

The NRF Investigatorship provides opportunities for scientists and researchers to pursue ground-breaking, high-risk research. It is designed to support a small number of excellent Principal Investigators who have a track record of research achievements that identify them as leaders in their respective field(s) of research.

CLASS OF 2023



A/P Benoit TAISNE
Nanyang Technological University
Asian School of the Environment

Research Title : Developing a new platform for assessing volcano hazard through analysis of globally acquired monitoring data
Homepage : <https://earthobservatory.sg/about-us/our-people/benoit-taisne>



Prof CHEN Wei
National University of Singapore
Department of Chemistry and Department of Physics

Research Title : Interface Engineered 2D Materials for Neuromorphic Computing
Homepage : <https://chemistry.nus.edu.sg/people/chen-wei>



A/P CHONG Yidong
Nanyang Technological University
School of Physical and Mathematical Sciences

Research Title : Topological Quantum Photonics
Homepage : <http://www1.spms.ntu.edu.sg/~ydchong/bio.html>



Prof David LO
Singapore Management University
School of Computing and Information Systems

Research Title : TrustedSEERs: Trusted Intelligent Work Bots for Engineering Better Software Faster
Homepage : <http://www.mysmu.edu/faculty/davidlo>



A/P Dawn TAN

*Singapore University of Technology and Design
Engineering Product Development*

Research Title : Nonlinear Integrated Optics: Creating, manipulating and harnessing classical and topological modes of light

Homepage : <https://epd.sutd.edu.sg/people/faculty/dawn-tan>



Dr Jay SHIN

*Agency for Science, Technology and Research
Genome Institute of Singapore*

Research Title : Towards Building Autonomous Genomics: AI-Driven Omics to Drug Discovery

Homepage : <https://www.a-star.edu.sg/gis/our-people/faculty-staff/members/jay-w-shin>



Prof LI Mo

*Nanyang Technological University
School of Computer Science and Engineering*

Research Title : Towards AIoT – Building Intelligence into Sensing, Networking, and Data Analytics of IoT

Homepage : <https://dr.ntu.edu.sg/cris/rp/rp00937>



Prof LING Xing Yi

*Nanyang Technological University
School of Physical & Mathematical Sciences*

Research Title : SERS Chemical Space to Identify Unknown Chemical/Disease X

Homepage : <https://www3.ntu.edu.sg/home/xyling/Members.htm>



Dr Marco VIGNUZZI

*Agency for Science, Technology and Research
Infectious Diseases Labs*

Research Title : Predicting and pre-empting the next alphavirus outbreaks using comparative proteomics and experimental evolution

Homepage : <https://www.a-star.edu.sg/idlabs/about-us/people/our-investigators/marco-vignuzzi>



A/P MIAO Yansong
Nanyang Technological University
School of Biological Sciences

Research Title : Understanding and Engineering Immunity to Combat Plant Infection: Molecular Condensation at the Interface of Plant-Microbe Communication

Homepage : <https://www.ntu.edu.sg/sbs/research/research-directory/Miao-Yansong>



Prof Praveen LINGA
National University of Singapore
Department of Chemical and Biomolecular Engineering

Research Title : Solidified Natural Gas (SNG) Storage Technology

Homepage : <https://cde.nus.edu.sg/chbe/staff/chepl/>



Dr TAM Wai Leong
Agency for Science, Technology and Research
Genome Institute of Singapore

Research Title : Understanding the metabolic milieu of the tumor microenvironment for niche-based therapy

Homepage : <https://www.a-star.edu.sg/gis/our-people/faculty-staff/members/wai-leong-tam>



A/P Thomas PEYRIN
Nanyang Technological University
MAS Division Research

Research Title : Interpretable and Automated Cryptanalysis for Tailor-Made Cryptographic Design

Homepage : <https://thomaspeyrin.github.io/web/>



Dr WAN Yue
Agency for Science, Technology and Research
Genome Institute of Singapore

Research Title : Developing high throughput technologies to study RNA structure and function

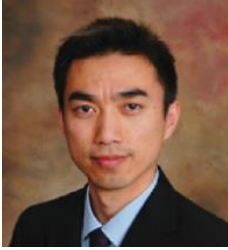
Homepage : <https://www.a-star.edu.sg/gis/our-people/faculty-staff/members/yue-wan>



A/P ZHAO Dan
National University of Singapore
Department of Chemical & Biomolecular Engineering

Research Title : In-Situ Investigation of Soft Porous Materials for Gas Adsorption and Separation

Homepage : <https://cde.nus.edu.sg/chbe/staff/chezhao/>



Dr FU Yu

*Agency for Science, Technology and Research
Institute of Molecular and Cell Biology*

Research Title : Investigating Neuronal Mechanisms of Obesity and its Treatment by Bariatric Surgery for Future Therapeutic Strategy
Homepage : <https://research.a-star.edu.sg/researcher/yu-fu/>



A/P Oliver MUELLER-CAJAR

*Nanyang Technological University
School of Biological Sciences*

Research Title : Understanding the Birth, Life and Death of the highly specific red CO₂-fixing Rubiscos to unlock enhanced photosynthetic efficiencies
Homepage : <https://dr.ntu.edu.sg/cris/rp/rp00530>



A/P Frank RHEINDT

*National University of Singapore
Department of Biological Sciences*

Research Title : A Combined Museomic and 'Earth history-guided' Field Approach to Discover the World's Last Undetected Centers of Species Endemism
Homepage : <https://www.dbs.nus.edu.sg/staffs/frank-rheindt/>



A/P YEONG Wai Yee

*Nanyang Technological University
School of Mechanical & Aerospace Engineering*

Research Title : 3D Bioelectronics Tissue Towards Tissue-Electronics Interface and Precision Medicine
Homepage : <https://dr.ntu.edu.sg/cris/rp/rp00184>



A/P YAN Ning

*National University of Singapore
Department of Chemical and Biomolecular Engineering*

Research Title : Green Amines for a Sustainable Future
Homepage : https://greenenergy.nus.edu.sg/our_team/academic-staff/ning-yan/



A/P PU Kanyi

Nanyang Technological University

School of Chemical and Biomedical Engineering

Research Title : Optical Artificial Urinary Biomarkers for Next-Generation Home Diagnostics

Homepage : <https://personal.ntu.edu.sg/kypu/Group%20Members1.html>



Prof LOH Xian Jun

Agency for Science, Technology and Research

Institute of Materials Research and Engineering

Research Title : Thermogels for Therapeutic Applications (THETA)

Homepage : <https://www.a-star.edu.sg/imre/about-us/leadership-team>



Prof KINJO Rei

Nanyang Technological University

School of Physical & Mathematical Sciences

Research Title : Precise Chemical Construction of Two-Dimensional Boron Materials

Homepage : <https://personal.ntu.edu.sg/rkinjo/>



A/P Kevin PETHE
*Nanyang Technological University
Lee Kong Chian School of Medicine*

Research Title : Bacterial metabolic adaptation during host colonisation and persistence
Homepage : <http://www.lkcmedicine.ntu.edu.sg/aboutus/Faculty-and-Staff/Pages/Kevin-Pethe.aspx>



A/P Joel YANG Kwang Wei
*Singapore University of Technology and Design
Engineering Product Development*

Research Title : 3D Nanostructured Optics with Designer Elements (NODE) to Shape and Control Light
Homepage : <https://epd.sutd.edu.sg/people/faculty/joel-yang>



A/P Shaffique ADAM
*National University of Singapore
Department of Physics*

Research Title : Moiré scale engineering of atomically thin materials to achieve higher-temperature superconductivity
Homepage : <https://www.physics.nus.edu.sg/staff/adam.html>



A/P YANG Hyunsoo
*National University of Singapore
Department of Electrical and Computer Engineering*

Research Title : The next-generation non-volatile memory: towards THz operation
Homepage : https://www.ece.nus.edu.sg/stfpage/eleyang/peop_pi.html



Prof LIU Yang
*Nanyang Technological University
School of Computer Science and Engineering*

Research Title : Towards Building Trustworthy and Robust Intelligent Systems and its Application on Human Brain
Homepage : <https://www.ntu.edu.sg/home/yangliu/>



A/P Antonia MONTEIRO
National University of Singapore
Department of Biological Sciences

Research Title : Finding the locus of evolution of a novel complex trait
Homepage : www.dbs.nus.edu.sg/staff/antonia.html



A/P Matthew CHANG
National University of Singapore
Department of Biochemistry, Yong Loo Lin School of Medicine

Research Title : Engineering Biology to Reprogramme Microbiome
Homepage : <https://bch.nus.edu.sg/bchcmw.htm>



Prof LIU Xiaogang
National University of Singapore
Department of Chemistry

Research Title : Photon Management for Energy Conversion and Imaging Applications
Homepage : https://chemistry.nus.edu.sg/people/academic_staff/liuxg.htm



Prof WU Jishan
National University of Singapore
Department of Chemistry

Research Title : Toward Carbon-Based Magnets
Homepage : https://chemistry.nus.edu.sg/people/academic_staff/wujs.htm



A/P Emma HILL
Nanyang Technological University
Asian School of the Environment

Research Title : Space-borne Geodesy and Remote Sensing for Understanding Natural Hazards, Sea-level Change and Disaster Response in Asia
Homepage : <https://earthobservatory.sg/people/emma-hill>



Prof MIAO Chun Yan

*Nanyang Technological University
School of Computer Science and Engineering*

Research Title : Senior-friendly Persuasive AI Companions for an Aging Population

Homepage : www.ntulily.org/ascymiao



A/P GOTO Atsushi

*Nanyang Technological University
School of Physical and Mathematical Sciences*

Research Title : Polymer Design Platform via Organocatalysis for Advanced Polymer Materials

Homepage : www1.spms.ntu.edu.sg/~chemistry/FacultyResearch/Individual%20Faculty/GOTOAtsushi.htm

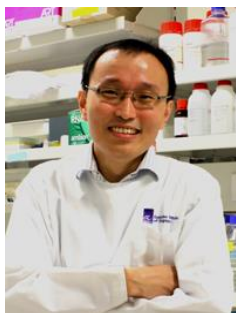


Prof Archan MISRA

*Singapore Management University
School of Information Systems*

Research Title : Coordinated Cyber-physical Sensing & Edge Analytics

Homepage : <https://www.smu.edu.sg/faculty/profile/9632/Archan-MISRA>

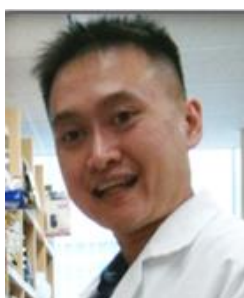


Dr KHOR Chiea Chuen

*Agency of Science, Technology and Research
Genome Institute of Singapore*

Research Title : Deciphering the genetic architecture of age-related diseases using eye diseases as the paradigm

Homepage : <https://www.a-star.edu.sg/gis/our-people/platform-leaders>



Dr Jonathan Yui-Han LOH

*Agency of Science, Technology and Research
Institute of Molecular and Cell Biology*

Research Title : Single-cell Transcriptome and Accessibility Regions (STAR) for analyzing cell fates plasticity and heterogeneity of complex tissues

Homepage : <https://research.a-star.edu.sg/researcher/jonathan-loh-yui-han/>



Dr Bruno REVERSADE

*Agency of Science, Technology and Research
Genome Institute of Singapore*

Research Title : Realize the Translational and Therapeutic Potential of the ELABELA-nergic Pathway

Homepage : <https://research.a-star.edu.sg/researcher/bruno-reversade/>



A/P Virgile VIASNOFF

*National University of Singapore
Mechanobiology Institute*

Research Title : Synthetic epithelial morphogenesis: a new perspective from mechanobiology

Homepage : <https://mbi.nus.edu.sg/virgile-viasnoff/>



Prof LU Yixin

*National University of Singapore
Department of Chemistry*

Research Title : Phosphine Catalysis: New Heights in Asymmetric Synthesis, Applications to Medicinal Chemistry & Potentials in Green, Sustainable Production

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



A/P WANG Qing
National University of Singapore
Department of Materials Science & Engineering

Research Title : "E-blood": Simultaneous Powering and Cooling of Microchips for Energy Resilient and Power Efficient Computing

Homepage : www.mse.nus.edu.sg/staff/wq.php



Prof Barbaros ÖZYILMAZ
National University of Singapore
Department of Physics

Research Title : Engineer a robust platform for topological quantum computation using 2D materials

Homepage : <https://www.physics.nus.edu.sg/staff/barbaros.html>



A/P ZHAO Yanli
Nanyang Technological University
School of Physical and Mathematical Sciences

Research Title : Smart supramolecular prodrug systems for combination cancer theranostics

Homepage : http://www.ntu.edu.sg/home/zhaoyanli/Yanli_Zhao_Research_Group/Yanli_Zhao.html



A/P SUM Tze Chien
Nanyang Technological University
School of Physical and Mathematical Sciences

Research Title : Towards >44% Perovskite Solar Cells

Homepage : www.ntu.edu.sg/home/tzechien/spms/research_group.html



Dr Arseniy KUZNETSOV

*Agency of Science, Technology and Research
Institute of Materials Research and Engineering*

Research Title : Sub-wavelength-resolution spatial light modulators based on active nanoantennas and metasurfaces
Homepage : <https://research.a-star.edu.sg/researcher/arseniy-kuznetsov/>



Dr Florent GINHOUX

*Agency of Science, Technology and Research
Singapore Immunology Network*

Research Title : IPSC-derived tissue organoids as a platform to model and study neurodegenerative disorders
Homepage : <https://www.a-star.edu.sg/sign/people/principal-investigators/florent-ginhoux>



Dr Nicholas BARKER

*Agency of Science, Technology and Research
Institute of Molecular and Cell Biology*

Research Title : Identifying Novel Lgr5+ Stem Cell Populations & Evaluating their Roles in Epithelial Homeostasis, Repair and Cancer
Homepage : <https://research.a-star.edu.sg/researcher/nick-barker/>



Prof GONG Jiangbin

*National University of Singapore
Department of Physics*

Research Title : Quantum control approach to new topological phases of matter
Homepage : <http://www.physics.nus.edu.sg/~phygj/>



Prof David SILVER

*Duke-NUS Medical School
Cardiovascular & Metabolic Disorders Programme*

Research Title : Mechanism-based molecular lipid nutrition and therapeutics for healthy brain development and function
Homepage : <https://www.duke-nus.edu.sg/cvmd/content/david-silver>



A/P Fidel COSTA
Nanyang Technological University
Asian School of the Environment

Research Title : Calibrating the lifetimes of magma reservoirs below active volcanoes

Homepage : <http://www.earthobservatory.sg/people/fidel-costa>



Prof CHEN Xiaodong
Nanyang Technological University
School of Materials Science and Engineering

Research Title : Conformal electronic devices based on silk protein: Adding autonomy to an ancient material

Homepage : <http://www.ntu.edu.sg/home/chenxd/>



Prof Srinivasan MADHAVI
Nanyang Technological University
School of Materials Science and Engineering

Research Title : Water-based rechargeable battery chemistries for new generation of safe, high energy density sustainable energy storage devices

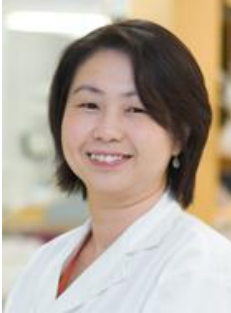
Homepage : <http://web.mse.ntu.edu.sg/homepages/madhavi/>



Prof PHAN Anh Tuan
Nanyang Technological University
School of Physical & Mathematical Sciences

Research Title : Structurally and chemically controlled G-quadruplex DNA: Understanding and application in therapeutics

Homepage : <http://www.ntu.edu.sg/home/phantuan/>



A/P LOK Shee Mei
Duke-NUS Medical School
Emerging Infectious Diseases Program

Research Title : Understanding Possible Structural Variations of Dengue Virus Particles and Their Implications in the Design of Effective Vaccine and Therapeutic Agents
Homepage : <https://www.duke-nus.edu.sg/content/lok-shee-mei>



Prof YU Hao
National University of Singapore
Department of Biological Sciences

Research Title : Unravelling the Mechanism of Macromolecular Trafficking in Plants
Homepage : <http://www.dbs.nus.edu.sg/staff/yuhao.htm>



Prof YAN Jie
National University of Singapore
Department of Physics

Research Title : Understanding and Altering Mechanosensing of Cells
Homepage : <http://www.physics.nus.edu.sg/staff/yanjie.html>



Prof LOU Xiong Wen, David
Nanyang Technological University
School of Chemical and Biomedical Engineering

Research Title : Metal-Organic Frameworks-Derived Functional Materials for Electrochemical Energy Storage and Conversion
Homepage : <http://www.ntu.edu.sg/home/xwlou/>



Prof LEE Pooi See
Nanyang Technological University
School of Material Science and Engineering

Research Title : Deformable Electronic Materials and Devices for Human Machine Interface
Homepage : <http://www.ntu.edu.sg/home/pslee/>



Prof CHI Yonggui, Robin
Nanyang Technological University
School of Physical and Mathematical Sciences

Research Title : Opportunities with Carbene Organocatalysis: New Activation Modes & Metal-Free Rapid Green Access to Functional Molecules
Homepage : <http://www.ntu.edu.sg/home/robinchi/>



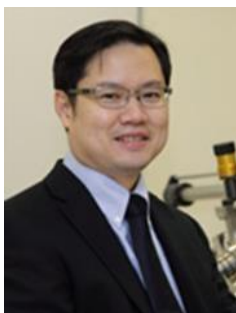
Prof PHEE Soo Jay, Louis
Nanyang Technological University
School of Mechanical and Aerospace Engineering

Research Title : Extending the Reach of Flexible Robotic Surgery
Homepage : http://research.ntu.edu.sg/expertise/academicprofile/Pages/StaffProfile.aspx?ST_EMAILID=MSJPHEE



Prof Hilmi Volkan DEMIR
Nanyang Technological University
School of Electrical and Electronic Engineering

Research Title : Emerging Colloidal Quantum Optoelectronics of Solution-Processed Atomically-Flat Nanocrystals
Homepage : http://research.ntu.edu.sg/expertise/academicprofile/Pages/StaffProfile.aspx?ST_EMAILID=HVDEMIR



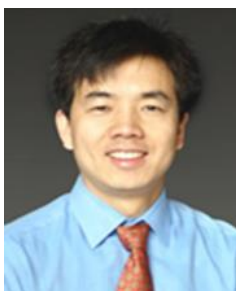
Prof LOH Kian Ping
National University of Singapore
Department of Chemistry

Research Title : Graphene Oxide: a New Class of Catalytic, Ionic and Molecular Sieving Material
Homepage : https://www.chemistry.nus.edu.sg/people/academic_staff/lohkp.htm



Prof LIU Bin
National University of Singapore
Department of Chemical and Biomolecular Engineering

Research Title : Aggregation Induced Emission: A Revolutionary Path to Molecular Probes and Theranostic Nanoplatforms
Homepage : <http://www.chbe.nus.edu.sg/faculty/cheliub>



Prof XIONG Qi Hua
Nanyang Technological University
School of Physical & Mathematical Sciences

Research Title : Expanding the toolbox of laser cooling towards the next-generation optical refrigeration
Homepage : http://www1.spms.ntu.edu.sg/~qihuagroup/Group_Principle%20Investigator.html



Prof Christos PANAGOPOULOS
Nanyang Technological University
School of Physical & Mathematical Sciences

Research Title : Magnetic Interactions for Spin Topology
Homepage : <http://phynelab.org/Staff/christos-panagopoulos/>



Prof Markus WENK
National University of Singapore
Department of Biochemistry and Department of Biological Sciences

Research Title : Defining Natural Boundaries of Lipidomic Variations
Homepage : <http://bch.nus.edu.sg/bchmrw.htm>



A/P Paul MACARY

*National University of Singapore
Yong Loo Lin School of Medicine*

Research Title : Molecular Engineering of Fully Human Monoclonal Antibodies

Homepage : <https://medicine.nus.edu.sg/researchers/macary-paul-a/>



Prof Kanaga SABAPATHY

*Duke-NUS Medical School
Cancer & Stem Cell Biology Program*

Research Title : Unravelling the Mechanistic Basis of Tumour Suppression vs. Tumour Promotion by p73 - a Paradigm for Cell-fate Choice by Transcription Factors

Homepage : <https://www.duke-nus.edu.sg/content/sabapathy-kanaga>