SPRING 2025 UNDERGRADUATE RESEARCH SYMPOSIUM AWARDEES

Most Popular Project

Regulating Carbon with Confidence: An Empirical Study of MRV Impacts on Market Behavior in China's National Emissions Trading Scheme

Presenter: Yuxin Shi

Project Subject: CS/DS/Engineering

Faculty Mentor: Xin Zhou

This study examines the impact of the Monitoring, Reporting, and Verification (MRV) process on price volatility and trading activity in China's national carbon emissions trading market. Using monthly data from eight regional markets (2013–2023), we apply fixed-effects regression and event study methodology to assess whether market participants respond to MRV reporting periods. Findings show that while MRV periods significantly increase trading volume, they have limited influence on price levels and returns. The results underscore the importance of improving MRV transparency to enhance market efficiency, offering regulatory insights into how compliance mechanisms shape behavior in emerging carbon markets.

HUMANITIES & SOCIAL SCIENCE

Best Presentation

The impact of Psychological First Aid (PFA) on university students' knowledge, attitude, and practice to support peers in need and their self-efficacy

Presenter: Morui Yu

Project Subject: Social Science

Faculty Mentor: Brian Hall

This study evaluated the effectiveness of a hybrid psychological first aid (PFA) training intervention on NYU Shanghai students' knowledge, attitude, and practice of supporting others and their self efficacy. It was conducted with a formative trial and a main trial, including questionnaires to assess PFA knowledge, PFA skills, self efficacy, psychological distress, and resilience, and interviews to assess PFA practice. The quality of intervention was approved by the formative trial. Main trials and analysis will be conducted soon. This study explored the potential of adopting PFA in universities to promote students' well-being.

BUSINESS & ECONOMICS

Best Research Project

Signals from Nature: Pricing Biodiversity Risk in China's Equity Market through News-Based Indices

Presenters: Jiaqi Wang, Mu Zhong, Qiyong Wang

Project Subject: Interdisciplinary

Faculty Mentor: Xin Zhou

This research investigates whether biodiversity constitutes a priced risk factor in China's equity market by examining the impact of biodiversity-related news, captured through novel indices built from the People's Daily, on stock returns. Using NLP and ML techniques, we develop a China-specific biodiversity news index and apply the Fama-French factor model to assess sector-level sensitivities. We further analyze whether firms in high-exposure industries exhibit stronger reactions to environmental news shocks. By filling a critical gap in biodiversity risk quantification, particularly in emerging markets, this research offers practical insights for investors, regulators, and firms integrating environmental risks into financial decision-making.

BUSINESS & ECONOMICS

Best Presentation

Calm Stocks, Wild Hopes: Explaining the Low-volatility Anomaly in China's A-share Market through Lottery Preferences

Presenters: Zijin Su, Yunhe Zhang

Project Subject: Business

Faculty Mentor: Xin Zhou

This study provides a comprehensive cross-sectional examination of the low-volatility anomaly in China's A-share market spanning 30 years. We investigate both systematic (beta) and idiosyncratic (IVOL) risk anomalies through univariate and bivariate portfolio analyses. By controlling for lottery-related variables such as MAX, SKEW, and KUR, we assess whether investor preference for lottery-like stocks can explain the anomaly. We confirm the existence of beta and IVOL anomalies in certain time periods. Further, the anomaly's significance weakens or strengthens after controlling for different lottery proxy variables, highlighting the explanatory power of lottery preferences in the A-share market.

STEM

Best Research Project

The non-Canonical Histone Variant H2A.Z Exhibits Interactions with Mitotic Kinase AuroraB and Post Translational Modifications

Presenter: Tyson Dao Phonesavanh

Project Subject: Biology

Faculty Mentor: Jungseog Kang

The histone variant H2A.Z is implicated with many functions such as DNA damage repair, mitotic chromosome segregation, centromeric transcription regulation, and more. However, functional differences between H2A.Z isoform variants H2A.Z1 and H2A.Z2 has yet to be thoroughly investigated. In this study, we showed novel, isoform specific association to mitotic kinases Mps1 and AuroraB, mitotic and interphase co-localization to the kinases in vitro, and post translational modifications in response to DNA damage and mitotic arrest. Results indicate non-redundant functions and regulation of the variants that have potential for further investigation.

STEM

Best Presentation

Object Representation Guides Attention: Evidence from Single-feature Search

Presenter: Shucheng Li

Project Subject: Neural Science

Faculty Mentor: Xing Tian

While attention is guided by low-level features like orientation and color and high-level factors such as scene context, task history, and reward, the role of object representations remains unclear. We investigated this using an eye-tracking experiment where Chinese readers searched for a fixed orientation within normal and scrambled Chinese characters, isolating object representation. Longer reaction and dwell times for scrambled characters suggest that object representations influence attention even in single-feature search. These findings extend Guided Search Theory, demonstrating an interaction between high-level object representations and feature-based guidance, offering new insights into visual attention.