given that conversation is a primary site where storytelling arises and takes place, this study takes a conversational analysis approach to examine interactive organization of storytelling among three L2 English speakers. First, this study aims to examine how the punchline of the story is negotiated and constructed in interaction. Second, by examining L2 English speakers' data, the study is interested to see if there is any potential difference in storytelling performances by L2 speakers. To investigate the specific turn-taking performances of the speakers, three participants were recruited for audio data recording sessions where they were encouraged to engage with each other and discuss predetermined topics. The study aims to shed light on the various modalities of storytelling by analyzing the participants' implementation performance, providing valuable insights into the nature of storytelling for potential application in L2 teaching environments.

## Abstracts

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### A-06 Florbela Espanca and the Portuguese Modernism

**CHAN Sam In**, Portuguese Studies, FAH

**Advisor:** DIAS Ana Cristina, FAH

This paper discusses the literary-aesthetic values of the work of the Portuguese poet, Florbela Espanca, emphasizing new aspects that have been ignored or distorted by the critics for long time, such as eroticism, the search of identity and the deep connection with Portuguese Modernism. These aspects are marked by the “poetic pretence”, by the use of masks and by a theatrical and fictional nature, that place the author among the greatest contemporary Modernists.

**Keywords:** Florbela Espanca; Portuguese Modernism; Romanticism; Portuguese Modernists

### **A-07 The Hybrid Matrix of the Macaenses (Macanese): A Brief Survey and Analysis of the Sociocultural and Linguistic Stereotypes Prevailing in Texts Written in Patuá**

**LEONG Fernandes Carlos Miguel**, Portuguese Studies, FAH

**Advisor:** NUNES Mario, FAH

The objective of this work is to provide a brief introduction to some socio-cultural and linguistic aspects of the Macanese community in Macau. To this end, I will talk about the provenance and formation of the community at its origin (from 1557 onwards), the genesis of Patuá Creole, also explaining some of its grammatical characteristics. Next, to better illustrate some of the socio-cultural aspects that have been systematically stereotyped in sources written in Patuá, I will carry out a qualitative annotated analysis of satirical style letters and some examples extracted from theater plays published at the end of the 19th century, in Barreiros (1943/44), focusing on the social stereotypes portrayed in them. I will consider these stereotypes as representative of the community's self-consciousness of its cultural and linguistic hybridity and how it placed itself and the remaining communities in Macau between the end of the 19th century and beginning of the 20th century.

## Abstracts

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### A-08 Analysis of the Translation of the Cultural Words in *O Meu Pé de Laranja Lima*

XU Qianyi, Portuguese Studies, FAH

Advisor: JATOBÁ Júlio Reis, FAH

Recently, there has been increasingly interest in the translation of cultural words. However, studies on the translation of cultural words from Portuguese into Chinese have not been found. This paper analyzes the translation of cultural words in the Brazilian book *O Meu Pé de Laranja Lima*, by José Mauro de Vasconcelos. Our general aim is to find out which translation techniques are used for cultural words and whether the techniques are appropriate. To achieve this, we collected examples from the original text and the Chinese version, carried out a case study, commented translation and categorization of the translations. Finally, we hope that the results will contribute to future studies and practices on the translation of cultural words.



### **A-09 The Linguistic Landscape of Historic Center of Macao**

**XIE Yuqing**, Portuguese Studies, FAH

**Advisor:** JATOBÁ Júlio Reis, FAH

For over 400 years, Macao has been under Portuguese administration. As a platform for linguistic and cultural exchanges between China and the West, Macao plays an important role in forming its unique linguistic landscape. The influence of Portuguese, which is one of the official languages, English as a language of communication, and Cantonese and Mandarin reflect this historical heritage and the interaction between different linguistic communities. Taking into account the unique context of Macau, the aim of this paper is to analyze the linguistic landscape in the Historic Center of Macao, which provides us with a better understanding of the use of languages in society as well as the vitality of the Portuguese language under Macau's language policy. The methodology used for the study includes quantitative analysis and fieldwork, which also contributes to an insight into the problems that exist in the linguistic landscape of this historic center. The study found that most of the signs are written in a mixture of Chinese, Portuguese and English. It also showed that Chinese is the dominant language in this historic center. Portuguese, although spoken by very few inhabitants, has an indispensable status. In order to adapt to the wave of globalization, English is widely used. However, there are some problems, such as inadequate Portuguese translation, which is expected to be improved.

## Abstracts

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### **A-10 The Choice of Master Course for Portuguese Students in Macau and the Reasons behind It**

**ZHANG Mingzhu**, Portuguese Studies, FAH

**Advisor:** LU Chunhui, FAH

The study is based on the research about the choice of master course and the motivations behind it for students of Portuguese as a foreign language (PLE) in Macau. It was precisely since 2005 that more Portuguese courses were set, whereas before there were only three universities in mainland China. At the same time, the employment market in China is becoming increasingly competitive and there are difficulties in finding a job. Considering the growing tendency in Chinese students' choice of master course and the competitive employment market in all walks of life in China, we mainly researched the approximate proportion of undergraduate students who intend to do a master's degree and the motivations behind this choice. In addition, with the political, economic and historical background of the Macau Special Administrative Region, we found a difference in the choice of master's degree and even career path between students from Mainland China and those from Macau. In order to clarify this issue of dissimilarity, it is essential to carry out a careful comparison of these two groups, contextualizing the analysis of the labor market, regional characteristics and conventional traditions of the two regions. In addition, we analyze the characteristics and advantages of PLE students when entering the employment market.

Oral Presentation (Afternoon Session) • Session B • Room E12-1016 • 2:30 pm - 6:30 pm

**B-01 The Analects of Confucius: "Having Learned Something, to Try It Out at Due Intervals" Chapter Annotations in Past Dynasties and Its Contemporary Educational Significance**

**CHAN Weng Chi**, Education (Chinese), FED

**Advisor:** YEUNG Siu Kwai, FED

The chapter “Having Learned Something, to Try It Out at Due Intervals” is the first chapter of the Analects of Confucius. It is an important material for the study of Confucius’ thought, so it is necessary to deeply explore the literal and spiritual meaning of this chapter. This article aims to focus on the word “learned” and delve into the meaning of “having learned” based on historical annotations and the text of the Analects of Confucius. By examining the annotations of the past dynasties, we can clarify the interpretations of this chapter by thinkers in each dynasty. From this, we can know that “have learned” leads to the learning state of “happiness”, which will help us understand Confucius’ teaching intention and Confucianism. In addition, the essence of Confucius’ teachings is practicality, emphasizing the application of what one has learned. As a classic that has been passed down for thousands of years, the Analects of Confucius still has the value of serving ancient and modern times. Through this chapter, we get a glimpse of Confucius’s learning spirit and connect it with practical significance. By sorting out a teaching method that combines learning and practice, it can help stimulate students’ subjective initiative in learning and help them understand the meaning of life and the importance of spiritual enrichment.

## Abstracts

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### **B-02 The Relation Between Growth Mindsets toward English Writing and the Perception of Written Corrective Feedback among Macau Secondary Students**

**CHIO Ka Hou**, Education (English), FED

**Advisor:** CHING Ho-Hong, FED

Drawing on Dweck's (2000) theory of motivation, the current study investigated the relations between language learners' implicit theories of writing intelligence and their orientation toward written corrective feedback (WCF). A questionnaire was developed based on previous studies and administered to 261 English as a Second Language (ESL) learners at a secondary school in Macau, China. The questionnaire included items measuring learners' implicit theories of L2 writing intelligence, orientation toward WCF, general effort belief (Effort vs Ability), effort belief in L2 writing, general ability flexibility, and ability flexibility in L2 writing. Using latent profile analysis, I identified three distinct mindset groups, namely low-flexibility, moderate flexibility, and high-flexibility profile. Results showed that individuals in different profiles did not differ significantly in attitude toward WCF. Pedagogical implications and future research directions are discussed.

### **B-03 Understanding the Impact of Virtual Influencers on Guest Decision-Making: Insights for Managerial Decision-Making**

**DEMYANOVICH Dana**, International Integrated Resort Management, FBA

**Advisor:** HUANG Huiling, FBA

The trend of using Virtual influencers (VIs) in tourism marketing is increasing though the information on how they influence guests' decisions is insufficient. This study aims to investigate the key variables influencing user engagement with VIs in the context of tourism promotion. Following the uncanny valley theory and the elaboration likelihood model, this research focuses on how the perceived human-likeness and content characteristics of VIs influence user responses and their decision-making processes. This study will also explore the subjective personality attributes of VIs and the impact they have on a destination's potential visitors' intentions. Through the conduction of online interviews, this study will obtain the information about their motivations, attitudes, and behaviors towards VIs in tourism marketing. The findings will be an information source for tourism marketers to use when implementing VIs to attract the desired target audiences and influence the customer decision-making. This research will contribute to the growing literature on VIs, as well as provide a foundation for the tourism industry for working with this new technology.

## Abstracts

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### **B-04 Exploring Teachers' Utilization of Adjustments to Support the Learning and Assessment Needs of Students with Disabilities: A Cross-Regional Analysis between Eastern and Western Regions of China**

**WANG Yizhu**, Education (English), FED

**Advisor:** LIN Xin, FED

Implementing adjustments is considered crucial in learning lives of students with disabilities, providing them better access to learning opportunities. Adjustments to classroom learning, classroom assessment, and public testing are recognized as significant for integrating students with disabilities into academic life. It is widely believed that attention towards disabled students was imbalance between the Eastern and Western regions. I used the Checklist of Learning and Assessment Adjustments for Students (CLAAS) to examine the frequency of adjustments made by 32 teachers from the western region of China and 84 teachers from the eastern region, including both regular and special education elementary schools. The findings revealed a significantly greater emphasis on students with disabilities in schools from the eastern region compared to those in the western region. Yet, our findings indicated minimal differences in the frequency of adjustment use between teachers in the eastern and western regions. Moreover, adjustments were more commonly used in classroom teaching than in public testing. This study illustrates the disparities in attention given to students with disabilities and the implementation of adjustments in various regions of mainland China, providing valuable insights for teachers' professional development.

### **B-05 Reading Vocabulary Levels Mastery in Relation to CEFR: Implications for Student Admissions and English as a Medium of Instruction**

**LI Zhiyou**, Education (English), FED

**Advisor:** REYNOLDS Barry Lee, FED

This quantitative case study investigates the potential discrepancy between students' language proficiency exhibited on standardised international language tests, and their learning performance in an EMI context. It draws attention to the lack of research on the extent to which these tests predict students' vocabulary levels mastery related to their academic fields. This study intends to bridge this research gap by exploring the relationship between students' CEFR levels and their vocabulary levels mastery. Previous studies (Reynolds et al., 2022, 2023) have highlighted the necessity of mapping these two levels of students; however, the foci were limited to vocabulary size which failed to compare students' vocabulary knowledge profiles to the lexical difficulty levels of academic programmes comprehensively. This study recruits non-native English-speaking year-1 and year-4 students from multiple disciplines in a Macau EMI university to take an English proficiency test and a vocabulary test of UVLT. Descriptive statistics and correlation analysis will be conducted to depict students' English proficiency levels and vocabulary levels mastery, as well as the relationship between the two levels. The findings of this study aim to offer insights to EMI universities in setting language proficiency and lexical standards for student admissions and to educators in giving EMI lectures.

## Abstracts

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### **B-06 Mastery of Listening Vocabulary Level in Relation to CEFR: Insights into Student Admissions and English as a Medium of Instruction**

**LI Zhiqing**, Education (English), FED

**Advisor:** REYNOLDS Barry Lee, FED

This quantitative case study addresses the potential discrepancy between students' ability in comprehending lectures in an English as a medium of instruction (EMI) setting and their language proficiency demonstrated in language tests submitted for the university admission. Lexical knowledge is important in EMI learning. However, there is a lack of research on the relationship between language tests and students' ability to cope with the lexical demands of their disciplines (Deygers et al., 2018). Additionally, studies examining the relationship between vocabulary size and the Common European Framework of Reference for Languages (CEFR) levels primarily focused on written receptive vocabulary. This study aims to fill the gap by investigating the relationship between aural receptive vocabulary knowledge and English proficiency mapped to CEFR levels. 20 Year 1 and 20 Year 4 Chinese EFL students were recruited in a public university in Macau to sit an English proficiency test, the Updated Vocabulary Levels Test (Webb et al., 2017), and the Listening Vocabulary Level Test (McLean et al., 2015). Descriptive statistics will be conducted to assess students' proficiency in vocabulary levels and English language proficiency. Subsequently, correlation analysis will be performed to examine the relationship between vocabulary level mastery and CEFR level. Consequently, this study aims to draw implications for EMI universities in establishing language proficiency and lexical mastery requirements for student admissions and for educators delivering EMI lectures.



### **B-07 Parental Involvement in English Language Learning in Macau**

**KUONG Weng I**, Education (English), FED

**Advisor:** YU Shulin, FED

While it has been widely known that parental involvement is crucial for academic success, the impact of parental involvement on children's English language learning has been rarely discussed, especially in research studying parental involvement in Macau. Therefore, this paper explores Macau parents' parental involvement in their children's English language learning and highlights the ways that Macau parents support their children's English language development and how their different styles of parental involvement influence children's English learning. As English is learned as a foreign language in Macau, this study also investigates whether there are barriers or limitations that Macau parents face when supporting their children's English learning and if there is any, in what ways parents try to cope with them. Based on the qualitative data collected through questionnaires and interviews with 10 parents of primary or secondary students, the current state of parent involvement is presented. Findings suggest that parents are involved in supporting their children's English literacy development in a variety of ways, yet there are limitations and barriers for parents to support their children's English language development.

## Abstracts

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### **B-08 Investigating English Teachers' Understanding of Feedback and Assessment Policies and Regulations in Macau**

**CHEANG Ka I**, Primary Education, FED

**Advisor:** YU Shulin, FED

Providing effective feedback and assessment has been a heated topic in the educational field, as it is essential to facilitate learning development and consistency. However, the awareness and implementation of the related policies and regulations by English teachers in Macau remain relatively unexplored. This study aims to investigate several issues, including the level of awareness of the policies, interpretation of the concepts, implementation of feedback and assessment, challenges faced during implementation, and professional suggestions on the issue. To collect qualitative data regarding the issues, interviews, metaphorical pictures, and the collection of teaching materials among ten local English teachers were conducted. The interview focused on the insights and personal experiences of teachers regarding giving feedback and conducting assessments in the classroom. The findings revealed a relatively low level of familiarity with related policies and several challenges faced by local teachers, including time constraints, a heavy workload of teachers, and a large class size. The study's main conclusion emphasizes two central needs to improve the current concerns in Macau. First, more resources on professional development for giving efficient feedback and assessment should be put in. Second, the policies and regulations in Macau's education system should be enhanced to support teachers' adequate implementation.

### **B-09 Enhancing Corporate Bond Factor Construction**

**CHEN Junyi**, Economics, FSS

**Advisor:** TAO Yubo, FSS

This paper studies the replication crisis in corporate bond research. Traditional approaches relying on ad hoc bond ratings for factor construction have led to significant replication failures, with only a few bond factors demonstrating consistent effectiveness. We refine the factor construction process by first employing several state-of-the-art clustering algorithms (e.g., k-means, DBSCAN, Gaussian Mixture Model, etc.) to classify the bonds based on their return performances in the past three years, circumventing the inaccuracies introduced by rating lags and the use of potentially outdated information. Then, we construct 22 factors widely adopted in the literature based on the estimated bond clusters and re-examine the corporate bond return predictability. We find that the momentum, among all the factors, can consistently predict corporate bond returns and generate significantly positive risk premiums across different classification methods.

### **B-10 Evaluating Economic Forecast**

**WANG Yale**, Economics, FSS

**Advisor:** ZU Yang, FSS

Prediction accuracy is a fundamental component of economic predictive modeling, which includes understanding prediction mistakes, selecting appropriate loss functions, and evaluating approaches. This paper presents a complete overview of prediction accuracy evaluation. It starts with remarks about the necessity of forecasting, and states the value of using appropriate loss. The evaluation of forecasts is considered with a focus on using evaluation criteria functions like Mean Squared Error (MSE) and Mean Absolute Error (MAE) to measure the performance of forecasts. Furthermore, this paper provides a full introduction of the Diebold-Mariano test (DM test), which compares forecast accuracy among competing models. Researchers and practitioners can effectively assess the accuracy and reliability of prediction models by systematically examining forecast errors, choosing related loss functions, and using efficient evaluation techniques such as the DM test, thereby improving decision-making processes in fields ranging from finance to meteorology. This paper contributes to the knowledge and application of forecast accuracy assessment approaches, allowing for more efficient model selection and refining to improve prediction accuracy.

### **B-11 The Shortage of Qualified Translators for Domestic Workers during Labor Disputes**

**TANG Cheok Man**, Government And Public Administration, FSS

**Advisor:** IEONG Meng U, FSS

This research investigates language barriers among Macau's domestic workers during labor disputes, especially those with limited proficiency in both Chinese and Portuguese. My objectives are threefold:

1) Assess the language barriers:

(a) What proportions of the interviewed workers have encountered language barriers?

(b) What types of labor disputes do they encounter?

(c) Is the barrier experienced differently across nationality?

(d) What proportion received prior language training, from either agencies or education institutes?

2) Assessing the impact of this barrier on dispute resolution:

(a) Did the Labor Affairs Bureau (DSAL) attempt to address translation issues?

(b) Was it difficult to find a qualified translator that spoke the same language?

(c) To what extent did language barrier delay or hinder a resolution?

3) to explore policies to improve access to translation. My methodology is to conduct a survey and semi-structured interview among domestic workers ( $n \geq 30$ ) using the non-random snowball sampling method. Additionally, I will critically review existing literature on labor laws, workers' rights and language services in a similar context to offer practical solutions informed by the public administration discipline.

### **B-12 The Problems of the 2023 Talent Recruitment Policy in Macao SAR**

**LAI Cheuk Yin**, Government And Public Administration, FSS

**Advisor:** IEONG Meng U, FSS

In Macao, there is a long-standing social problem due to its small size of total population and the ageing population, which is the labor shortage. Recruiting foreign workers to fill the labor shortage is not a new topic to Macao society, Macao government has released the legal regulations about importing foreign workers as the supplementary labor since 1988. In the upcoming years, the scheme of “Investment Immigration” in 1995, “Technical Immigration” in 2005 were introduced by the government. In order to facilitate the implementation of the “1+4” industry strategy development, which is introduced in Macao 2023 Policy Address, the Talent Recruitment System of Macao to the public with three specific programmes were introduced in May 2023. And the Law No. 7/2023 “the Legal System for Talent Recruitment” was in force on 1 July 2023. Talent acts as an important role in developing the economy, it has discussed lively around world. Under the intense global competition for talents, the talent recruitment system should be “attractive” enough to recruit the best talents. Therefore, this essay also uses the comparative study with Hong Kong’s talent recruitment to find out the problems of Macao’s.

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Oral Presentation (Morning Session) • Session C • Room E12-1017 • 9:30 am - 12:50 pm

### **C-01 The Power of Concept Momentum: Evidence from China's A-Shares**

**YIN Qinkai**, Finance, FBA

**Advisor:** GONG Shuaishuai, FBA

The momentum effect, first found by Jegadeesh and Titman in 1993, involves selecting a pool of stocks and constructing a portfolio by taking long positions on top-performing stocks and short positions on bottom-performing stocks. This approach has been shown to generate significant returns. In the early 2000s, scholars began studying the momentum effect in China's equity market. The results indicated that China has a short-term momentum effect but a reversal effect in the long term. Many empirical studies have focused on individual-level and industry-level momentum. However, the concept stocks, which represent a group of currently popular stocks that are actively chased by the market, have received little attention from scholars. Compared to industry-level studies, analyzing concept momentum can provide the investor with a more accurate categorization of stocks, which can provide investors with more practical investment choice. This paper aims to examine whether concept stocks exhibit the momentum effect. By utilizing data from the WIND Concept Stock Index, stocks are categorized into 298 different concepts. The main conclusion of this study is that there is a significant return associated with the concept momentum strategy in the A-Share market. This abnormal return is attributed to unique behavioral traits of Chinese investors, such as short holding periods and chasing returns when stocks rise.

**Keywords:** Concept Stocks, Momentum Effect, Behavioral Finance, Momentum Strategy

## Abstracts

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### **C-02 A Study of the Financial Performance of Market Participants Committed to the Environmental Social and Governance (ESG) Framework**

**LI Zhijie**, Finance, FBA

**Advisor:** TAM Hon Keung, FBA

The objective of this study is to explore the impact of implementing an Environmental, Social and Governance (ESG) framework at the corporate level on financial performance. With the increasing global spotlight on sustainability and responsible investment practices, companies have recognized the need to incorporate ESG considerations into their business strategies. This study aims to investigate the relationship between the adoption of an ESG framework and financial performance, with a particular focus on key financial metrics such as profitability and stock returns. The focus of the analysis will be on listed companies from different industries. From a financial perspective, understanding the impact of implementing ESG frameworks on financial performance is crucial for decision makers to assess the sustainability and value creation potential of companies. The results of this study may contribute to existing studies on ESG and financial performance. It will provide valuable information for stakeholders such as management, investors and policy makers in strategic decision making. It will help them better understand the impact of the currently popular ESG integration on the financial performance of companies. This study also aims to reveal the potential trade-offs and synergies that may exist between sustainable practices and financial performance.



### **C-03 Assessing the Impact of the Russian-Ukrainian War's Energy Crisis on European Energy Companies: A Comparative Study**

**FAN Tingxuan**, Finance, FBA

**Advisor:** TAM Hon Keung, FBA

This study investigates the impact of the Russian-Ukrainian war-induced energy crisis on the European energy industry, specifically analyzing stock return rates (ROA/ROE) as dependent variables. Independent variables examined include natural gas imports from Russia, company size, investment proportion in new energy research relative to total cost, and cross-listing status. The research holds crucial importance in offering insights and strategies to governments and investors for effectively mitigating financial risks associated with the energy crisis. Utilizing regression analysis and heteroskedasticity tests with Eviews software, data from Refinitiv and Eurostat serve as primary sources. Addressing existing research gaps, this study contributes by assessing the potential negative impact, contrasting perspectives suggesting minimal consequences. The findings reveal significant negative effects, advancing our understanding of the challenges faced by the European energy industry.

## Abstracts

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### C-04 Factor Model in Cryptocurrency Market

**DU Yuxin**, Finance, FBA

**Advisor:** SHEN Hongchuan, FBA

This study explores the return structures of 100 crypto assets with a market value exceeding 400 million. We identify 13 distinct characteristics-based return patterns and observe momentum in the largest-cap group. Additionally, strong premiums related to crypto value and network adoption are found in other observations. Our model incorporates size, momentum, value, and networking factors to develop an investment strategy. Cryptocurrencies exhibit similarities to the stock market in size and momentum but possess unique networking characteristics. Furthermore, we analyze the differential sensitivity to market volatility, revealing divergent patterns between the two markets. These findings offer valuable insights for optimizing cryptocurrency portfolios and understanding the drivers of returns in this market.

### **C-05 Green Mergers and Acquisitions in Energy Sector's Companies Their Value Creation Impact on Stock Price**

**LAM Chi Kin**, Finance, FBA

**Advisor:** MA Xiaorong, FBA

This study examines Merger & Acquisition (M&A) events in the U.S. energy industry from January 1, 2019, to March 17, 2024. We selected the top three publicly traded companies by market capitalization, namely ExxonMobil (NYSE: XOM), Chevron (NYSE: CVX), and ConocoPhillips (NYSE: COP), resulting in a total of eight events, which represent a subset of 74 events in the market. We delve into the details of these eight events, with a particular focus on their M&A motivations and reasons. For events that meet Eikon's sustainable flag criteria or mention sustainability or green energy-related objectives in their announcements, we will pay extra attention to their abnormal returns. Furthermore, we will analyze the value effects of M&A, assessing whether each event is value-increasing, value-reducing, or value-neutral. Finally, we will infer the existence of synergy through stock returns. Through these analyses, we aim to provide valuable insights into M&A events in the U.S. energy industry, offering valuable information for market participants. The objectives of this study include analyzing M&A motivations, examining sustainable M&A trends, evaluating value effects, inferring synergy, and providing actionable insights for investors, managers, and policymakers involved in the U.S. energy sector.

## Abstracts

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### C-06 Machine Learning Approaches to Predict the Netflix APP Ratings

**CHEN Xinyu**, Business Intelligence And Data Analytics, FBA

**Advisor:** LIAN Zhaotong, FBA

Netflix, the unassailable streaming service, has experienced a significant surge in global subscribers since the pandemic outbreak. To gain insights into user reviews on the Google Play Store, this study utilized enhanced machine learning tools, Natural Language Processing techniques and data visualization applications. The cleaned dataset consists of 1,121,434 records spanning from 2017 to 2023, encompassing periods before, during, and after the pandemic. Four features were included: review text, review rating, likes, and the year of posting. A methodology was proposed to predict ratings based on user review comments, employing machine learning models, including random forest, gradient boosting, support vector machines, and neural networks. Hyperparameters were fine-tuned, and accuracy was evaluated to determine the most effective model. By visualizing the data across different periods and using various plot formats, key patterns, trends, and prominent characteristics of user experiences are revealed. These insights provide valuable information to Netflix, enabling them to make informed decisions that focus on enhancing user satisfaction and deliver more personalized functions. The effectiveness of the approach was demonstrated through a comprehensive understanding of user sentiment through pandemic and the improvement of the overall user experience.

### **C-07 The Effect of ESG Performance on Financial Performance in Healthcare Industry in Asia**

**GUERRA Viana**, Accounting, FBA

**Advisor:** CHEN Can, FBA

Climate change has become a crucial worldwide issue, causing stakeholders to increase their recognition of a sustainable environment, and therefore, Environmental, Social, and Governance (ESG) performance has gained significant influence. Meanwhile, this trend becomes particularly obvious in the healthcare sector, where balancing financial performance with societal welfare is crucial. Therefore, this study investigates the effect of ESG performance on the financial performance of the healthcare industry in Asia. Hence, the growing interests of the stakeholders in ESG performance can affect the reputation of the companies and the investment decisions of the shareholders, which can directly influence the financial performance of companies. Therefore, the hypothesis was that ESG scores can positively affect financial performance. This research evaluated 240 companies in the healthcare industry in Asia to determine whether ESG performance scores influence the healthcare company's return on equity in Asia Pacific between 2021 and 2023. Given the increasing worldwide awareness of ESG, this research is critical for stakeholders to understand the effect of ESG performance on financial performance as it helps both management make strategic decisions from a long-term perspective, shareholders in making investment decisions, and the public for evaluating the sustainability of the companies.

## Abstracts

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### **C-08 A Research on the Current Situation of Senior Kindergarten Teachers' Feelings on Professional Burnout in Macau**

**VONG Hao Lam**, Pre-Primary Education, FED

**Advisor:** LIU Nai-Hua, FED

This study mainly explores the current situation of professional burnout among senior kindergarten teachers in Macau. The purposive sampling method was used to select 10 participants in Macau as the research subject. Those ten participants had more than ten years of working experience. Nine were head teachers, and one was the grade leader, serving different types of schools (e.g., religious, patriotic, Chinese-Portuguese public schools, community schools, etc.). The study adopts a qualitative research approach, specifically phenomenology, and conducts in-depth interviews to collect data. The data are analysed through open/axial/selective coding by using Nvivo software. Triangulation was conducted to ensure the objectivity of the study results. The research findings reveal the following: (1) The causes of teachers' professional burnout include poor cooperation with colleagues, difficulties communicating with students' parents, and excessive workload. (2) All the interviewees reported that the essential reasons for the emergence of professional burnout were the tediousness of clerical work and the complexity of procedures. (3) The earliest time for the emergence of professional burnout is the first two years after starting work, and then it is followed by the period between five and six years. (4) When teachers' professional burnout occurs, teachers' work attitudes tend to be negative and passive.

### **C-09 The Impact of the Application of Artificial Intelligence Chat-Bot on Consumers in the Luxury Goods Industry**

**LIU Zhenji**, Marketing, FBA

**Advisor:** CHEN Fangyuan, FBA

This study investigates how the personality traits of AI chatbots affect consumer trust and satisfaction within the luxury industry and how these factors influence consumer behavioral intentions. A structured questionnaire was used to collect data on consumer attitudes and behavioral intentions. The preliminary findings imply that the personality traits of AI chatbots have a significant correlation with consumers' trust and satisfaction and may influence their willingness to reuse the service, share it on social media, make recommendations, make offline purchases, and adopt personalized recommendations. Although the study has limitations in terms of sample size and diversity, it provides initial insights into the potential application of AI technology in luxury consumer services. It suggests ways in which practitioners can leverage AI to enhance the consumer experience and brand value.

## Abstracts

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### C-10 Research on the Influencing Factors and Strategies of Chinese TV Series "Going Out"

**HE Suixin**, Marketing, FBA

**Advisor:** HO Ying, FBA

In recent years, Chinese TV series have achieved certain results in "going out", for example, they have gradually expanded their influence in the world with Asia as the center. However, the dissemination of Chinese TV series in Europe and the United States area is still in a disadvantageous position and has become an ongoing problem for Chinese TV series internationalization. Therefore, to solve this problem, this study investigates the potential key factors that will affect overseas consumers' willingness to pay for Chinese TV series' subscription. In addition, this research intends to collect data from overseas online data collection platform(s) via questionnaire in order to know the perspectives of overseas consumers towards this topic. With a profound understanding of the core influencing factors of the behavior of overseas consumers browsing Chinese TV series, Chinese TV series production company, online video broadcast platforms, social media applications can develop corresponding strategies for Chinese TV series "going out" and enable Chinese TV series to obtain a larger overseas market share.



Oral Presentation (Afternoon Session) • Session D • Room E12-1017 • 2:30 pm - 6:10 pm

### **D-01 ESG Disclosure Mandate and Corporate Investment Decisions**

**SHAN Linya**, Accounting, FBA

**Advisor:** LIU Jiancheng, FBA

This study examines how Environmental, Social and Governance (ESG) disclosure mandate influences corporate investment decisions. Using an empirical approach, I measure the corporate investment level by R&D expenditure and investigate the association between ESG disclosure mandate and corporate investment level. Exploiting an international sample of public firms, I aim to test the main hypothesis: ESG disclosure mandate has a significant effect on corporate investment decisions and this relationship is moderated by corporate governance practices. This research contributes to understanding the effectiveness of ESG disclosure mandate and its effect on companies' real decisions. The findings also inform policymakers, corporate leaders, and investors about the implications of ESG disclosure mandate for shaping corporate investment practices.

## Abstracts

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### **D-02 The Relationship between Management Forecasts and Equity Analyst Coverage**

**LI Zhujin**, Accounting, FBA

**Advisor:** LIU Jiancheng, FBA

This project aims to explore the relationship between management forecasts and equity analyst coverage, with the objective of understanding how management forecasts influence the companies' overall information environment. The study hypothesizes that a strong positive correlation exists between the existence of management forecasts and the equity analyst coverage. Using a comprehensive dataset of management forecasts and analyst coverage from Capital IQ and IBES, respectively, I employ statistical techniques, such as regression analysis and correlation analysis, to examine the relationship between management forecasts and analyst coverage. The importance of this study lies in its potential to enhance the understanding of the information dynamics between management forecasts and equity analysts. The findings from this study will help inform practitioners, regulators and researchers about the importance of management forecasts in improving public firms' overall information environment.

### **D-03 Assessing Environmental and Social Disclosure Compliance: A Comparative Analysis of Energy and Utilities Industries Among Hong Kong Listed Companies**

**LEI Chi Sin**, Accounting, FBA

**Advisor:** CHU Teresa, FBA

The study investigates the changing landscape of corporate governance and environmental, social, and governance (ESG) reporting on Hong Kong-listed corporations in the energy and utilities sectors. Given the rising global demand on sustainability and corporate responsibility by companies, we aim to explore the current situation of ESG disclosures under the HKEX reporting regulations. The research takes a comprehensive approach to evaluate the compliance level of state-owned companies (SOEs) and non-SOEs in these two industries following the comply or explain provisions in the Appendix C2 Environmental, Social, and Governance Reporting Guide. The research shows that all examined organisations reveal some environmental and social information, demonstrating that the value of ESG reporting is widely recognised. Notably, SOEs in the energy industry outperform non-SOEs in terms of environmental disclosure practices, which is mostly due to the low-level compliance among free-float entities. However, both SOEs and non-SOEs exhibit similar transparency in social disclosures within the energy sector. The utilities industry outshines the energy sector in both environmental and social disclosures, regardless of ownership types. These findings highlight the utility industry's more extensive approach to ESG reporting than the energy sector. Given the growing worldwide demand for transparent and responsible corporate behaviour, this study emphasises the importance of rigorous ESG disclosure and suggests the possibility of ESG audits akin to financial statements. This study not only contributes to the academic discussion on corporate governance and sustainability, but also gives practical insights to legislators, business strategists, and stakeholders who want to improve ESG disclosure standards and build a more responsible corporate environment.

## Abstracts

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### **D-04 Ownership and Performance: Exploring the Relationship between Ownership Types and Profitability and Dividends Paid-out Rate within the Healthcare Industry in Hong Kong**

**TAN NGO Shi Khai**, Accounting, FBA

**Advisor:** CHU Teresa, FBA

This study explores the relationship between ownership types and profitability, emphasizing how ownership structures affect dividend payout rates in Hong Kong's healthcare sector. The purpose of the study is to improve our comprehension of the connections between dividend policy, corporate governance, and ownership structures in the industry. A comprehensive literature review shows that ownership structure has a varied and complicated impact on profitability and dividend payouts, with varying results seen in different research. We utilize an innovative method to close this research gap, which involves categorizing ownership types according to controlling shareholders indicated in annual reports and iFind database. The results show that more research is needed to fully understand the connection between ownership types and profitability, particularly in the healthcare sector. These findings will aid for regulators, investors, and decision-makers since they offer important information about how to assess the efficacy of various ownership structures and comprehend how they affect dividend choices. Additionally, the study advances our knowledge of the ways in which various ownership arrangements may affect how financial resources are distributed throughout the healthcare industry. In the end, this research improves our understanding of how ownership types, profitability, and corporate governance interact in Hong Kong's healthcare sector.

### **D-05 Optimizing Parkinson's Disease Diagnosis: Cost-Effectiveness Analysis of Non-CSF Biomarker Selection Strategies**

**JIA Zhiqi**, Accounting, FBA

**Advisor:** LI Shaozhi, FBA

**Co-advisor:** WONG Garry, FHS

Parkinson's disease (PD) is putting an increasing health and economic burden on the aging population. Early detection is crucial, but methods like neuroimaging have accuracy, cost, and radiation exposure drawbacks. Biomarkers offer an option; however, they lack reliability when used alone. This study aims to identify an optimal panel of non-cerebrospinal fluid (non-CSF) biomarkers across proteomic, genetic, clinical, and other categories that contribute to maximizing PD diagnosis accuracy. The initial identification of candidate biomarkers will use generalized estimating equations and elastic net regression modeling. The panel will be validated internally and externally. A Markov decision model will then assess the cost-effectiveness of that panel versus status quo methods from the payer's perspective over a lifetime horizon. Outcomes include costs, quality-adjusted life years (QALYs), and the incremental cost-effectiveness ratio (ICER). One-way sensitivity analyses will test uncertainty and identify value drivers. This research will address gaps in the selection and validation methodologies for multi-category biomarker integration and the evaluation of its lifelong economic impacts. By balancing improved health outcomes with affordability, findings will inform evidence-based diagnostic recommendations to alleviate the health burden on patients, their families, and healthcare systems.

### D-06 Decoding Senses and Message Strategies in Virtual-Influencer Marketing

**HUANG Linqian**, International Integrated Resort Management, FBA

**Advisor:** YANG Xi, FBA

The increasing integration of artificial intelligence has propelled virtual influencers—avatars autonomously generated by AI—into the forefront of marketing strategies. This research delves into the impact of virtual influencers' content on consumers' purchasing intentions across various social media platforms. Specifically, it examines how the use of different types of language (factual versus experiential), encompassing five sensory dimensions (visual, auditory, olfactory, gustatory, and haptic), influences consumer perceptions. Through a series of ten online scenarios within a 2x2 experimental framework, this study reveals that the use of factual language tends to increase purchasing intention, whereas experiential language leads to a decrease. This effect is attributed to the violation of language expectancy, which posits that experiential language should not be employed due to the inability of AI to genuinely experience products. However, this effect is reversed when viewers perceive different sensory stimuli. The performance of experiential language improves when messages are associated with distal sensory aspects (visual and auditory), while the efficacy of factual language decreases if proximal sensory cues (olfactory, gustatory, haptic) are more pronounced. These findings shed light on the significance of language in shaping consumer responses to virtual influencers, providing valuable insights for optimizing the effectiveness of virtual influencer endorsements and promotions.

### **D-07 How the Contribution to Non-Gaming Factors Affect the Overall Profitability of Macau's Gaming Industry**

**YAM Yu Liang**, Accounting, FBA

**Advisor:** LIU Morris Ming, FBA

Leading firms in Macau's gaming industry aim to expand their contribution to non-gaming sectors to strengthen their image in diversifying the tourism market recently. Non-gaming activities are crucial as they bring the most tourism experiences to the visitors. The number of tourists worldwide has bounced back drastically for gaming purposes post-COVID-19. This study aims to determine how important non-gaming activities could bring a better tourist experience for a longer stay or revisit intention. The results of this study indicate that participation is necessary for gaming firms to boost the tourism industry in Macau as it provides greater investment opportunities and better images. This study points out that several aspects of the region's future will be developed together with the Greater Bay-Hengqin Area. It matches the government's diversification plan to increase the weight of non-gaming sectors in Macau's GDP to 60% by 2028. This study demonstrates how the new ten-year gaming concession increases the engagement of six major casino operators in non-gaming investment. It also explains why Macau's gaming industry is obliged to work with the government to push for more non-gaming revenue. This study reveals how non-gaming's contributions affect profitability regarding destination image, word-of-mouth publicity and tourists' overall experience.

## Abstracts

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### **D-08 Effectiveness of Food Waste Reduction Interventions in Restaurant: A Customer Perspective**

**NG Cheng U**, International Integrated Resort Management, FBA

**Advisor:** FONG Hoc Nang, FBA

The report examines the promotion of sustainable food waste management, specifically on strategies to reduce food waste. Macau, a well-known global tourist destination and a major contributor to the service industry, has to handle a substantial amount of food waste in a sustainable way for the environment. The environmental ramifications of food waste are emphasized in the report, which also stresses the significance of implementing efficient reduction strategies in Macau. The study examines many strategies to reduce food waste to the best limit, including cognitively oriented nudges and behaviorally oriented nudges. By strategically implementing nudges, hotels can discreetly impact customer behavior in favor of options that reduce food waste and promote sustainable practices. Based on the results of an online survey that included 300 participants, the report asserts that by integrating nudges into hotel operations in conjunction with other preventive and corrective measures, it is possible to foster a culture that promotes sustainable food waste management successfully. Macau hotels play a vital role in encouraging sustainable methods for managing food waste.



### **D-09 Comparative Analysis of Mean Reversion and Momentum Strategies for Cryptocurrencies in High Market Capitalization: A Buy and Hold Benchmark Study**

**CHONG Nga Man**, Business Intelligence And Data Analytics, FBA

**Advisor:** SAM Kin Meng, FBA

This research investigates the performance of mean reversion and momentum strategies applied to the top three cryptocurrencies (Bitcoin, Ethereum, and Binance Coin). The objective is to compare these strategies against a buy-and-hold benchmark and assess their effectiveness in generating superior returns. Through comprehensive analysis, the findings indicate that the momentum strategy consistently outperforms both mean reversion and buy-and-hold approaches for these cryptocurrencies. The study includes a 5-year backtest to optimize parameters tailored to the strategies, aiming to enhance performance and accuracy. The research highlights the importance of adapting indicators to the unique characteristics of individual cryptocurrencies and provides valuable insights for investors, traders, and researchers seeking to navigate the dynamic cryptocurrency market and maximize returns.

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### **D-10 An Empirical Study of the Influence of Big Data Analytics on Consumer Behavior in E-commerce**

**LOU Lok I**, Business Intelligence And Data Analytics, FBA

**Advisor:** SAM Kin Meng, FBA

In the wake of the COVID-19 pandemic, the significance of big data analytics in e-commerce has seen a marked increase. This research delves into the impact of big data analytics on various aspects of the ecommerce industry, particularly in the realms of sales support and after-sales service. It further investigates how these influences shape consumers' emotional trust and perceived emotional value, ultimately affecting consumers' behavior. Data analyses were conducted based on a questionnaire of 230 respondents from Macau. Through SPSS and linear multiple regression models, the research model and associated hypotheses were verified. This study contributes to improve the utilization of big data analytics in business by providing insights into customers' perception of big data analytics in e-commerce, which can have positive impact on sales revenue through a retention rate of customers. Additionally, the results of this study shed light on further promoting big data analytics for practical usage across businesses.

### **D-11 Comparative Analysis of Tax Implications for Start-up Companies in Malaysia, Singapore, Macau, and Hong Kong**

**CHAN Ren Chern**, Accounting, FBA

**Advisor:** NORONHA Carlos, FBA

This research proposal outlines a comprehensive comparative study aimed at assisting start-up investors and entrepreneurs in evaluating the tax implications when establishing and operating start-up companies in Malaysia, Singapore, Macau, and Hong Kong. Start-up companies play a crucial role in driving economic growth, innovation, and job creation. The research aims to gain valuable insights into the business environment, investment attractiveness, and policy frameworks that support entrepreneurial activities. It will help stakeholders evaluate the potential costs, benefits, and risks associated with operating or investing in start-up ventures. The primary focus of this research will be on corporate tax rates, incentives, and their direct influence on the profitability and growth potential of start-ups within these four jurisdictions.

## Abstracts

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Oral Presentation (Morning Session) • Session E • Room E12-1018 • 9:30 am - 12:50 pm

### **E-01 The Transmission Layer Matching System of Perovskite Optoelectronic Devices is Developed based on Existing Database and Neural Network**

**ZENG Ge**, Applied Physics And Chemistry, FST

**Advisor:** XING Guichuan, IAPME

**Co-advisor:** CAI Yongqing, IAPME

In the past perovskite PV research, due to the limited knowledge of the materials that may be used in the structure of perovskite PV devices, the use of these materials still follows the methods of past experience. However, due to the long period of a single experiment, when preparing 15 samples, it sometimes takes three to five days to test the effect of only one group of combinations. Therefore, we hope that through the analysis of the data of the past 40,000 photovoltaic panels, through the neural network model, in the past experience, to find the most suitable for a particular perovskite transport layer collocation. In a sense, this will greatly save the time, cost and manpower required for experiments. In this study, we explored the layered design of titanite PV through convolutional neural networks. After synthesizing the data of 40,000 devices in the database and their efficiency and other information, we hope to find the stacking pattern that best fits each layer of perovskite PV through the neural network. At the same time, among the types of materials used in these docking methods, we will further fit potentially suitable materials by analyzing past data. After the type of perovskite required by the user is given, the appropriate docking method can be adopted. It is expected that these docking methods can be verified in the laboratory to observe and confirm whether efficiency improvements are achieved.

### **E-02 Fabrication of Nano-encapsulated Phase Change Material for Heat Control**

**CHUI Teng Hei Desmond**, Applied Physics And Chemistry, FST

**Advisor:** CHEN Binmeng, IAPME

Concrete is the most widely used building material in the world due to its abundant sources, cheap price, good durability etc. However, concrete generally has poor toughness, forming cracks under loading, especially at the early age. Among these, temperature stress arising from the hydration of cement is one of the biggest challenges, especially when a large volume of concrete is used. In this research, we focus on addressing this issue by fabricating nano-encapsulated phase change materials (PCMs) and mixing it into the concrete to mitigate the buildup of internal temperature pressure. Thereafter, the fabrication process of nano-encapsulated PCMs is optimized by varying its dispersing agent and synthesizing procedures, followed by an in-depth analysis, including the particle size and latent heat of PCMs, the mechanical performance and durability of concrete.

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### **E-03 Sustainable Campus Assessment and Development of the University of Macau**

**WANG Zixuan**, Civil Engineering, FST

**Advisor:** PAN Mi, FST

Universities are crucial for fostering a sustainable society through education, teaching, and research. In recent years, universities have recognized the importance of addressing environmental degradation and enhancing the sustainable development of campuses. To comprehensively address sustainability issues, universities should integrate sustainable practices into all aspects of their operations. While various universities, regional, and international institutions have proposed different indicators and methods for assessing sustainable campuses, there is currently no universally adopted assessment method specifically tailored for the University of Macau. Therefore, this study aims to develop a new sustainable campus assessment method for assessing sustainability performance of the University of Macau, in terms of ‘environment’, ‘people and society’, and ‘teaching, research, and development’. Particularly, a set of sustainability indicators were developed and validated by combing a comprehensive literature review and expert interviews. The applicability of the method was demonstrated through its implementation to assess the sustainability performance of University of Macau. This study should provide valuable insights and reasonable suggestions for sustainable campus development and improvement of the University of Macau and contribute to a more sustainable future.

### **E-04 Urban Planning for Zone C in Macau**

**CHAN Nga Lai**, Civil Engineering, FST

**Advisor:** LAM Chi Chiu, FST

This paper focuses on a proposed urban plan for Zone C, a newly reclaimed area in Macau, with the aim of establishing a low-carbon residential area and increasing the likelihood of people using green transportation. The plan primarily focuses on the layout of land use, transportation systems, and sustainable development strategies. The design emphasizes the segregation of the main traffic network from pedestrian pathways to reduce the risk of traffic congestion, to enhance safety and create a better environment for both pedestrians and motorists. The plan emphasizes allocating more parks and green spaces along the roads and roofs of buildings and implementing advanced technology to promote sustainability in the living environment. Additionally, Building Information Modeling (BIM) tools like Revit are used to create landscape and building models for a better analysis and visualization of the proposed layout of Zone C.

### **E-05 Charge Recycling For CMOS Ring Oscillator in Ultra-Low Voltage IoT Applications**

**ZHANG Peirui**, Electrical And Computer Engineering, FST

**Advisor:** LEI Ka Meng, IME

The ring oscillator is commonly used as a circuit configuration to produce signals of a specific frequency in today's IoT applications. However, in the traditional circuit design, the capacitor is connected to ground and the charge through it is directly dumping to ground, leading to power waste concerns. To address this issue, this research paper introduces a charge recycling technique specifically developed for a three-stage CMOS ring oscillator utilized in ultra-low voltage Internet of Things (IoT) applications. The main goal of this technique is to recycle the charge stored at the capacitor before dumping to ground to obtain better power efficiency.

The proposed technique leverages logic gates to harness the energy stored in the capacitors of the current stage during the falling edge. This harvested energy is then utilized to power the rising edge of the next stage inverter. By utilizing the stored charge from the capacitors instead of relying solely on the voltage source, the technique enables the power for pull-up operations to be derived from the capacitors. This approach effectively reduces power consumption, resulting in increased power efficiency.



### **E-06 Parallel Miniaturized Rotational Probe for Expedited Magnetic Field Mapping**

**MIAO Yuxuan**, Electrical And Computer Engineering, FST

**Advisor:** LEI Ka Meng, IME

This essay introduces a parallel miniaturized rotational probe designed for expedited magnetic field mapping. The device utilizes the principle of electromagnetic induction and combines printed circuit board (PCB) and 3D printing technology to form the physical structure. When the coils in the probe rotate at high speed, slight variations in the rotation speed occur due to random factors, introducing errors in the signals generated and further affecting the measurement of the magnetic field. To minimize the impact of unstable rotation speed and improve measurement accuracy, a signal calibration model is established. In the system, the variation in coil rotation speed corresponds to changes in signal frequency. The frequency variations, induced electromotive force and data sampling can be simulated. Subsequently, the signal calibration model optimizes the collected series of measurement data, resulting in more accurate measurement results. This magnetic field measurement system achieves portability, high accuracy, and stability, making it applicable in scientific research, industrial monitoring, medical diagnostics, and other fields.

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### **E-07 Non-intrusive Smart Meter Application on Residential College**

**AO IEONG Weng Chi**, Electrical And Computer Engineering, FST

**Advisor:** WONG Man Chung, FST

This project introduces a non-intrusive smart meter system that has been developed and implemented to address the imperative need for accurate and efficient methods of monitoring and managing energy consumption in a residential college environment. As the demand for energy efficiency and sustainability continues to rise, it becomes increasingly crucial to employ effective approaches for tracking and analysing energy usage patterns. In response, this proposed system leverages the power of machine learning algorithms to meticulously analyse voltage and current measurements, thereby enabling the identification of distinctive energy consumption patterns. By facilitating real-time monitoring and visual representation of energy consumption data pertaining to individual washing machines, the system empowers users to make well-informed decisions regarding energy utilization. The primary contributions of this project encompass the design and implementation of a customized non-intrusive smart meter system tailored specifically to meet the unique requirements and challenges encountered within residential college settings. Furthermore, the project provides valuable insights and comprehensive analysis of energy usage patterns, thereby facilitating the optimization of energy consumption practices. Ultimately, the outcomes and practical implementation of this research endeavour have the potential to significantly enhance energy efficiency within residential college environments, effectively contributing to the broader goal of fostering sustainable practices.

### **E-08 Development of a Customizable Soft Material Printer for Advanced Functional Material Fabrication**

**JIANG Dechao**, Electromechanical Engineering, FST

**Advisor:** LEI Iek Man, FST

Three-dimensional (3D) printing has traditionally been used for rapid prototyping and creating customized items. However, conventional 3D printers are limited in material compatibility, hindering innovation in soft materials. To expand the capabilities of 3D printing, a customizable platform is required that can accommodate different printing materials and commands. Here, we present the development of an open-source, high-performance 3D printing platform that enables printing from CAD designs using customized soft materials. The key features of this system include a high-precision gantry stage with 2-micrometer mechanical repeatability, programmed to read G-Code generated from CAD designs using open-source slicing software. Additionally, a pneumatic controller which can apply up to 8,000 mPa of pressure to extrude soft materials, such as hydrogels or even animal cells. By synchronizing the motion and extrusion modules, this customized 3D soft material printer can achieve efficient printing of delicate and complex structures. This versatile 3D printing platform has the potential to advance the development and testing of novel soft materials, with applications in fields such as tissue engineering, biomedicine, and adaptive manufacturing.

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### **E-09 Butterfly Effect Inference Forecasting (Beif): A Synergistic Approach to Augmented Topic Modeling in Text Mining**

**LI Geyue**, Mathematics, FST

**Advisor:** FONG Simon James, FST

As people's comments (sentiment) can be effectively recorded and collected in large quantities, converting the information stored in comments into factors for pricing models is an effective method to improve the predictive accuracy. The purpose of this study is to explore the causality between the resale value of luxury goods and public sentiment from online reviews across ten prominent luxury brands. We first use web scraping techniques to gather thousands of comments and obtain prices from multiple specialized second-hand luxury goods platforms. Then, we calculate the variation in the depreciation rate of luxury goods and conduct sentiment analysis on these comments. Granger tests are used to examine the causality between these two factors. Through hypothesis testing, we validate that public sentiment significantly influences the variability of resale value for second-hand luxury goods, thereby suggesting the expansion of a new feature 'sentiment' in second-hand luxury goods pricing models. This study conclusively emphasizes the importance of sentiment as a factor in second-hand luxury goods pricing prediction models. Further studies can employ machine learning techniques to train more accurate pricing models which contains several factors including Brand Reputation, Market Demand, Seasonality and Trends to predict second-hand luxury goods prices.

### **E-10 Image Encryption and Decryption through Toeplitz Matrix**

**SAM Ka Tai**, Mathematics, FST

**Advisor:** LEI Siu Long, FST

Image encryption and decryption play important roles in securing image transmission. In this paper we would show the use of Toeplitz matrices in image encryption and decryption techniques for both gray-scale and RGB images. The purpose of using Toeplitz matrices is that without knowing the exact Toeplitz matrix, it is very difficult to decrypt the blurred image. For encryption process, we would generate a random Toeplitz matrix which is diagonal dominant. Then we add some noise by multiplying the Toeplitz matrix twice, obtaining a blurred image. On the other hand, for decryption process, we first calculate the inverse matrix of the Toeplitz matrix. After multiplying the blurred image by it twice, we would get the recovered image. This method works on RGB image too, but we would encrypt it by separating the image into red, green and blue colors, and multiply by three random Toeplitz matrices twice. Finally, we stack the three matrices, and the blurred image is formed. Similar procedure is formed for decryption process. This method shows the security and robustness for image encryption and decryption using Toeplitz matrices.

## Abstracts

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Oral Presentation (Afternoon Session) • Session F • Room E12-1018 • 2:50 pm - 6:10 pm

### **F-01 Analysis of Females' Escape on Social Media: A Case Study of Hashtag on Xiaohongshu as A Female Self-protection**

**CHEN Yifan**, Communication, FSS

**Advisor:** LEE Tien Tsung, FSS

The article aims to explore the personal space that females would like to build on social media. In recent years, a hashtag named BaoBaoFuShi (Baby solid food) has been getting popular among females in Xiaohongshu, a famous social media in China. The hashtag is used to filter out male users to construct a clear women-only space. All the time, women-only space has been chased from many aspects. There are schools only for girls since this kind of school gives girls a better studying space. Some housewives also need their own personal space after a continuing long time to take care of her family. When it comes to the digital era, the women-only space is requested by modern females and the reason is often to protect themselves from males' assault. With qualitative method, deep interviews and text analysis are conducted to collect and analyze the data. Seven interviewees with related experiences in using this hashtag were interviewed. The results show that although females fail to use such hashtag to build a women-only space, they do not give up to look for other possible ways to realize the escape from the male dominant world when using social media.

### **F-02 The Intercultural Adaptation of Macau Students Studying Abroad**

**MAK Weng Tong**, Communication, FSS

**Advisor:** CHEANG Ka Ian, FSS

The purpose of this study is to understand the intercultural adaptation situation of Macau students studying in Australia. In-depth interviews are adopted to explore and describe how Macau students experience and adapt to Australian culture through various aspects, including academic learning, language barrier, social integration, and coping strategies. Participants are all graduated from the same secondary school, and they are studying in Australia. It could be seen that the participants went through the honeymoon stages, and they are experiencing the culture shock stages. The study reveals that the background and personalities of the participants, could be an important factor to affect the adaptation to one's culture. The massive number of Asian students and friends studying abroad also is another factor affecting the adaptation of Macau students to Australian culture. Participants tend to stay with Asian peers and friends in Australia. The universities should actively encourage the exchange of ideas and interaction between local and Macau students, as to improve the intercultural adaption of Macau students studying globally.

## Abstracts

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### **F-03 Exploring Psychological Distress and Resilience in Parents of Children with Special Educational Needs in Macau: A Comparative Study**

**LIO Iat Cheng**, Psychology, FSS

**Advisor:** CHI Peilian, FSS

Children with special educational needs (SEN) has recently become more prevalent in Macau, creating an urgent need for educational and public health services. Previous studies from a psychopathological perspective have shown that parents of children with SEN are more likely to demonstrate psychological distress, such as depression, anxiety, and sleep problems. However, there is a lack of studies from resilience perspective to investigate the potentially damaged positive psychological processes among parents of children with SEN. This study aims to describe both psychological distress and resilience in parents of children with SEN, by comparing them with parents of typically developed children (TD). We recruited 39 parents (Mage =39.67) of SEN children and 39 parents of TD children (Mage = 39.56) in Macau. In terms of psychological distress, parents of SEN children showed significantly higher levels of depression and anxiety. In terms of positive psychological processes, parents of SEN children demonstrated significantly lower levels of self-compassion and resiliency than parents of TD children. Parents in two groups did not report significantly different life satisfaction and meaning in life. The study is among the first research efforts to understand the caregiving challenges among parents of children with SEN in Macau.



### **F-04 The Cultural Evolution of Ghost in Chinese Classics**

**LIANG Haoran**, Sociology, FSS

**Advisor:** HONG Ze, FSS

The term 'ghost' in Chinese culture connotes both the spirits of the dead and divine entities, and the predominant forms of texts featuring ghosts have evolved from religious accounts during the Qin and Han Dynasties to literary works from the Tang Dynasty onward. Many scholars have studied the moral implications of religious rituals and ghostly narratives historically, suggesting that such beliefs were emphasized by rulers to reinforce their legitimacy. Here, taking advantage of the wealth historical records available in China, this study examines the cultural evolution of the concept of ghosts and the strategies potentially employed to promote belief in them quantitatively. The analysis of ghost occurrences in official Chinese historical records reveals a general trend of decreasing frequency in ghost references over time, suggesting a possible shift in their role within societal and political context. Additionally, it appears that belief in ghosts may have played an important role in reinforcing political legitimacy, though this influence was not consistent across all periods. The study cautiously infers that there may have been a transformation in the functions and perceptions of ghosts, influenced by the evolving notions of the afterlife and the role of ghosts in the moral guidance of society.

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### **F-05 Brothers and Dropout Risks among Girls in China: How Does Marketization Matters?**

**FANG Ge**, Sociology, FSS

**Advisor:** ZHANG Huiquan, FSS

Education inequality across genders has been enduring in China, which is further complicated by population policies, gender preferences, and marketization. We use the Difference-in-Difference (DID) design and analyze the Chinese General Social Survey (CGSS) data, hoping to reveal how Chinese girls in the past decades face different dropout risks. Our analysis yields the following findings: (1) girls who have male siblings face higher risks; (2) girls from earlier birth cohorts face higher dropout risks; (3) for girls born during 1967-1974, having a brother increases the dropout likelihood the most; and finally, (4) such negative sibling impacts are more salient in the inland provinces than the coastal provinces. The findings show that though marketization reform is overall a positive contributor to gender equality, the short-term impact may be negative for girls in certain cohorts and regions, especially when their dropout is economically rewarding for the family.

### **F-06 Prediction of AMPK Substrates**

**JIANG Zhihui**, Bioinformatics, FHS

**Advisor:** LI Gang, FHS

AMP-activated protein kinase (AMPK) is a crucial cellular regulator of energy homeostasis responding to changes in ATP level and regulates a wide range of cellular processes. In the last few years, the identification of novel substrates has revealed that AMPK is involved in more diverse activities, including DNA repair, autophagy and ferroptosis. However, its regulatory network still needs to be fully elucidated. To facilitate the discovery, this project utilises a kinase substrate specificity library to construct a list of potential substrates. A user-friendly interface is also provided for testing the likelihood of a protein's phosphorylation site being the target of AMPK. Analysis is also performed on the potential substrates to study their biological functions.

## Abstracts

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### F-07 Gene Co-Expression Network of AD Patients

**CAI Yicheng**, Bioinformatics, FHS

**Advisor:** MING Chen, FHS

Alzheimer's disease (AD) is a common neurodegenerative disorder among the elderly, characterized by brain atrophy, progressive memory loss, and cognitive impairment. Nowadays, Weighted Gene Co-Expression Network Analysis (WGCNA) has been employed to identify key modules and genes linked to AD mechanisms. In this project, a comprehensive analysis of gene data from a large sample of AD patients was conducted using the WGCNA pipeline in R Studio. After matching gene expression levels with traits, a soft threshold was set based on scale-free topology criteria to build a related adjacency matrix. Subsequently, the dynamic tree-cut method was employed to identify distinct modules. Modules were detected through cluster analysis of the topological overlap matrix, facilitating the analysis of gene expression concerning clinical features. Trait-associated genes with significant correlations and high intramodular connectivity were extracted from the modules. Clinical information in the dataset included gender, Apolipoprotein E genotype in diverse neurodegenerative disorders. After data preprocessing, 18,410 standardized genes were analyzed using WGCNA. With a soft threshold power of 6 and a scale-free index  $R^2$  of 0.9, fourteen modules were established. Integration of clinical features with modules revealed relationships, aiding in the identification of modules most relevant to the traits of interest. For further analysis, genes within these modules were selected based on criteria (module membership  $> 0.8$ ).

### **F-08 Prevalence of Internet Addiction in Chinese University Students: A Meta-Analysis And Bibliometric Analysis**

**ZHENG Xin**, Biomedical Sciences, FHS

**Advisor:** XIANG Yutao, FHS

There is an ever-growing prevalence of Internet addiction among university students, and many researchers continue to study this topic. China regarded as the country with the highest number of university students at a worldwide level, confronts challenging issues in this regard. This study aims to summarize the current status of globally published literature regarding Internet addiction among university students using bibliometric analysis and examine the pooled prevalence and other related factors regarding Internet Addiction for university students in China using meta-analysis. The bibliometric analysis was performed using VOSviewer, R software, and CiteSpace with data extracted from Web of Science. For the meta-analysis, literature was thoroughly searched through both Chinese and International databases such as PubMed, PsycINFO, and WANGFANG. In the statistical part, all analyses were conducted through R software. The random-effects model was used to calculate the pooled prevalence and its 95% confidence intervals (CIs), and Egger's tests and funnel plots were used to assess publication bias. The preliminary result showed that there is a total of 202,625 Chinese university students involved in the 144 studies being included for analysis, and the pooled overall prevalence of Internet addiction was 11.2 % [95 %CI: 10.0%–12.5%].

## Abstracts

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### **F-09 Dietary Patterns Associated with Body Mass Index (BMI) and Lifestyle in Students in University of Macau**

**LU Bei**, Biomedical Sciences, FHS

**Advisor:** TAM Kin Yip, FHS

This project aims to explore how dietary patterns and lifestyle will affect physical conditions in students in University of Macau. We will use the Body Mass Index (BMI) as an indicator and the hypothesis of the project is that dietary patterns and lifestyle will affect health conditions in students in University of Macau. We mainly investigate the type and amount of nutrient intake and we use online questionnaires to collect students' information regarding intake of three meals and also snacks. And we will then analyze and conclude dietary patterns. We also briefly try to know about students' fitness situations through questionnaires. Finally we can summarize the lifestyles of students through the above data. This project helps to connect dietary and lifestyle habits with students' health levels and the results can inspire students to make adjustments in their diet and adopt a healthier lifestyle. I learned more about health and nutrition during this project, learned how to collect information through questionnaires, and will continue to learn data analysis methods.

### **F-10 Development of SET7/9 Inhibitor for the Reduction of Inflammation in Rheumatoid Arthritis**

**CHANG Mei Ian**, Biomedical Sciences, FHS

**Advisor:** LEUNG Chung Hang, ICMS

SET7 is a SET domain-containing lysine methyltransferase that modulates the function of histones or non-histone proteins by catalysing post-translational methylations on targeted lysine residues. Recently, it has been revealed that SET7 contributes to the promotion of inflammation by interacting with pro-inflammatory factors such as NF- $\kappa$ B. Since NF- $\kappa$ B regulates the expression of inflammatory mediators in rheumatoid arthritis (RA), a chronic autoimmune disease primarily affecting the synovial membrane, we propose that drugs targeting SET7 could serve as novel and effective treatment options for RA. In this study, we report three ruthenium(III) complexes as potential inhibitors of SET7. These complexes were specifically designed to bind to SET7 and regulate its methyltransferase activity. To determine the optimal incubation period and concentration of the complexes, confocal imaging was performed. The addition of the complexes to RA-FLS cells showed reduction in inflammation, as confirmed by western blotting analysis. Furthermore, we established a SET7 knockdown model using RNA interference. The results from the SET7 knockdown cells showed similar inflammation level with the complexes added. This validates that the regulation of inflammation is dependent on SET7. These potential inhibitors could aid in further studies on SET7's activity and also facilitate the future development of treatments for inflammatory disorders.

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**T**

TAM Hon Keung, C-02, C-03  
TAM Kin Yip, F-09  
TAO Yubo, B-09

**W**

WONG Garry, D-05  
WONG Man Chung, E-07

**X**

XIANG Yutao, F-08  
XING Guichuan, E-01

**Y**

YANG Xi, D-06  
YEUNG Siu Kwai, B-01  
YU Shulin, B-07, B-08

**Z**

ZHANG Haoyun, A-03  
ZHANG Huiquan, F-05  
ZHAO Guanfang, A-02, A-03  
ZU Yang, B-10

Be Empathetic

Be Leading

Be Intercultural

Be  
part  
of the  
*Honours*  
*College*

Be Trustworthy

Be Ethical



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