

Award Presentation



RGC Senior Research Fellow Scheme







Prof Songnian CHEN The Hong Kong University of Science and Technology

Prof Jianhua HAO

The Hong Kong Polytechnic University

Prof Ying-yi HONG

The Chinese University of Hong Kong

Prof Liwen JIANG The Chinese University of Hong Kong

Prof John Chi-shing LUI The Chinese University of Hong Kong

Prof Catherine McBRIDE The Chinese University of Hong Kong

Prof Darrell Patrick ROWBOTTOM Linguan University

Prof Hongzhe SUN The University of Hong Kong

Prof Wang YAO

The University of Hong Kong

Prof Zijian ZHENG The Hong Kong Polytechnic University



Prof Songnian CHEN

Department of Economics
The Hong Kong University of Science and Technology

Project Title:

Quantile Regression Subject to Sample Selection with Continuous and Binary Outcomes



陳松年教授







Prof Songnian CHEN



- Chair Professor of Economics at The Hong Kong University of Science and Technology since 2005
- Has made seminal contributions in numerous areas of econometrics, especially in developing quantitative tools to evaluate the effects of public policy and social programs
- SRFS project to address the knowledge gap regarding sample selection bias with an innovative approach, which brings together insights and benefits from two different perspectives and develops effective tools to better address the concerns of policymakers
- Awards and Honours:
 - RGC Senior Research Fellow (2021)
 - Beconometric Theory Plura Scripsit Award (2019)





Prof Jianhua HAO

Department of Applied Physics The Hong Kong Polytechnic University

Project Title:

Coupling Ferroelectrics and Piezoelectrics to Optoelectronics: From Fundamentals and Materials to Device Applications



郝建華教授







Prof Jianhua HAO



- Research focus on the functional thin-films and heterostructures, and luminescence for photonic and biomedical applications. Internationally known for outstanding and pioneering contributions to multifunctional smart phosphors and photonic devices
- SRFS project to couple ferroelectric and piezoelectric effects on the optical and optoelectronic process in broad classes of cutting-edge materials and devices, investigate physical properties in the material systems, and demonstrate device applications based on the coupling effects
- Awards and Honours:
 - RGC Senior Research Fellow (2021)
 - Natural Science Award by the Ministry of Education (2020)
 - TechConnect Global Innovation Award (2018)









Prof Ying-yi HONG

Department of Management The Chinese University of Hong Kong

Project Title:

Understanding the Psychological Underpinnings of Identities and Intergroup Relations during Socio-Political Transitions – The Case of Hong Kong



康螢儀教授







Prof Ying-yi HONG



- Choh-Ming Li Professor of Management at The Chinese University of Hong Kong
- Advises on research panels around the world -- as a scientific advisor of Future Resilient Systems, Singapore ETH-Centre; serves on the Social Science and Humanities Research Expert Panel of Singapore Ministry of Education, Expert Panel of OECD Programme for International Student Assessment (PISA)
- SRFS project to identify the core features of major social identities in Hong Kong, and to demonstrate the psychological consequences of the core (versus peripheral) features in explaining intra- and inter-group relations and how these features may change according to social-political situations
- Awards and Honours:
 - RGC Senior Research Fellow (2021)
 - United Standing Contributions to Cultural Psychology Award (2020)
 - Nanyang Award for Research Excellence (2013)





Prof Liwen JIANG

School of Life Sciences
The Chinese University of Hong Kong

Project Title:

Cellular and Molecular Characterization of the Tip-Vesicles in Germinating Pollen Tube



姜里文教授







Prof Liwen JIANG

- Choh-Ming Li Professor of Life Sciences at The Chinese University of Hong Kong (CUHK)
- Associate Dean (Research) in Faculty of Science, CUHK
 Director of RGC-AoE Centre for Organelle Biogenesis and Function, CUHK
 Director of Centre for Cell and Developmental Biology, CUHK
 Director of Institute of Plant Molecular Biology and Agricultural Biotechnology, CUHK
 Deputy Director of State Key Laboratory of Agrobiotechnology, CUHK
- SRFS project to illustrate the nature, identity and functions of distinct tip-vesicles (TVs) of germinating pollen tubes using a combination of cellular and molecular approaches, including the advanced platforms of 3D transmission electron microscopy (TEM) and Cryo-electron tomography (ET)
- Awards and Honours:
 - RGC Senior Research Fellow (2021)
 - Higher Education Outstanding Scientific Research Output Award (1st class in 2009, 2nd class in 2013 & 2017), Ministry of Education
 - Croucher Senior Research Fellowship (2009, 2015)







Prof John Chi-shing LUI

Department of Computer Science and Engineering The Chinese University of Hong Kong

Project Title:

Online Learning Theory Approach to Design Quantum Communication Networks



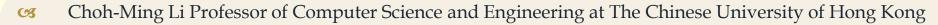
呂自成教授







Prof John Chi-shing LUI



- Central research theme always on the *fundamental research in stochastic modelling of computer/ communication systems*, and by analysing the underlining stochastic models, to device elegant distributed and efficient algorithms to address emerging engineering problems
- SRFS project to develop new online learning theory to design quantum Internet, in particular new mathematical and algorithmic theories based on multi-armed bandit online learning framework or reinforcement learning framework to design communication protocols for quantum Internet
- Awards and Honours:
 - RGC Senior Research Fellow (2021)
 - Fellow of the Association for Computing Machinery (ACM) (2009)
 - Fellow of the Institute of Electrical and Electronics Engineers (IEEE) (2009)
 - Croucher Senior Research Fellowship (2011)







Prof Catherine McBRIDE

Department of Psychology The Chinese University of Hong Kong

Project Title:

Optimizing Predictions of Dyslexia Cross-Culturally: Chinese and English Compared









Prof Catherine McBRIDE

- Choh-Ming Li Professor of Psychology at The Chinese University of Hong Kong
- A developmental psychologist whose research focuses primarily on literacy development and impairment across cultures, with current interests centering on identifying optimal predictors of dyslexia by incorporating behavioral, neuroscience, and genetics approaches
- Has authored two books *Children's Literacy Development* (2016); *Coping with Dyslexia, Dysgraphia, and ADHD: A Global Perspective* (2019); has authored approximately 250 journal articles, with over 20,000 citations in google scholar
- SRFS project to test newly identified correlates of Chinese and English literacy longitudinally, for optimizing early identification of risk for reading impairment in both Chinese and English across Chinese-speaking societies, and further test the neural signatures and genetics of the targeted, specific behavioral correlates as well as basic, potentially universal processes in both Chinese and English
- Awards and Honours:
 - RGC Senior Research Fellow (2021)
 - Bounding President of the Association for Reading and Writing in Asia
 - Senior Fellow, Institute for Advanced Study in Europe (EURIAS) (2017 2018)
 - President, Society for the Scientific Study of Reading (2012)







Prof Darrell Patrick ROWBOTTOM Department of Philosophy Lingnan University

<u>Project Title:</u>
Philosophy of Contemporary and Future Science









Prof Darrell Patrick ROWBOTTOM

- Professor in Department of Philosophy at Lingnan University
- Research expertise in philosophy of science, epistemology, metaphysics, and foundations of probability
- Editor-in-Chief of *Studies in History and Philosophy of Science*; Associate Editor of *Australasian Journal of Philosophy*; Co-ordinating Editor of *Theory and Decision*
- SRFS project involves philosophers and natural scientists working together, to probe epistemological issues raised by new approaches and emerging developments in science (such as machine learning)
- Awards and Honours:
 - RGC Senior Research Fellow (2021)
 - The 8th Outstanding Scientific Research Output Award (Humanities and Social Sciences), 2nd Class, Ministry of Education (2021)
 - Humanities and Social Sciences Prestigious Fellowship (2013)
 - British Academy Postdoctoral Fellowship (2008)







Prof Hongzhe SUN

Department of Chemistry
The University of Hong Kong

Project Title:

Discovering Bismuth and Relevant Metallo-agents for Medicinal Applications: From Molecular Mechanism of Action to Translational Research



孫紅哲教授







Prof Hongzhe SUN

- Norman & Cecilia Yip Professor in Bioinorganic Chemistry, and Chair Professor of Department of Chemistry at The University of Hong Kong
- Research interests lie in the interface of inorganic chemistry and biology/medicine, with ground-breaking work especially in his discovery of bismuth drugs as antivirals to combat infection from SARS-CoV to SARS-CoV-2
- SRFS project to build up an integrative platform for metal-protein interactions at the proteome-wide scale for identification of key metalloproteins from microbial pathogens, and then investigate the role of metals and metalloproteins in the interface of host-pathogen interaction, and to find a way to enhance biological efficacy of bismuth and relevant compounds against bacterial and virus infection in vivo through chemical formulation, as well as to build an inter-disciplinary consortium for fundamental and translational research
- Awards and Honours:
 - RGC Senior Research Fellow (2021)
 - UC Berkeley Earl L Muetterties Lectureship (2017)
 - WuXi AppTec Life Science & Chemistry Research Award (2016)
 - Croucher Senior Research Fellowship (2010)







Prof Wang YAO

Department of Physics The University of Hong Kong

Project Title:

Moiré Superlattice Physics in Van der Waals Materials



姚望教授







Prof Wang YAO

- Chair Professor in Department of Physics at The University of Hong Kong
- Research interests span condensed matter physics, quantum physics, and optical physics, with a current focus on atomically thin two-dimensional materials and their Van der Waals layered structures, having played a decisive role in creating an important new research direction valley optoelectronics in two-dimensional semiconductors
- SRFS project to explore the profound effects of moiré superstructures, arising from the atomic-stacking-dependent interlayer coupling, on the physics phenomena, material properties and potential device functionalities in a range of van der Waals layer structures
- Awards and Honours:
 - RGC Senior Research Fellow (2021)
 - Fellow of American Physical Society (2020)
 - Croucher Senior Research Fellowship (2020)
 - OCPA Achievement in Asia Award (Robert T. Poe Prize) (2014)







Prof Zijian ZHENG

Institute of Textiles and Clothing The Hong Kong Polytechnic University

Project Title:

Permeable and Multi-functional Stretchable Electronics: Materials, Device, and 3D Monolithic System



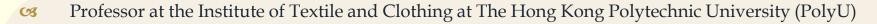
鄭子劍教授







Prof Zijian ZHENG



- Associate Director of the Research Institute of Wearable Intelligent Systems, PolyU
 Associate Director of the University Research Facility in Materials Characterization and Device Fabrication, PolyU
- Research interests include surface and polymer science, nanofabrication, flexible and wearable electronics, energy conversion and storage, well known for the original contributions to the developments of fibrous metallic materials, permeable electronics for stretchable and wearable applications, high-performance flexible optoelectronic electrodes and devices, fiber-based supercapacitors and batteries, and various unconventional nanofabrication tools
- SRFS project to develop a new type of high-performance wearable and breathable sensor system integrated with various sensitive, reliable and multiplexed sensors on the basis of highly breathable materials and structures
- Awards and Honours:
 - RGC Senior Research Fellow (2021)
 - Chang Jiang Scholars Program, China (2020)
 - Service GENEVA International Technology Invention Award (Gold in 2019, Silver in 2015)



