The Singapore National Research Foundation (NRF) Fellowship Scheme is a competitive programme that seeks to attract, recruit and root outstanding young scientists from around the world to conduct independent research in Singapore.

The Singapore NRF Fellowship Scheme aims to build up a pool of bright, passionate researchers in various fields of science and technology to help us advance our scientific and technological edge.

CLASS OF 2023





National University of Singapore Saw Swee Hock School of Public Health

Research Title : Robust Bayesian inference of characterization and spread of infectious diseases by integrating genomic, serological, and epidemiological information

Homepage



Dr YAN Chuan

Agency for Science, Technology and Research (A*STAR) Institute of Molecular and Cell Biology (IMCB)

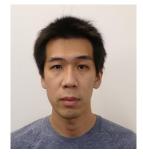
Research Title : Precision oncology approaches for hepatocellular carcinoma Homepage



Dr TAN Yong Zi

National University of Singapore Department of Biological Sciences

Research Title : Structure-Function Understanding of Activation and Inactivation of a Bitter **Taste Receptor** : <u>https://www.tyzlab.com/</u> Homepage



Dr Sho SUZUKI

Nanyang Technological University School of Biological Sciences

Research Title : Investigating the molecular basis of endosomal membrane dynamics and its impact to neurodegeneration :

Homepage



Dr LOW Jun Siong

National University of Singapore / Agency for Science, Technology and Research (A*STAR)

Research Title : Clonal analysis of antigen-specific T and B cells in stomach cancer to guide personalized immunotherapy and vaccine design Homepage :



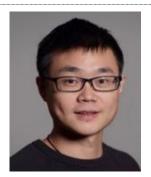
Dr Kayla NGUYEN National University of Singapore Department of Physics & Department of Electrical & Computer Engineering

Research Title : New direct electron imaging techniques for quantum materials Homepage :



Dr HO Wen Wei National University of Singapore Department of Physics and the Centre for Quantum Technologies

Research Title : Non-equilibrium Many-Body Physics and Quantum Information Science in the age of Programmable Quantum Systems : <u>https://sites.google.com/view/wenweiho/bio</u> Homepage



Dr ZHU Di National University of Singapore / Agency for Science, Technology and Research (A*STAR)

Research Title : Developing an integrated photonic platform for scalable quantum information processing :

Homepage



Dr YANG Le

Agency for Science, Technology and Research (A*STAR) Institute of Materials Research and Engineering (IMRE)

Research Title : Spinning Towards a 'Bright' Future: Energy-Harvesting with Spin-Triplet Excitons in Luminescent Materials

Homepage



Dr Tedrick Thomas Salim LEW

:

National University of Singapore Department of Chemical and Biomolecular Engineering

 Research Title : Rational Design of Plant Nanotechnology: Towards Climate-Resilient and Smart Agriculture

 Homepage : https://www.lewlab.org/



Dr LIM Yuan Chong Jason

Agency for Science, Technology and Research (A*STAR) Institute of Materials Research and Engineering (IMRE)

 Research Title :
 ECO-Cycling: Environmentally-friendly Catalytic Oxidations for Upcycling Waste Polyethylenes into Chemical Commodities

 Homepage :
 :

CLASS OF 2022



Dr FERNANDO Palamandadige Basura Chinath

Agency for Science, Technology and Research (A*STAR) Institute of High Performance Computing (IHPC)

Research Title : Learning why do we do what we do through abductive and deductive understanding of human actions using Neurosymbolic AI Homepage : https://basurafernando.github.io/



Dr Julius FREDENS

National University of Singapore Yong Loo Lin School of Medicine

Research Title : Advancing DNA-Delivery for Gene Therapy Homepage : <u>https://medicine.nus.edu.sg/bch/faculty/julius-fredens/</u>



Dr Kyle MORGAN Nanyang Technological University Asian School of the Environment (ASE)

Research Title : Back to the future: Integrating multiscale coral reef functions in Southeast Asia Homepage : <u>https://earthobservatory.sg/research/climate/coral-reef-geomorphology</u>



Dr LUM Yanwei

National University of Singapore, Department of Chemical and Biomolecular Engineering / A*STAR, Institute of Materials Research and Engineering (IMRE)

Research Title : Developing innovative toolkits for elucidating the fundamentals of electrochemical CO2-to-chemicals conversion Homepage : <u>https://lumyanwei.wixsite.com/lumresearch/</u>



Dr Prashant Nalini VASUDEVAN National University of Singapore Department of Computer Science

Research Title: Fine-Grained Cryptography

Homepage : <u>https://www.comp.nus.edu.sg/~prashant/</u>



Dr Sandip BASAK

Nanyang Technological University School of Biological Sciences

Research Title : Understanding the molecular mechanism of olfactory receptors in insects Homepage : <u>https://www.ntu.edu.sg/sbs/research/research-directory/sandip-basak</u>



Dr Steven TOUZARD National University of Singapore Department of Materials Science and Engineering, Department of Physics and The Centre for Quantum Technologies

Research Title : Building quantum networks of superconducting circuits mediated by telecom photons Homepage : <u>https://twitter.com/steventouzard?lang=en</u>



Dr SUN Xuyang Alfred Duke-NUS Medical School Neuroscience and Behavioural Disorders Programme

Research Title : Constructing physiological human neural models to deconstruct PD pathogenesis Homepage : <u>https://www.duke-nus.edu.sg/nbd/the-team/faculty-members/details/Detail/alfred-</u> <u>sun-xu-yang</u>



Dr Tong LING

Nanyang Technological University School of Chemical and Biomedical Engineering

Research Title : All-optical electrophysiology: function-associated cellular deformations as intrinsic biomarkers for all-optical functional imaging at the cellular scale Homepage : <u>https://www.tonglinglab.com</u>



Dr Ahmet AVSAR

National University of Singapore Department of Materials Science and Engineering

Research Title : Unconventional Spin Transport in Layered Quantum Materials for Lowpower Electronics

Homepage : <u>https://sites.google.com/site/aavsar</u>

CLASS OF 2021



Dr Andrew HOLLE

National University of Singapore Department of Biomedical Engineering / Mechanobiology Institute

Research Title : Confinement Mechanobiology: A New Paradigm for Spatiotemporally Controlling Stem Cell Differentiation Homepage : <u>https://www.mbi.nus.edu.sg/andrew-holle/</u>



Dr LIANG Kaicheng

Agency for Science, Technology and Research (A*STAR) Institute of Bioengineering and Bioimaging (IBB)

 Research Title
 : Comprehensive intra-operative assessment of tissue pathology in vivo and ex vivo with high-speed endoscopic microscopy and machine learning

 Homepage
 : <u>https://liangresearch.com/</u>



Dr WEE Lei Caroline

Agency for Science, Technology and Research (A*STAR) Institute of Molecular and Cell Biology (IMCB)

Research Title : You Are What You Eat: Gene-Diet Interactions Regulating Appetite and Food Choice Homepage : <u>www.carolineweelab.com</u>



Dr LUO Xinwei Sarah

Agency for Science, Technology and Research (A*STAR) Institute of Molecular and Cell Biology (IMCB)

Research Title : Defining a bidirectional liver-brain axis in metabolic regulation Homepage : <u>http://www.sarahluo.com/</u>



Dr LI Qianxiao National University of Singapore Department of Mathematics

Research Title : A Dynamical Systems Approach to Deep Learning and its Applications in Science Homepage : https://blog.nus.edu.sg/gianxiaoli/

Dr LI Boyang

Nanyang Technological University School of Computer Science and Engineering

Research Title : Constructing Event-level Narrative Intelligence from the Ground Up Homepage : <u>www.boyangli.org</u>



Dr WANG Lei

National University of Singapore Department of Chemical and Biomolecular Engineering

Research Title : Controlling Electrocatalytic Carbon Dioxide Reduction: Towards Sustainable Fuels and Chemicals Production Homepage : <u>https://blog.nus.edu.sg/wanglab/</u>



Dr SHOU Zheng National University of Singapore Department of Electrical and Computer Engineering

 Research Title
 : Towards Next-generation Video Intelligence: Training Machines to Understand Actions and Complex Events

 Homepage
 : <u>https://sites.google.com/view/showlab</u>



Dr Sergey KOZLOV National University of Singapore Department of Chemical and Biomolecular Engineering

Research Title : Rational Design of Catalysts Enhanced by Nanoscale Metal-Oxide Interactions Homepage : <u>https://blog.nus.edu.sg/compnanocat/</u>



Dr CHANG Guoqing

Nanyang Technological University School of Physical and Mathematical Sciences

Research Title : Theoretical and Numerical Study of Topological Materials for Applications in Next-Generation Quantum Technologies Homepage : <u>https://sites.google.com/view/guoqingchang/home</u>



Dr Kedar HIPPALGAONKAR

Nanyang Technological University School of Materials Science and Engineering

 Research Title
 : Thermoelectric Materials by Design: Understanding and Extrapolating from Non-Equilibrium Charge and Heat Transport

 Homepage
 : <u>https://www.ntu.edu.sg/mse/about-us/our-people/faculty-staff/kedar</u>



Dr Philipp HARMS Nanyang Technological University School of Physical and Mathematical Sciences

Research Title : Geometry, probability, and deep learning Homepage : <u>https://www.philippharms.com/</u>

CLASS OF 2020



Dr Pieremanuele CANEPA

National University of Singapore Department of Materials Science and Engineering

Research Title : Designing Functional Interfaces of Batteries Using Theory and Computation Homepage : <u>https://caneparesearch.org/</u>



Dr Hortense LE FERRAND

Nanyang Technological University School of Mechanical and Aerospace Engineering

Research Title : Additive manufacturing of resilient, strong and functional composites through bio-inspired microstructures. Homepage : <u>https://hortenseleferrand.wixsite.com/hortenseleferrand</u>



Dr Christopher LEE

Nanyang Technological University School of Electrical and Electronic Engineering

Research Title : Development of Novel Electric Machine Systems with Gearless Structure for Emerging Applications Homepage : <u>https://dr.ntu.edu.sg/cris/rp/rp00563</u>



Dr Yvonne GAO National University of Singapore Department of Physics

 Research Title
 : Enabling Scalable Quantum Computation via a Programmable Quantum Router

 Homepage
 : <u>https://www.physics.nus.edu.sg/faculty/yvonne-y-gao/</u>



Dr YANG Bo

Nanyang Technological University School of Physical and Mathematical Science

 Research Title
 : Interplay between Geometry and Topology: Effective Theories and Novel

 Manipulations in Low-dimensional Strongly Correlated Topological Materials

 Homepage
 : https://research.ntu.edu.sg/expertise/academicprofile/Pages/StaffProfile

.aspx?ST EMAILID=YANG.BO&CategoryDescription=Physics



Dr QIAO Yuan

Nanyang Technological University School of Physical and Mathematical Science

 Research Title
 : A Chemical Biology Approach to Investigate the Structures and Functions of Blood Peptidoglycan-ome in Human

 Homepage
 : <u>https://www.yqiaolab.com/home</u>



Dr Gloryn CHIA

National University of Singapore Department of Pharmacy

Research Title: Engineering Personalized Cancer Vaccines Using Pluripotent Stem Cells-
Derived Red Blood Cells As Artificial Antigen Presenting CellsHomepage: http://pharmacy.nus.edu.sg/profile_glorynchia/



Dr Jun NISHIYAMA

Duke-NUS Medical School Neuroscience and Behavioural Disorders Programme

Research Title : Decoding Protein–Protein Interactions in Single Dendritic Spines Homepage : <u>https://www.duke-nus.edu.sg/directory/detail/nishiyama-jun</u>



Dr Perrine HAMEL Nanyang Technological University Asian School of the Environment

Research Title : Designing resilient and inclusive cities in Asia-Pacific Homepage : <u>https://www.perrinehamel.com/</u>

CLASS OF 2019 (ARTIFICIAL INTELLIGENCE FELLOWSHIP)



Dr YAO Yingjie Angela National University of Singapore Department of Computer Science

Research Title : Efficient Modelling and Learning for Video Understanding Homepage : <u>https://www.comp.nus.edu.sg/cs/bio/ayao/</u>



Dr Arnab BHATTACHARYYA National University of Singapore Department of Computer Science

Research Title : Efficient Algorithms with Provable Guarantees for Causal Inference Homepage : <u>https://www.comp.nus.edu.sg/cs/bio/arnab/</u>



Dr Kuldeep S. MEEL National University of Singapore Department of Computer Science

Research Title : Provably Verified and Explainable Probabilistic Reasoning Homepage : <u>https://www.comp.nus.edu.sg/cs/bio/meel/</u>

CLASS OF 2019



Dr Aron MELTZNER

Nanyang Technological University Asian School of the Environment

 Research Title : Sea-level and land-level change in Southeast Asia: A geological approach to quantifying hazard from rising seas and earthquakes

 Homepage : https://earthobservatory.sg/people/aron-meltzner



Dr CHEN Qing Lian, Patricia National University of Singapore Department of Psychology

Research Title : Scalable Interventions to Cultivate Strategically Self-Regulated Learners Homepage : <u>https://www.patriciachen.com/</u>



Dr Franklin ZHONG Lei

Nanyang Technological University Lee Kong Chian School of Medicine

Research Title : Targeting innate immune sensors to develop novel immune-modulatory therapeutics Homepage : <u>http://www.lkcmedicine.ntu.edu.sg/aboutus/Faculty-and-</u> Staff/Pages/Franklin-Zhong.aspx



Dr Jonathan SCARLETT National University of Singapore Department of Computer Science

Research Title : Robust Statistical Learning Under Model Uncertainty Homepage : <u>https://www.comp.nus.edu.sg/~scarlett/</u>



Dr LIM Ci Wen Charles National University of Singapore Department of Electrical & Computer Engineering

Research Title : Framework for Practical Quantum Communication with Untrustworthy Devices Homepage : <u>https://www.ccwlim.com/</u>



Dr Qian HE

National University of Singapore Department of Materials Science & Engineering

Research Title : Electron Microscopy for Catalyst Discovery and Innovation Homepage : <u>https://www.eng.nus.edu.sg/mse/staff/he-qian/</u>



Dr SHAM Lok To, Chris National University of Singapore Department of Microbiology & Immunology

Research Title: Exploiting capsule synthesis pathway in Streptococcus pneumoniae to
identify new antimicrobial compounds.Homepage: http://medicine.nus.edu.sg/mbio/About-Us/Academic-Staff.html



Dr YU Jing Nanyang Technological University School of Materials Science & Engineering

 Research Title : Bio-inspired adhesives for wet environment: Molecular Designs to Applications

 Homepage
 : <u>http://research.ntu.edu.sg/expertise/academicprofile/Pages/Staf</u> <u>fProfile.aspx?ST_EMAILID=YUJING&CategoryDescription=Nanote</u> <u>chnologyNanoScience</u>

CLASS OF 2018



Dr Vincent TAN

National University of Singapore Department of Electrical and Computer Engineering

Research Title : Fundamental Performance Limits for Statistical Learning Algorithms Homepage : <u>https://www.ece.nus.edu.sg/stfpage/vtan</u>



Dr LOH Huanqian National University of Singapore Department of Physics

 Research Title
 : Designing Novel Quantum Materials at the Microscopic Level with Ultracold Molecules

 Homepage
 : <u>http://www.physics.nus.edu.sg/staff/lohhq.html</u>



Dr NG Shi Yan

Agency for Science, Technology and Research (A*STAR) Institute of Molecular and Cell Biology

Research Title : Investigating Altered Metabolic Pathways in Neurodegeneration using		
	Organoids	
Homepage	: https://www.a-star.edu.sg/imcb/Science/Investigators/Independent-	
	Fellows/Independent-Fellows-Profile/ResearchListID/12	



Dr LI Yinghui

Nanyang Technological University School of Biological Sciences

Research Title : Role of non-canonical NF-kB signaling in the transcriptional and epigenetic reprogramming of malignant cancers

Homepage : <u>http://research.ntu.edu.sg/expertise/academicprofile/Pages/StaffPr</u> ofile.aspx?ST_EMAILID=LIYH&CategoryDescription=BiomedicalScien cesLifeSciences&print=1



Dr Matteo SEITA

Nanyang Technological University School of Mechanical and Aerospace Engineering

Research Title : Layerwise microstructure scanner: A new technology for online materials assessment in additive manufacturing Homepage : <u>http://www.ntu.edu.sg/home/mseita/</u>



Dr David LALLEMANT

Nanyang Technological University Earth Observatory of Singapore

Research Title : Analytics for Dynamic Urban Risk and Disaster Impact Modeling Homepage : <u>http://david-lallemant.com/</u>



Dr Georgios PILIOURAS Singapore University of Technology and Design Engineering Systems and Design

Research Title : Algorithmic Prediction and Practical Control of Large Scale Population Dynamics Homepage : <u>http://people.sutd.edu.sg/~georgios/</u>

CLASS OF 2017



Dr Derrick ONG

National University of Singapore Yong Loo Lin School of Medicine

Research Title : Mechanisms of Aberrant Brain Stem Cell Behavior: Implications in Aging and Gliomagenesis : http://medicine.nus.edu.sg/phys/Staff Fac Acad Ong.html Homepage



Dr LI Jingmei

Agency for Science, Technology and Research (A*STAR) Genome Institute of Singapore

Research Title : Identification of women at high-risk of breast cancer in Singapore: Towards more effective primary prevention

: https://www.a-star.edu.sg/gis/our-people/investigator-Homepage details.aspx?source=faculty member&user id=205



Dr CHEN Qingfeng

Agency for Science, Technology and Research (A*STAR) Institute of Molecular and Cell Biology

Research Title	e : Development of Humanized Mouse Model to Study Human Specific Immune
	Responses, Pathogenesis and Drug Discovery of Human Systemic Lupus
	Erythematosus
Homepage	: https://www.a-star.edu.sg/imcb/Science/Investigators/Pls/Pls-
	Profile/ResearchListID/21



Dr SEH Zhi Wei

Agency for Science, Technology and Research (A*STAR) Institute of Materials Research and Engineering

Research Title : Multivalent Energy Storage for a Sustainable Future: A Quest beyond Lithium-Ion Technologies : http://www.zwseh.com/ Homepage



Dr Lena HO

Duke-NUS Medical School

Research Title : Finding Gems in Disguise: Novel Peptides and Hormones from Long Non-Coding RNAs Significance, Utility and Therapeutic Potential : https://www.duke-nus.edu.sg/content/lena-ho Homepage



Dr Thomas YEO

National University of Singapore Department of Electrical and Computer Engineering

Research Title : Unsupervised Machine Learning of Mental Disorder Factors From Magnetic Resonance Imaging Homepage : <u>https://sites.google.com/site/yeoyeo02/</u>



Dr John HO National University of Singapore Department of Electrical and Computer Engineering

Research Title : Small-scale Wireless Devices for Bioelectronic Therapies Homepage : <u>https://www.ece.nus.edu.sg/stfpage/hsyj/index.html</u>



Dr Benjamin Tee

National University of Singapore Department of Materials Science & Engineering

Research Title : Nature-inspired digital devices and networks for multi-scale environment sensing Homepage : <u>http://www.benjamintee.com/</u>



Dr Yair ZICK National University of Singapore Department of Computer Science

Research Title : Data-Driven Strategic Collaboration



Dr Xavier BRESSON National University of Singapore School of Computing

Research Title : Unifying Spectral Networks and Sparse Representations for Big Data Science Homepage : <u>https://www.comp.nus.edu.sg/cs/bio/xavier/</u>



Dr Bent WEBER Nanyang Technological University School of Physical and Mathematical Sciences

Research Title : Atomic Manipulations in 2D Materials for Quantum Computation Applications Homepage : <u>http://weber-lab.com/</u>

CLASS OF 2016



Dr Manvendra SINGH

Duke-NUS Medical School Cardiovascular and Metabolic Disorders Program

Research Title : Role of Hippo Signalling in the Epicardium: Expanding the Outer Limit of Heart Repair Homepage : https://www.duke-nus.edu.sg/cvmd/content/manvendra-singh



Dr GU Mile

Nanyang Technological University School of Physical and Mathematical Sciences

Research Title : Enhancing the Efficiency of Modelling and Simulating Complex Systems via Quantum Mechanics Homepage : <u>http://www.milegu.org</u>



Dr FOO Jia Nee

Nanyang Technological University Neuroscience and Mental Health Programme, Lee Kong Chian School of Medicine

Research Title : Genetic and genomic approaches to unlock the secrets of neurological diseases Homepage : <u>http://www.lkcmedicine.ntu.edu.sg/aboutus/Faculty-and-Staff/Pages/Foo-Jia-Nee.aspx</u>



Dr Caroline BOUVET DE MAISONNEUVE

Nanyang Technological University Earth Observatory of Singapore

Research Title : Assessing the Volcanic Hazard for Singapore Homepage : <u>http://www.earthobservatory.sg/people/caroline-bouvet-de-maisonneuve</u>



Dr Justin SONG Nanyang Technological University School of Physical and Mathematical Sciences

Research Title : Topological electronics and opto-electronics (TEAO): van der Waals heterostructures as a platform for new valley, spin, energy, and charge manipulation in devices Homepage : <u>https://sites.google.com/site/justincsong/</u>



Dr TEE Wee Wei

Agency for Science, Technology and Research (A*STAR) Institute of Molecular and Cell Biology

Research Title : DNA Topological and Epigenetic Regulation in Neurodevelopment and Disease Homepage : <u>https://wwteelab.com/</u>



Dr Hady Wirawan LAUW Singapore Management University School of Information Systems

Research Title: Dimensionality Reduction for Recommender Systems: Unified Latent Co-
representation of Multi-Modal Preference SignalsHomepage: http://www.smu.edu.sg/faculty/profile/9621/Hady-W-LAUW

CLASS OF 2015



Dr Yvonne TAY

National University of Singapore Cancer Science Institute of Singapore

Research Title	: MicroRNA and competing endogenous RNA crosstalk: Post-transcriptional
	regulatory networks in cancer pathogenesis and therapeutics
Homepage	: http://bch.nus.edu.sg/bchtmsy.htm



Dr KIM Young-Jin Nanyang Technological University School of Mechanical & Aerospace Engineering

Combs

Research Title : Ultra-precision Dimensional Metrology using Femtosecond Laser Frequency



Dr GAO Weibo

Nanyang Technological University School of Physical & Mathematical Sciences

Research Title : Quantum manipulation of hybrid solid state system Homepage : <u>http://www1.spms.ntu.edu.sg/~weibogroup/</u>



Dr TAM Wai Leong

Agency for Science, Technology and Research (A*STAR) Genome Institute of Singapore

Research Title : Integrated strategies to target the vulnerabilities of cancer stem cells Homepage : <u>https://www.a-star.edu.sg/gis/our-people/investigator-</u> <u>details.aspx?source=faculty_member&user_id=172</u>



Dr Daniel MESSERSCHMIDT

Agency for Science, Technology and Research (A*STAR) Institute of Molecular and Cell Biology

 Research Title
 : Mechanisms of epigenetic reprogramming and its implications in complex human diseases

 Homepage
 : <u>https://www.a-star.edu.sg/imcb/Science/Investigators/Pls/Pls-</u> Profile/ResearchListID/69



Dr KOH Tong Wey

Temasek Life Sciences Laboratory Limited Developmental Biology

Research Title : Investigating the Interactions between Type 2 Diabetes and Neurodegeneration Homepage : <u>http://www.tll.org.sg/group-leaders/koh-tong-wey/</u>

CLASS OF 2013



Dr Joseph FITZSIMONS

Singapore University of Technology and Design Engineering Product Development (EPD)

Research Title : Methods for Verifying Quantum Computation



Dr Takaomi SANDA National University of Singapore Cancer Science Institute of Singapore

Research Title: Novel Therapeutics Targeting the Core Regulatory Circuits in Human T-cell
Acute Lymphoblastic LeukemiaHomepage: https://www.csi.nus.edu.sg/ws/team/pi/takaomi-sanda



Dr Sylvain BARBOT

Nanyang Technological University Earth Observatory of Singapore

Research Title : Physics-Based and Data-Driven Predictive modelling of the Earthquake Cycle in Sumatra



Dr Melissa FULLWOOD

Nanyang Technological University Cancer Science Institute of Singapore

 Research Title
 : Harnessing the Power of Next-Generation DNA Sequencing: Characterization of Human Transcriptomes and Transcriptome Regulation Mechanisms in Gastric Cancer

 Homepage
 : <u>http://fullwoodlab.com/</u>



Dr Judith HUBBARD

Nanyang Technological University Earth Observatory of Singapore

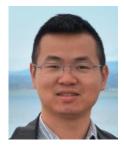
Research Title : Assessing seismic hazards in Southeast Asia by characterizing the geometries and slip histories of active faults Homepage : <u>https://sites.google.com/site/judithahubbard/</u>



Dr QUEK Su Ying

National University of Singapore Department of Physics

Research Title: Spin Transport across Interfaces in Emerging Materials - Towards Materials
Design for Next Generation Data Storage ApplicationsHomepage: http://www.physics.nus.edu.sg/staff/queksy.html



Dr LIU Zheng

Nanyang Technological University Division of Materials Science

 Research Title
 : Synthesis, Characterizations and Performance of Novel Two-dimensional Atomic Layers: Hexagonal Boron Nitride (h-BN) and Molybdenum Disulfide (MoS2)

 Homepage
 : http://www3.ntu.edu.sg/home/z.liu/index.html



Dr Timothy SAUNDERS

National University of Singapore Mechanobiology Institute, Singapore

 Research Title
 : Using biophysics to probe the mechanisms of scaling and robustness in development

 Homepage
 : <u>http://mbi.nus.edu.sg/timothy-saunders/</u>



Dr Karen CRASTA

Nanyang Technological University Lee Kong Chian School of Medicine

Research Title : Molecular mechanisms that dictate cell fate following treatment with antimitotic drugs



Dr LAN Shau-Yu Nanyang Technological University Division of Physics & Applied Physics

Research Title : Quantum sensor using guided matter waves in optical fibers Homepage : <u>http://www1.spms.ntu.edu.sg/~physics/Home/Faculty/Lan_Shau_Yu.html</u>



Dr Troy LEE

Nanyang Technological University Center for Quantum Technologies

Research Title : Quantum query complexity, communication complexity, and semidefinite programming: exploring the limits of efficient computation



Dr Mikinori KUWATA Nanyang Technological University Division of Earth Sciences

Research Title : Atmospheric Organic Aerosol in the Changing Environment of Southeast Asia

CLASS OF 2012



Dr Shaffique ADAM Yale-NUS College

Research Title : Harnessing Interacting Dirac Fermions for Future Technology Homepage : <u>https://sites.google.com/site/shaffigueadam/home</u>



Dr CHONG Yidong

Nanyang Technological University Division of Physics and Applied Physics

Research Title : Enhancement of optical absorption in coherent photonic structures Homepage : <u>http://web.spms.ntu.edu.sg/~ydchong/index.html</u>



Dr Nathalie GOODKIN Nanyang Technological University Earth Observatory of Singapore

Research Title : The Oceanographic Perspective: Reconstructing seasonal climate variations in the Indo-Pacific using coral geochemical records



Dr LING Xing Yi Nanyang Technological University Division of Chemistry and Biological Chemistry

Research Title: Engineering Plasmonic Nanocrystal Super-lattices for Emerging Optical
Properties and Sensing ApplicationsHomepage: http://www3.ntu.edu.sg/home/xyling/index.htm



Dr Katsutomo OKAMURA

Temasek Life Sciences Laboratory Limited Genome Structural Biology

Research Title : Mechanisms of miRNA biogenesis: Substrate recognition by the miRNA processing enzymes and regulation of miRNA stability



Dr Thomas PEYRIN

Nanyang Technological University Division of Mathematical Sciences

Research Title: Analysis and Conception of Symmetric Key Cryptography PrimitivesHomepage: https://sites.google.com/site/thomaspeyrin/



Dr SUN Lei Duke-NUS Medical School Cardiovascular & Metabolism Disorders Program

Research Title: Regulation of Brown Fat Development by Non-coding RNAsHomepage: https://www.duke-nus.edu.sg/content/sun-lei



Dr Fumio MOTEGI *Temasek Life Sciences Laboratory Limited Cell Biology*

Research Title : The Mechanisms of Breaking Cellular Symmetry in Metazoan Development



Dr Slaven GARAJ National University of Singapore Department of Physics

 Research Title
 : Graphene nanopore platform for single-molecule DNA analysis and physical DNA sequencing

 Homepage
 : <u>http://nanopore.science.nus.edu.sg/</u>

CLASS OF 2011



Dr CHO Nam-Joon

Nanyang Technological University Division of Materials Technology

Research Title : Combating Infectious Diseases: Engineering Strategies for Molecular Virology Homepage : <u>https://www.namjooncho.com/</u>



Dr Goki EDA

National University of Singapore Department of Chemistry

Research Title: Novel Electronic and Opto-electronic Materials from Two-Dimensional Layered
Transition-Metal Dichalcogenide NanosheetsHomepage: http://www.physics.nus.edu.sg/~phyeda/index.html



Dr Emma HILL

Nanyang Technological University Earth Observatory of Singapore

Research Title	: Towards a better understanding of climate change and natural hazards in and
	around Southeast Asia through geodetic data combination
Homepage	: http://www.earthobservatory.sg/people/emma-hill



Dr Pakorn (Tony) KANCHANAWONG

National University of Singapore Department of Bioengineering

Research Title : Mechanotransduction by Integrin-mediated Cell Adhesions Homepage : <u>http://mbi.nus.edu.sg/pakorn-tony-kanchanawong/</u>



Dr Ali MISEREZ

Nanyang Technological University Division of Materials Technology

Research Title : Frontiers in Physical and Life Sciences: Bio-Inspired and Biomimetic Materials Homepage : <u>http://www.ntu.edu.sg/home/ali.miserez/index.html</u>



Dr Mankei TSANG

National University of Singapore Department of Electrical and Computer Engineering

 Research Title
 : General Theory of Quantum Sensors: Estimation, Control, and Fundamental Limits

 Homepage
 : <u>https://sites.google.com/site/mankeitsang/home/mankei</u>



Dr WANG Xianfeng

Nanyang Technological University Earth Observatory of Singapore

Research Title: Tracking hydro-climate variation in the tropical Indo-Pacific with highly resolved
cave recordsHomepage: http://www.earthobservatory.sg/people/wang-xianfeng



Dr WU Min

National University of Singapore Mechanobiology Institute, Singapore

Research Title : Regulation of Endocytosis by Curvature-Generating Proteins and the Actin Cytoskeleton



Dr ZHAO Yu National University of Singapore

Department of Chemistry

 Research Title
 : New Catalysis Concepts and Methods for More Efficient and Economical Chemical Synthesis And Improvement of Chemistry Tools for Biological Labeling

 Homepage
 : <u>https://zhaoyugroup.sg/</u>



Dr Kimberly Ann KLINE Nanyang Technological University Singapore Centre on Environmental Life Sciences Engineering (SCELSE)

Research Title : Localized Virulence Factor Assembly in Gram Positive Bacteria: Mechanism of Coordination and Therapeutic Targeting Homepage : <u>http://kimberlyklinelab.com/</u>

CLASS OF 2010



Dr GAO Yonggui

Nanyang Technological University Division of Structural Biology & Biochemistry

Research Title : Structure and functional interactions of translational factors with ribosome by X-ray crystallography Homepage : http://www.ntu.edu.sg/home/ygao/Site/Home.html



Dr LEE Sang Hyun Duke-NUS Medical School Cancer & Stem Cell Biology Program

Research Title : The mechanisms of chromosomal instability in human cancers and development of novel anti-mitotic cancer therapies



Dr Christian NIJHUIS

 National University of Singapore

 Department of Chemistry

 Research Title
 : Self-assembled organic-inorganic nanostructures to solve longstanding problems in Physics

 Homepage
 : https://www.chemistry.nus.edu.sg/people/academic_staff/Nijhuis.htm



Dr Adam SWITZER

Nanyang Technological University Earth Observatory of Singapore

 Research Title
 : Geological records of coastal hazards in southeast Asia

 Homepage
 : <u>http://www.earthobservatory.sg/people/adam-switzer</u>



Dr TEO Yik Ying

National University of Singapore Department of Statistics & Applied Probability

 Research Title
 : Modeling complex interactions in the genetics and genomics of common phenotypes and infectious diseases

 Homepage
 : https://sph.nus.edu.sg/about/faculty-directory/teo-yik-ying



Dr Joanne YEW

Temasek Life Sciences Laboratory Limited

Research Title : Understanding the role of chemical communication in insect social behavior: Identifying new pheromones, neural circuits and metabolic pathways using novel mass spectrometry methods



Dr YU Ting

Nanyang Technological University Division of Physics & Applied Physics

 Research Title
 : Tailoring electronic structure of graphene for nanoelectronic, photonic and phononic applications

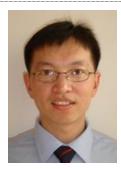
 Homepage
 : <u>http://www1.spms.ntu.edu.sg/~yuting/</u>



Dr Ronen ZAIDEL-BAR

National University of Singapore Mechanobiology Institute, Singapore

Research Title : Linking cell-cell adhesion with the actin cytoskeleton: Combining genetics and mechano-manipulations to discover novel adaptors in cadherin-based adhesion



Dr ZHAO Yanli

Nanyang Technological University Division of Chemistry and Biological Chemistry

 Research Title
 : Light- and pH-operated mechanized nanoparticles as controllable drug delivery systems

 Homepage
 : <u>http://www.ntu.edu.sg/home/zhaoyanli/index.html</u>

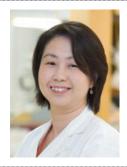


Dr Swaine CHEN

National University of Singapore Department of Medicine

Research Title: Novel evolutionary approaches to studying host-pathogen interactions and
infectious diseasesHomepage: http://www.nuh.com.sg/scripts/webformshowprofile.aspx?id=13719

CLASS OF 2009



Dr LOK Shee Mei Duke-NUS Medical School Emerging Infectious Diseases Program

Research Title : Identification of dengue therapeutics and determination of its neutralization
mechanisms using a combination of immunological, biochemical and structural
techniquesHomepage : https://www.duke-nus.edu.sg/content/lok-shee-mei

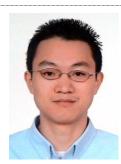


Dr WANG Hongyan

Duke-NUS Medical School Neuroscience & Behavioral Disorders Program

 Research Title : Analyzing molecular machinery that regulates neural stem cell self-renewal and differentiation in Drosophila larval brains

 Homepage
 : <u>https://www.duke-nus.edu.sg/content/wang-hongyan</u>



Dr CHI Yonggui Robin Nanyang Technological University

Nanyang Technological University Division of Chemistry & Biological Chemistry

Research Title : New strategies for selective and site-selection protein modification via local environment and proximal residue-directed cooperative organic catalysis under mild, non-toxic and biocompatible conditions Homepage : <u>http://www.ntu.edu.sg/home/robinchi/</u>



Dr CHEN Xiaodong Nanyang Technological University

Nanyang Technological University Division of Materials Technology

Research Title : Nanostructured-Biomaterial hybrid systems for bioelectronics Homepage : <u>http://www.ntu.edu.sg/home/chenxd/index.html</u>



Dr Naohiko YOSHIKAI

Nanyang Technological University Division of Chemistry & Biological Chemistry

Research Title : Development of cooperative transition metal catalysis for carbon-carbon bond formation



Dr XIONG Qihua Nanyang Technological University Division of Physics & Applied Physics

Research Title : Optical properties of novel nanomaterials and field effect transistor nanopore devices for single molecular detection and DNA sequencing



Dr Frederique OGGIER Nanyang Technological University Division of Mathematical Sciences

Research Title : Information theoretical security for wireless communications Homepage : <u>http://www1.spms.ntu.edu.sg/~frederique/index.html</u>



Dr Edith ELKIND Nanyang Technological University Division of Mathematical Sciences

Dr Hilmi Volkan DEMIR

Nanyang Technological University Division of Microelectronics

Research Title : Algorithmic aspects of coalitional games



 Research Title
 : Nanostructured white LEDs of nanocrystal quantum dot emitters for high quality mesopic solid state lighting

 Homepage
 : <u>http://research.ntu.edu.sg/expertise/academicprofile/Pages/StaffProfile.aspx</u>

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CLASS OF 2008



Dr Gijsbert Marnix GROTENBERG

National University of Singapore Departments of Microbiology and Biological Sciences

Research Title : Conditional ligands for class I MHC products; application to epitope discovery for Dengue and respiratory syncytial virus-specific CD8+ T-cells



Dr Cynthia HE Yingxin National University of Singapore Department of Biological Science

Research Title : Morphological and molecular characterization of a bi-lobed structure required
for organelle biogenesis and cytokinesis in Trypanosoma bruceiHomepage : http://www.dbs.nus.edu.sg/lab/cynthia/index.html



Dr Eugene MAKEYEV

Nanyang Technological University Division of Molecular & Cell Biology

Research Title : Understanding molecular mechanisms of post-transcriptional control in neuronal differentiation: a link between microRNAs, alternative pre-mRNA splicing and mRNA quality control



Dr Barbaros ÖZYILMAZ National University of Singapore

National University of Singapore Department of Physics

Research Title : Phase Coherent Charge and Spin Transport in Nanostructured Graphene and Ferromagnet Hybrid Devices Homepage : <u>http://graphene.nus.edu.sg/barbaros/</u>



Dr Christos PANAGOPOULOS

Nanyang Technological University Division of Physics & Applied Physics

Research Title : Novel Quantum Phases on the Border of Magnetism Homepage : <u>http://phynelab.org/Staff/christos-panagopoulos/</u>



Dr YEO Yee Chia National University of Singapore Department of Electrical and Computer Engineering

Research Title : Strain Engineering for Next-Generation Semiconductor Manufacturing Homepage : <u>https://www.ece.nus.edu.sg/staff/bio/yeoyc.html</u>



Dr ZHOU Jianrong Steve Nanyang Technological University Division of Chemistry and Biological Chemistry

Research Title : Asymmetric Catalytic [4+1] Cycloadditions between Dienes and Carbene Precursors