

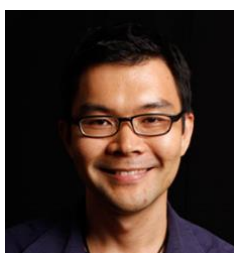
The NRF Investigatorship provides opportunities for established, innovative and active scientists and researchers, in their mid-career, to pursue ground-breaking, high-risk research. It is designed to support a small number of excellent Principal Investigators who have a track record of research achievements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

CLASS OF 2020



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/>



Dr Giulia RANCATI

*Agency of Science, Technology and Research
Institute of Medical Biology*

Research Title : Evolvability of eukaryotic cells

Homepage : <https://www.a-star.edu.sg/imb/Research/tid/2/Aneuploidy-and-Genome-Instability>



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/wuis.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



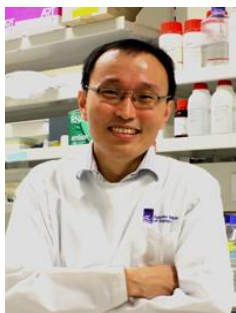
A/P GOTO Atsushi
Nanyang Technological University
School of Physical and Mathematical Sciences

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

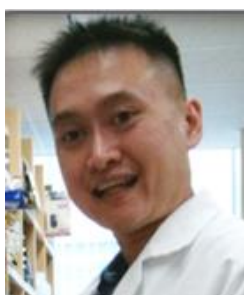
Research Title : Coordinated Cyber-physical Sensing & Edge Analytics
Homepage : <https://www.smu.edu.sg/faculty/profile/9632/Archan-MISRA>



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/Investigator-details/source/faculty_member/user_id/139



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://www.a-star.edu.sg/imcb/Science/Investigators/Senior-Pls/Senior-Pls-Profile/ResearchListID/42>



Dr Bruno REVERSADE

*Agency of Science, Technology and Research
Institute of Medical Biology*

Research Title : Realize the Translational and Therapeutic Potential of the ELABELA-nergic Pathway
Homepage : <https://www.a-star.edu.sg/imb/Research/tid/12/Human-Genetics-Embryology.aspx>



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](http://www.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
Data Storage Institute*

Research Title : Sub-wavelength-resolution spatial light modulators based on active nanoantennas and metasurfaces
Homepage : <https://researchers.a-star.edu.sg/userprofile.aspx?userid=8121>



Dr Florent GINHOUX

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

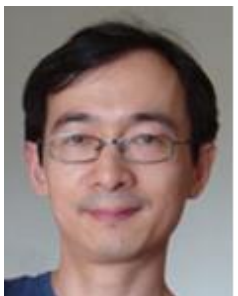
Research Title : IPSC-derived tissue organoids as a platform to model and study neurodegenerative disorders
Homepage : <https://www.a-star.edu.sg/sign/Research/Principal-Investigators/tid/5.aspx>



Dr Nicholas BARKER

*Agency of Science, Technology and Research
Institute of Medical Biology*

Research Title : Identifying Novel Lgr5+ Stem Cell Populations & Evaluating their Roles in Epithelial Homeostasis, Repair and Cancer
Homepage : <https://www.a-star.edu.sg/imb/Research/tid/7/Epithelial-Stem-Cells.aspx>



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/~phygi/>



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

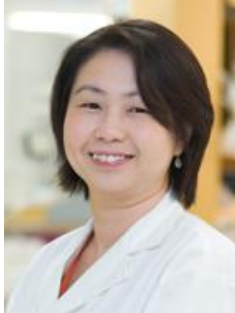
Homepage : <http://web.mse.ntu.edu.sg/homepages/madhavi/>



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/>



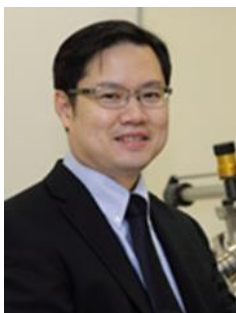
Prof PHEE Soo Jay, Louis
Nanyang Technological University
School of Mechanical and Aerospace Engineering

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



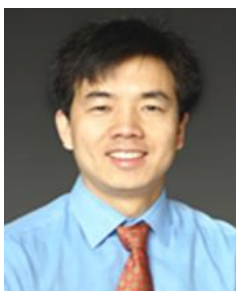
Prof LOH Kian Ping
National University of Singapore
Department of Chemistry

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 : <http://www.lsi.nus.edu.sg/corp/research-programmes/immunology/principal-investigators/paul-a-macary/>



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>