



Award Presentation



RGC Senior Research Fellow Scheme





SRFS Awardees 2021/22

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

Lingnan 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





SRFS Awardee 2021/22

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





SRFS Awardee 2021/22



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)
 - 🏆 Econometric Theory Plura Scripsit Award (2019)





SRFS Awardee 2021/22

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





SRFS Awardee 2021/22



Prof Jianhua HAO

- ☞ Chair Professor of Materials Physics and Devices at The Hong Kong Polytechnic University
- ☞ 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)





SRFS Awardee 2021/22

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*



康瑩儀教授





SRFS Awardee 2021/22



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)
 - 🏆 Outstanding Contributions to Cultural Psychology Award (2020)
 - 🏆 Nanyang Award for Research Excellence (2013)





SRFS Awardee 2021/22

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





SRFS Awardee 2021/22



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)





SRFS Awardee 2021/22

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





SRFS Awardee 2021/22



Prof John Chi-shing LUI

- ☞ Choh-Ming Li Professor of Computer Science and Engineering at The Chinese University of Hong Kong
- ☞ 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)





SRFS Awardee 2021/22

Prof Catherine McBRIDE

**Department of Psychology
The Chinese University of Hong Kong**

Project Title:

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





SRFS Awardee 2021/22



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)
 - 🏆 Founding 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)





SRFS Awardee 2021/22

Prof Darrell Patrick ROWBOTTOM
Department of Philosophy
Lingnan University

Project Title:

Philosophy of Contemporary and Future Science





SRFS Awardee 2021/22



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)





SRFS Awardee 2021/22

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





SRFS Awardee 2021/22



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 Muettterties Lectureship (2017)
 - 🏆 WuXi AppTec Life Science & Chemistry Research Award (2016)
 - 🏆 Croucher Senior Research Fellowship (2010)





SRFS Awardee 2021/22

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





SRFS Awardee 2021/22



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)





SRFS Awardee 2021/22

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





SRFS Awardee 2021/22



Prof Zijian ZHENG

- ☞ Professor at the Institute of Textile and Clothing at The Hong Kong Polytechnic University (PolyU)
- ☞ 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)
 - 🏆 GENEVA International Technology Invention Award (Gold in 2019, Silver in 2015)

