

CityU Summer Exchange Programme 2023 - Project List

Department	Project Title	No. of Vacancy
Advanced Design and System Engineering Management	Advanced manufacturing for anti-virus products	2
	Cu-to-Cu direct bonding for 3DIC packaging application	2
	System modelling and analysis with applications	1
	Statistical monitoring of time-between-events	1-2
	Data Driven approaches for quality prediction	1
	Damage Identification for Aircraft Composite Structures	1-2
Architecture and Civil Engineering	Computer Vision and Nature Language Processing for Smart Constitution	4
	Life Cycle Assessment for Building and Infrastructure	2
	UAV for Resilient Infrastructure	2
	Integration of BIM and GIS	2
	Environment and Social Governance in Sustainable Society	2
	Carbon Neutral City	2
Biomedical Engineering	High-resolution functional brain imaging using light and ultrasound	2
	Assembly and manufacturing of biosensor systems for disease detection and monitoring	2
	Imaging glucose utilization in the brain using magnetic resonance imaging (MRI)	2
	Wearable materials for healthcare	2
	Wearable sensors for CVD monitoring	2
	Physiological modeling	1
	Development of a computer vision-aided teleoperation system of millirobot in stomach	2
	Microneedle for mRNA delivery	1
Biomedical Sciences	Molecular epidemiological study of complex diseases	1
Chemistry	Photofunctional transition metal complexes for bioorthogonal labeling and imaging	1
	Using computers to study organic reactions	1
	Using computers to study the structures of molecules	1
	Copper that cancer! Development of copper-based drugs for treatment of metastatic cancers	1
	Development of anticancer vaccines: metal complexes inducing immunogenic cell death in aggressive breast cancers	1
	How can marine mollusks help battle cancer? (synthetic project)	1
	Investigation of novel biologically active substances for the treatment of aggressive cancers	1
	Learning through projects: Advanced characterization technique training using the world's thinnest material	2
Computer Science	Dynamic Programmings on Omics Data	2
	Pipelines to study microbiome data	2
Electrical Engineering	Design and characterization of lithium niobate photonic integrated circuits	1
	RISC-V High-Level Synthesis and Architecture	1
	Analysis of human behavior and human-object interaction in sports	1
	Hand gesture recognition using wearable at wrist	1
	Analysis of emotion and human-object interaction in artworks	1
	Data Analytics on Complex Diseases	1
	Neuromorphic Cameras for Internet of Video Things	2
Mathematics	A bionic learning scheme for generating geometric shapes	1
	Mathematical modeling of anomalous light diffraction phenomena	2
	Mean field game and its applications	2
	Geometric maximal functions in analysis	1
	Modeling and Analyzing the development of Cell Lineage	1
	An investigation into the Sobolev regularity of singularities at black hole horizons	1
	Berry Essen bound and convergence rate for Central Limit Theorem	1
	Discontinuous Galerkin methods for incompressible flow simulations	1
Mechanical Engineering	Critical heat flux and boiling enhancement with advanced surface structures	2
	Condensation heat transfer enhancement with advanced surface structures	2
	Supercritical fluids applications in energy systems	2
	Battery thermal management	2
	Design and fabrication of bioinspired composite materials	1-2
Physics	Computer simulations of DNA and protein knots	1
	Computer simulation of plastic crystal phase transition	1
	Computer simulation of peptides and cell membrane interactions	1
	Computer simulation of the effects of ions on DNA structures and interactions	1
	Single molecule conductance measurements of amine-functionalized compounds	1
	Many-body localization: the breakdown of quantum statistical mechanics	1-2
	Search for novel electronic states in twisted materials	1-2