RGC Early Career Award
ECA Awardees

Dr Venus Hiu Ling LO
City University of Hong Kong

Dr Xin HUANG
Hong Kong Baptist University

Prof Kin-wai CHAN
The Chinese University of Hong Kong

Prof Jacque Pak-kan IP
The Chinese University of Hong Kong

Prof Changhong ZHAO
The Chinese University of Hong Kong

Dr Yi JIANG
The Hong Kong Polytechnic University

Dr Chau-ming SO
The Hong Kong Polytechnic University

Dr Man-chung YUE
The Hong Kong Polytechnic University
ECA Awardees

Prof Ivan Chi-ho IP  
The Hong Kong University of Science and Technology

Dr Ke WANG  
The Hong Kong University of Science and Technology

Dr Junzhi LIU  
The University of Hong Kong

Dr Laura Anne MEEK  
The University of Hong Kong

Dr Yung-wa SIN  
The University of Hong Kong
Dr Venus Hiu Ling LO
Department of Management Sciences
City University of Hong Kong

Project Title:
Multi-Stage Assortment Optimization for an Omnichannel Retailer
PhD from Cornell University

Assistant Professor in the Department of Management Sciences at CityU

Interests in the field of revenue management, with a focus on assortment optimization in multi-channel and multi-stage settings.

Her recent work focuses on developing algorithms and insights for complex models that account for the interactions between a retailer’s online retail channel and physical stores.

This project studies omnichannel assortment optimization to identify strategies that can help an omnichannel retailer increase his total expected revenue.

Her work has been presented at international conferences such as INFORMS and POMS.
Dr Xin HUANG
Department of Computer Science
Hong Kong Baptist University

Project Title:
Efficient Community Search on Large Directed Graphs
PhD from the Chinese University of Hong Kong

Assistant Professor in the Computer Science at HKBU

Interests in developing innovative technologies and theories of data science, especially on large-scale graph data management and mining.

This project investigates new problems regarding community search over large directed graphs. It aims at developing novel community models and techniques for efficiently finding query-based dense communities.
Prof Kin-wai CHAN
Department of Statistics
The Chinese University of Hong Kong

Project Title:
Multiple Incompatibility Problems in Multiple Imputation Procedures
PhD from Harvard University

Assistant Professor in the Department of Statistics at CUHK

Interests in statistical inference for dependent data and incomplete data. His research topics include covariance matrix estimation, change point detection, multi-phase inference and data privacy.

This project aims at developing a unified procedure for handling various incompatible problems. It is particularly important for this age of data science as it enables division of labor, protection of privacy and knowledge fusion.

Awards and Honours:
ثقافة Faculty Exemplary Teaching Award (2019)
Prof Jacque Pak-kan IP
School of Biomedical Sciences
The Chinese University of Hong Kong

Project Title:
Investigating the roles of input-specific cooperative synaptic plasticity in visual cortical plasticity: implications for amblyopia
PhD from The Hong Kong University of Science and Technology

Assistant Professor in the School of Biomedical Sciences at CUHK

Devoted his research to investigate the mechanisms of synaptic plasticity, and will continue to expand his research focus on how such mechanistic defects result in autism-related disorders.

This project will provide critical information for understanding the roles of synaptic plasticity in the brains in the context of health and disease.

Awards and Honours:
- Croucher Studentship
- Sir Edward Youde Memorial fellowship
- IBRO Rita Levi-Montalcini Research fellowship
- Human Frontier Science Program Long-Term fellowship
Prof Changhong ZHAO  
Department of Information Engineering  
The Chinese University of Hong Kong

Project Title:  
Optimizing Multiphase Power Flow via Exact Convex Relaxation and Distributed Feedback Design
PhD from California Institute of Technology

Assistant Professor of Information Engineering at CUHK

Interests in control and optimization of network systems such as power grid.

This project aims to develop a fast and scalable method to solve the fundamental and challenging optimal power flow (OPF) problem for operating a power network integrated with a large number of distributed energy resources.

Awards and Honours:

- Best PhD thesis awards at both department and division levels from California Institute of Technology
- Led multiple research projects at the U.S. National Renewable Energy Laboratory on smart grid control
Dr Yi JIANG
Department of Civil and Environmental Engineering
The Hong Kong Polytechnic University

Project Title:
Advanced Nanocomposite Membranes Synthesized by An Aerosol-assisted Fabrication Approach for Water and Wastewater Treatment
Prof Yi JIANG

PhD from Washington University

Assistant Professor in the Department of Civil and Environmental Engineering at PolyU

Major research interests and areas are environmental applications and implications of nanotechnology, aerosol technology and advanced water treatment.

This project plans to develop a novel aerosol-assisted fabrication approach for synthesizing a new paradigm of nanocomposite water treatment membranes with high and uniform surface coverage of engineered functional nanomaterials.

Awards and Honours:
- Excellence in Review award from the journal Environmental Science & Technology
- CH2M/AEESP Outstanding Doctoral Dissertation Award from the Association of Environmental Engineering and Science Professors
- Graduate Student Award from the American Chemical Society
- Doctoral Research Award from Washington University in St. Louis.
Dr Chau-ming SO  
Department of Applied Biology and Chemical Technology  
The Hong Kong Polytechnic University

Project Title:  
A Rational Design of Heterocyclic-based Ligands and Application in Carbon–Carbon and Carbon–Heteroatom Bond Forming Coupling Reactions
PhD from the Hong Kong Polytechnic University

Assistant Professor in the Department of Applied Biology and Chemical Technology at PolyU

Interests in developing new ligands and exploring their application in carbon-carbon and carbon-heteroatom bond formation reactions.

This project will establish a facile approach for synthesizing phosphine ligands, constructing the ligand library, and developing a methodology to address currently problematic coupling reactions and unexplored substrates transformations.

Awards and Honours:
- Hong Kong Young Scientist Award
- Eli Lilly Asia Outstanding Graduate Thesis Award (1st Place Award)
- Higher Education Outstanding Scientific Research Output Awards (Science and Technology) Second-class Award in Natural Science, Ministry of Education, PR China
Dr Man-chung YUE
Department of Applied Mathematics
The Hong Kong Polytechnic University

Project Title:
Distributional Robustification with Fisher-Rao Ambiguity Sets
PhD from the Chinese University of Hong Kong

Assistant Professor in the Department of Applied Mathematics at PolyU

Interests in continuous optimization and its applications in machine learning, data science, signal processing and operations research.

This project proposes and studies a new methodology for decision making under uncertainty. The project is expected to make a positive impact to the application domains.

He settles an open question in the theory of interior-point methods. It is recently published in the journal Mathematics of Operations Research.
Prof Ivan Chi-ho IP
Department of Mathematics
The Hong Kong University of Science and Technology

Project Title:
The Theory of Positive Representations and its Applications
PhD from Yale University

Assistant Professor in the Department of Mathematics at HKUST

Interests in intersection of representation theory, quantum geometry and mathematical physics.

This project will promote connections to different areas of mathematics and physics, including cluster algebra and quantum integrable systems.

Awards and Honours:
- International Mathematical Olympiad Medalist for the Hong Kong team (2002)
Dr Ke WANG
Department of Mathematics
The Hong Kong University of Science and Technology

Project Title:
Low-rank perturbations of large random matrices
PhD from Rutgers University-New Brunswick

Assistant Professor of Mathematics at HKUST

Interests in probabilistic combinatorics and random matrix theory and made significant contributions to the understanding of the theory and applications of random matrices and random graphs.

This project elucidates the asymptotic statistical behavior of the extreme eigenvalues and eigenvectors of a large random matrix perturbed by a low-rank error. It find numerous applications in computer science, finance, statistics, signal processing, and wireless communication.
Dr Junzhi LIU
Department of Chemistry
The University of Hong Kong

Project Title:
Exploring solution-phase synthetic approaches to nonalternant ring topologies in graphene nanostructures
Dr Junzhi LIU

PhD from the Max Planck Institute for Polymer Research

Assistant Professor at HKU

Interests in bottom-up organic synthesis of topological carbon nanostructures and their applications in organic electronics.

Published more than 40 peer-reviewed papers in high-impact chemistry journals, including Science (1 paper), J. Am. Chem. Soc. (14 papers), Angew. Chem. Int. Ed. (7 papers), Adv. Mater. (1 paper), Chem. Sci. (1 paper), etc.

This project will provide a route for accessing novel properties of graphene nanostructures containing non-alternant topologies, such as curvatures, large open-shell biradical characters, increased chemical activities and new electronic functionalities (for applications in organic field effect transistors, nonlinear optics or spintronics).

Awards and Honours:
- “Marie-Curie” fellowship (2011-2014)
- Chinese Government Award for Outstanding Self-financed Students Abroad (2015)
- International Union of Pure and Applied Chemistry (IUPAC) International Award for Young Chemists - Honorable Mention Award (2017)
Dr Laura Anne MEEK
Centre for the Humanities and Medicine
The University of Hong Kong

Project Title:
Fakes, Poisons, and Medicines: Reconfiguring Pharmaceuticals in Tanzania
Dr Laura Anne MEEK

- PhD from the University of California, Davis
- Assistant Professor in the Centre for the Humanities and Medicine at HKU
- Interests in biomedical globalization, bodily epistemologies, and the politics of healing in East Africa.

This project will address critically important issues regarding pharmaceutical use in Tanzania, where 30-60% of drugs are counterfeit. Understanding how people respond to such uncertain conditions will help policymakers and medical practitioners concerned about pharmaceutical use in and beyond Tanzania.
Dr Yung-wa SIN
School of Biological Sciences
The University of Hong Kong

Project Title:
Genetic Basis of Plumage Coloration in the Seasonally and Sexually Dichromatic American Goldfinch and the Evolution of Plumage Patterns
PhD from the University of Oxford

Assistant Professor in the School of Biological Sciences at HKU

Interests in molecular ecology, evolutionary biology and behavioural genomics.

Research topics include mate choice, animal behaviour, animal coloration, host-pathogen co-evolution, gene family evolution, genotype-phenotype association, phylogenomics, and conservation genomics.

This project investigate the genes and regulatory elements responsible for plumage color patterning, and sexual and seasonal dichromatism.

Awards and Honours:
- Croucher Scholarship