

## Institute of High Performance Computing (IHPC)

### Electronics / Solid State Devices

Name	Project	Degree By
Dr Gan Chee Kwan ganck@ihpc.a-star.edu.sg	First principles calculations of structural and thermal properties of thermoelectric and magnetic materials	NUS/NTU/SUTD

### Nano Science and Technology

Name	Project	Degree By
Dr Ching Eng (Jason) PNG Department Director (EP)/Senior Scientist I pngce@ihpc.a-star.edu.sg	<ol style="list-style-type: none"> <li>1. Dielectric Nanoantennas</li> <li>2. High speed optical/photonic communications</li> <li>3. Wireless Charging and Harvesting</li> <li>4. Semiconductor device physics and SPICE modeling</li> <li>5. Electromagnetic Compatibility and Interference (EMC and EMI)</li> <li>6. Plasmonics, Biophotonics,</li> <li>7. Photonics: Electrical (process and device) and Optical</li> <li>8. Quantum Photonics</li> </ol>	NUS/NTU/SUTD
Dr David Wu Deputy Department Director (MSE)\ CGM(MS) davidwu@ihpc.a-star.edu.sg	Nucleation and growth, grain growth, additive manufacturing, phase field	NUS/NTU
Dr Gan Chee Kwan ganck@ihpc.a-star.edu.sg	First principles calculations of structural and thermal properties of thermoelectric and magnetic materials	NUS/NTU/SUTD
Dr Jerry Quek Senior Scientist quekss@ihpc.a-star.edu.sg	Deformation and failure behaviour of materials	NUS/NTU/SUTD
Dr Khoo Eng Huat Scientist III khooeh@ihpc.a-star.edu.sg	Nanophotonics, Optics, Biophotonics, Numerical modeling	NUS/NTU
Dr Khoo Khoong Hong Scientist II khookh@ihpc.a-star.edu.sg	First-principles study of spin-orbit related phenomena	NTU / NUS
Dr Liu Zhengtong Scientist I liuz@ihpc.a-star.edu.sg	Plasmonics for bio-medical sensing, metasurface design & engineering, nanophotonics modeling	NTU / NUS
Dr Ong Phuong Khuong Senior Scientist I\ CGM(FM) ongpk@ihpc.a-star.edu.sg	SOLUTION GROWN SINGLE-CRYSTAL PEROVSKITE MULTIPLE QUANTUM WELLS AND THEIR LIGHT-EMITTING DIODES	NTU

Dr Pei Qing Xiang Senior Scientist III peiqx@ihpc.a-star.edu.sg	Mechanical and thermal behavior of nanomaterials, nanostructures and nanodevices.	NTU / NUS
Dr Rajeev Ahluwalia rajeev@ihpc.a-star.edu.sg	Microstructural evolution in phase transforming materials Modelling of domain patterns in ferroic materials Modelling of mechanical behaviour (fracture and plasticity)	NUS/NTU/SUTD
Dr Reddy Chilla Damodara Scientist III reddy@ihpc.a-star.edu.sg	1. Mechanical properties of two dimensional materials 2. Molecular surface diffusion, Nano-mechanics and Nano-friction 3. Thermal conductivity of nanostructures and interfaces 4. Nano-composites and light-weight materials	NUS/NTU/SUTD
Dr Viacheslav Sorokin sorkinv@ihpc.a-star.edu.sg	Mechanics of nanomaterials	NUS/NTU/SUTD
Dr Yu Zhigen yuzg@ihpc.a-star.edu.sg	Structures and defects and electronic properties of nanomaterials	NUS/NTU/SUTD
Dr Zhang Jia zhangj@ihpc.a-star.edu.sg	Heterogeneous catalysis Surface and interface properties Electronic/magnetic properties of nanomaterials	NUS/NTU/SUTD
Dr Zhang Yong Wei Deputy Executive Director/Principal Scientist II zhangyw@ihpc.a-star.edu.sg	1. Modelling and simulations of two-dimensional materials 2. Modelling and simulations of structures, defects and mechanical properties of metals and metallic glasses 3. Modelling and simulations of metallic material processing in additive manufacturing	NTU / NUS
Wu Lin Senior Scientist I wul@ihpc.a-star.edu.sg	1. Quantum plasmonics. 2. Plasmon-enhanced phenomena. 3. Nanoscale device and ultrafast device modelling and simulation.	NTU
Chu Hong Son Senior Scientist II & Team Leader chuhs@ihpc.a-star.edu.sg	1. Molecular nanoplasmonics 2. 2D materials-based devices for nanophotonics	NUS/NTU/SUTD

### Intelligent Systems

Name	Project	Degree By
Dr Fu Xiuju Senior Scientist I fuxj@ihpc.a-star.edu.sg	1. Data pattern recognition 2. Discrete event and agent-based modelling and simulation 3. risk management and optimisation 4. Planning and scheduling 5. Network modeling, mathematical modeling 6. modeling and simulation for logistics and supply chain, maritime related industries, public health area etc.	NTU

Dr Ho Seng Beng hosb@ihpc.a-star.edu.sg	Social computing, social analytics, cognitive computing.	NTU/NUS/SUTD
Dr Huynh Phung Huynh CGM (High Performance Computing)/Scientist III huynhph@ihpc.a-star.edu.sg	1. Accelerator Computing (GPU,FPGA or Many-core) 2. Machine Learning 3. Image Processing 4. Natural Language Processing	NUS
Dr Muhamad Azfar Bin Ramli Scientist II, CS ramlimab@ihpc.a-star.edu.sg	Complex networks, Transportation systems	NTU
Dr Quek Boon Kiat quekbk@ihpc.a-star.edu.sg	Social computing, social analytics, behavioural informatics, cognitive computing.	NTU/NUS/SUTD
Dr Rick Goh Department Director gohsm@ihpc.a-star.edu.sg	1. High performance computing 2. Neuromorphic computing 3. Artificial intelligence 4. Deep learning 5. Natural language processing	NTU / NUS / SUTD
Dr Wang Zhaoxia wangz@ihpc.a-star.edu.sg	Big data analytics, knowledge discovery and data mining. Social computing and Social analytics. Opinion mining and automatic sentiment categorization. Multilingual sentiment analysis and Social sensing.	NTU/NUS/SUTD
Dr Yang Feng Scientist I, CS yangf@ihpc.a-star.edu.sg	1. Industrial Health 2. Monitoring,Predictive Modelling	NTU
Feng Ling Scientist II & NUS adjunct assistant Prof fengl@ihpc.a-star.edu.sg	Complex networks, Social networks	NTU
Kenneth Kwok Principal Scientist, SCC kenkwok@nus.edu.sg	1. Cognitive Systems 2. Cognitive Architectures 3. Commonsense Reasoning 4. Knowledge Representation	NTU / NUS
Dr Neil Huynh Hoai Nguyen Scientist I, CS huynhnh@ihpc.a-star.edu.sg	Urban Complexity, Spatial Analysis and Modelling, Complex Networks, Statistical Physics	NTU
Dr Tan Hong En Scientist I, CS tanhe@ihpc.a-star.edu.sg	1. Traffic modelling 2. Complex networks 3. Computational physics	NUS / NTU

## Electronics & Photonics

Name	Project	Degree By
Chu Hong Son Senior Scientist I/CGM(PP) chuhs@ihpc.a-star.edu.sg	1. Multifunctional metasurfaces for metadevices application 2. Photonic structures for cooling and heating applications 3. Computational intelligence and AI for smart development of nanophotonic devices and circuits	NTU / NUS / SUTD
Dr AKIMOV Yuriy Scientist III akimov@ihpc.a-star.edu.sg	1. Nanophotonics and Plasmonics 2. Eigenmode resonances 3. Computational spectroscopy	NTU / NUS / SUTD
Dr BUI Viet Phuong Scientist II buivp@ihpc.a-star.edu.sg	1. Non-destructive testing and quantification 2. High-fidelity ray tracing-based modeling 3. Efficient wireless channel modeling for complex environments	NTU / NUS
Dr Ching Eng (Jason) PNG pngce@ihpc.a-star.edu.sg	High speed optoelectronic devices. Quantum plasmonics. Wireless charging and networks. Healthcare and medical technology. Computational algorithms for nano-optics and nanophotonics.	NUS/NTU/SUTD
Dr Khoo Eng Huat khooeh@ihpc.a-star.edu.sg	Urban Agri-Photonics. Nonlinear and chiroptics. Laser beam engineering.	NUS/NTU
Dr KOH Wee Shing Senior Scientist I\CGM(EAM) and Adjunct Associate Professor, Department of Physics, Faculty of Science, National University of Singapore kohws@ihpc.a-star.edu.sg	1) Plasma Modeling and Simulation for the Semiconductor industry 2) Daylight, Shortwave, Longwave radiation, and energy modeling for the cities 3) Multiscale and Multiphysics modeling for Building Integrated Sensors and Photovoltaics	NUS
Dr Liu Zhengtong Scientist I liuz@ihpc.a-star.edu.sg	Plasmonics for bio-medical sensing, metasurface design & engineering, nanophotonics modeling	NTU / NUS
Dr OO Zaw Zaw Scientist II zawzo@ihpc.a-star.edu.sg	1. Multi-physics modeling & analysis in electronic devices and systems 2. Modeling and simulation of electromagnetic wave propagation in complex environment 3. Connectivity and coverage optimization of wireless communications for future smart systems	NUS/NTU/SUTD
Dr Wu Lin Senior Scientist I wul@ihpc.a-star.edu.sg	Nonequilibrium interaction of ultrafast laser with nanostructures; Plasmonics: resonance, field enhancement, and applications in sensing, cosmetics and catalysis	NTU

Dr. Gao Xianke Richard Senior Scientist II \CGM(RF) gaoxk@ihpc.a-star.edu.sg	Electromagnetic interference / compatibility, metamaterial and graphene antenna, wireless energy harvesting, robust design and optimization	NUS/NTU/SUTD
Hla Nu Phyu Scientist, AGS Supervisor, STAR Ambassdor hla_nu_phyu@ihpc.a-star.edu.sg	Computational electromagnetic, numerical analysis, modeling, design and analysis of electromagnetic devices for both low frequency and high frequency applications	NTU / NUS / SUTD

### Interactive & Digital Media

Name	Project	Degree By
Dr Ilya Farber farberi@ihpc.a-star.edu.sg	Cognitive computing, social behavioural sciences.	NUS/NTU/SUTD
Dr Wang Zhaoxia wangz@ihpc.a-star.edu.sg	Social computing, social analytics, data analytics.	NUS/NTU/SUTD
Dr Yang Yinping yangyp@ihpc.a-star.edu.sg	Social computing, social analytics, behavioural informatics, cognitive computing.	NUS/NTU/SUTD

### Computational Social Cognition

Name	Project	Degree By
Dr Ilya Farber farberi@ihpc.a-star.edu.sg	Cognitive computing, social behavioural sciences.	NUS/NTU/SUTD
Dr Quek Boon Kiat quekbk@ihpc.a-star.edu.sg	Social computing, social analytics, behavioural informatics, cognitive computing.	NTU/NUS/SUTD

### Biomedical Engineering

Name	Project	Degree By
Dr Cui Fangsen Senior Scientist II cuifs@ihpc.a-star.edu.sg	1. Computational biomechanics and bioengineering 2. Acoustic metamaterials and engineering applications 3. Structural Health monitoring	NUS/NTU/SUTD
Dr Su Yi Deputy Department Director (CS)\ Senior Scientist III suyi@ihpc.a-star.edu.sg	1. Biomedical engineering 2. Mesh generation 3. Mesh processing 4. Computational geometry 5. Medical image analysis	NUS

Dr Teo Soo Kng Scientist III teosk@ihpc.a-star.edu.sg	Computational biomechanics using numerical techniques (finite element method)	NUS/NTU
Shiwei Gong Senior Scientist I gongsw@ihpc.a-star.edu.sg	1. Biomedical engineering 2. Shock and bubble dynamics	NTU / NUS / SUTD
Yeo Si Yong Scientist I yeosy@ihpc.a-star.edu.sg	1. Biomedical Image Analysis 2. Deep Machine Learning	NTU / NUS / SUTD
Yin Xiao Feng Scientist II yinx@ihpc.a-star.edu.sg	1. Manufacturing planning and scheduling 2. Logistic and supply chain optimisation 3. Maritime and port simulation and optimisation 4. Knowledge discovery and feature extraction	NTU

### Computational Mechanics

Name	Project	Degree By
Dr Jerry Quek Senior Scientist quekss@ihpc.a-star.edu.sg	Computational study of microstructural effects on strength, ductility, and fracture of metals.	NUS
Dr Keith Foo foocc@ihpc.a-star.edu.sg	Mechanics of soft materials and devices.	NUS/NTU/SUTD
Dr Reddy Chilla Damodara Scientist III reddy@ihpc.a-star.edu.sg	1. Mechanical properties of two dimensional materials 2. Molecular surface diffusion, Nano-mechanics and Nano-friction 3. Thermal conductivity of nanostructures and interfaces 4. Nano-composites and light-weight materials	NTU / NUS / SUTD
Liu Zhuangjian Senior Scientist I liuzj@ihpc.a-star.edu.sg	1. Mechanics of flexible and wearable electronic 2. Numerical analysis of Structures Strength.	NTU / NUS
My Ha DAO Scientist II daomh@ihpc.a-star.edu.sg	Hydrodynamics & model reduction	NTU / NUS

### Computational Solid Mechanics

Name	Project	Degree By
Dr Zhang Yong Wei Deputy Executive Director/Principal Scientist II zhangyw@ihpc.a-star.edu.sg	1. Modelling and simulations of two-dimensional materials 2. Modelling and simulations of structures, defects and mechanical properties of metals and metallic glasses 3. Modelling and simulations of metallic material processing in additive manufacturing	NTU / NUS

### Cognitive Systems

Name	Project	Degree By
Dr Ilya Farber farberi@ihpc.a-star.edu.sg	Cognitive computing, social behavioural sciences.	NTU / NUS
Dr Quek Boon Kiat quekbk@ihpc.a-star.edu.sg	Social computing, social analytics, behavioural informatics, cognitive computing.	NTU / NUS

### Social Cognitive Computing

Name	Project	Degree By
Dr Ilya Farber farberi@ihpc.a-star.edu.sg	Cognitive computing, social behavioural sciences.	NTU / NUS
Dr Quek Boon Kiat quekbk@ihpc.a-star.edu.sg	Social computing, social analytics, behavioural informatics, cognitive computing.	NTU / NUS

### Miniaturized medical device and Biosensors

Name	Project	Degree By
Dr Khoo Eng Huat khooeh@ihpc.a-star.edu.sg	Healthcare and medical devices. Computational algorithms for nanooptics and nanophotonics. Aerospace and smart city applications.	NUS/NTU
Dr Liu Zhengtong Scientist I liuz@ihpc.a-star.edu.sg	Plasmonics for bio-medical sensing, metasurface design & engineering, nanophotonics modeling	NTU / NUS
Dr Wu Lin Senior Scientist I wul@ihpc.a-star.edu.sg	Quantum plasmonics. Plasmon-enhanced phenomena. Nanoscale device and ultrafast device modelling and simulation.	NUS/NTU/SUTD

### Semiconductor process technology and advance packaging

Name	Project	Degree By
Dr David Wu davidwu@ihpc.a-star.edu.sg	Modelling of microstructure and applied mathematics.	NUS/NTU

### Computational Materials Science

Name	Project	Degree By
Daniel Cheong Senior Scientist dcheong@ihpc.a-star.edu.sg	Molecular dynamics simulations, soft matter, surfactants, polymers, peptides, self-assembly, encapsulation	NTU / NUS / SUTD
Liu Zhuangjian Senior Scientist I liuzj@ihpc.a-star.edu.sg	1. Mechanics of flexible and wearable electronic 2. Numerical analysis of Structures Strength.	NTU / NUS

### Computational Architectures

Name	Project	Degree By
Dr Rick Goh gohsm@ihpc.a-star.edu.sg	High performance computing. Data analytics. Artificial intelligence.	NUS/NTU/SUTD

### Organometallic catalysis / polymerization catalysis/ photocatalysis

Name	Project	Degree By
Dr Zheng Jianwei zhengjw@ihpc.a-star.edu.sg	Polymer, membrane, emulsion, nanomaterials, photocatalyst.	NUS/NTU/SUTD

### Chemical and Pharmaceutical Processing, reactor design, formulation processes

Name	Project	Degree By
Dr David Wu davidwu@ihpc.a-star.edu.sg	Modelling of microstructure and applied mathematics.	NUS/NTU

### Alternate Energy

Name	Project	Degree By
Dr Nguyen Vinh Tan Senior Scientist nguyenvt@ihpc.a-star.edu.sg	Hydrodynamics, aerodynamics, Fluid structure interactions, wind turbines.	NUS
Dr Zheng Jianwei zhengjw@ihpc.a-star.edu.sg	Polymer, membrane, emulsion, composite, nanomaterials, photocatalyst, materials design	NUS/NTU/SUTD



## Pharmaceutical Science and Technology

Name	Project	Degree By
Jernej Zidar Scientist I zidarj@ihpc.a-star.edu.sg	Largescale simulations of biological macromolecules	NTU / NUS / SUTD

## Wireless Communication

Name	Project	Degree By
Dr Ching Eng (Jason) PNG pngce@ihpc.a-star.edu.sg	High speed optoelectronic devices. Quantum plasmonics. Wireless charging and networks. Healthcare and medical technology. Computational algorithms for nano-optics and nanophotonics.	NUS/NTU/SUTD
Dr Wang Zhaoxia wangz@ihpc.a-star.edu.sg	Big data analytics, knowledge discovery and data mining. Social computing and Social analytics. Opinion mining and automatic sentiment categorization. Multilingual sentiment analysis and Social sensing.	NUS/NTU/SUTD
Dr. Gao Xianke Richard Senior Scientist II \CGM(RF) gaoxk@ihpc.a-star.edu.sg	Electromagnetic interference / compatibility, metamaterial, antenna, wireless, bio-electromagnetics, robust design and optimization	NUS/NTU/SUTD
Dr OO Zaw Zaw Scientist III zawzo@ihpc.a-star.edu.sg	1. Wireless Signal Coverage Modeling and Optimization for 5G Applications / Autonomous / IIoT 2. Modeling and simulation of electromagnetic wave propagation in complex environment 3. Connectivity and coverage optimization of wireless communications for future smart systems	NUS/NTU/SUTD

## Functional materials (polymer; hybrid)

Name	Project	Degree By
Chiang Huay Freda LIM Scientist II limch@ihpc.a-star.edu.sg	1. Molecular Modeling and Simulations 2. Polymer 3. Surfactants 4. Consumer Care 5. Consumer Products	NTU / NUS / SUTD
Dr Gan Chee Kwan Senior Scientist II ganck@ihpc.a-star.edu.sg	1. Simulation of magnetic materials 2. First-principles calculations of thermal properties	NTU / NUS

Dr Keith Foo foocc@ihpc.a-star.edu.sg	Mechanics of soft materials and devices.	NUS/NTU/SUTD
Dr Ong Phuong Khuong ongpk@ihpc.a-star.edu.sg	Hybrid perovskites. Nano structure optical materials. Multiferroics materials.	NUS/NTU
Dr Viacheslav Sorkin sorkinv@ihpc.a-star.edu.sg	Mechanics of nanomaterials.	NUS/NTU/SUTD
Dr Yu Zhigen yuzg@ihpc.a-star.edu.sg	Structures and defects and electronic properties of nanomaterials.	NUS/NTU/SUTD
Dr Zheng Jianwei zhengjw@ihpc.a-star.edu.sg	Polymer, membrane, emulsion, nanomaterials, photocatalyst.	NUS/NTU/SUTD
Jernej Zidar Scientist I zidarj@ihpc.a-star.edu.sg	Largescale simulations of biological macromolecules	NTU / NUS / SUTD

#### Computational Fluid Dynamics

Name	Project	Degree By
Fong Yew LEONG Scientist III leongfy@ihpc.a-star.edu.sg	Micro and nano fluidics/ Biofluid dynamics/ Transport phenomena	NUS/NTU/SUTD

#### Computational Fluid Dynamics or Computational Mechanics

Name	Project	Degree By
Bharathi BOPANA Scientist boppanavbl@ihpc.a-star.edu.sg	CFD of urban flows Pollutant dispersion Heat transfer	NTU / NUS / SUTD
Dominic Chandar Scientist chandard@ihpc.a-star.edu.sg	higher order methods for CFD	NTU / NUS
Dr Arthur Lim Teck-Bin limtba@ihpc.a-star.edu.sg	Hydrodynamics.	NUS
Dr Cary Kenny Turangan cary@ihpc.a-star.edu.sg	Shock wave, multiphase flow.	NUS
Dr Cheng Ming Senior Scientist II chengm@ihpc.a-star.edu.sg	Multi-phase and multi-component flows, Vortex dynamics	NTU / NUS / SUTD

Dr Cui Fangsen Senior Scientist I cuifs@ihpc.a-star.edu.sg	1. Mechanics of implantable medical devices (Vascular and Orthopedic); 2. Vibration and noise control	NUS/NTU/SUTD
Dr Evert Klaseboer evert@ihpc.a-star.edu.sg	Bubbles, thin film.	NUS/NTU
Dr Le Duc Vinh ledv@ihpc.a-star.edu.sg	Microfluidics, complex fluids.	NUS
Dr Lu Xin lux@ihpc.a-star.edu.sg	Waves, Currents, Renewable energy.	NTU
Dr Nguyen Vinh Tan CGM ( Fluid Structure Interaction) Senior Scientist nguyenvt@ihpc.a-star.edu.sg	High order methods in CFD; turbulence modelling; aerodynamics; hemodynamics; fluid-structure interactions; Computational design and optimization; gas dispersion modelling; CFD based risk analysis	NUS
Dr Ren Weiqing renw@ihpc.a-star.edu.sg	Complex fluids, contact theory.	NUS
Dr Sridhar Narayanaswamy Director\ CGM(EM) narayanas@ihpc.a-star.edu.sg	Mechanics of materials.	NUS/NTU/SUTD
Guglielmo VASTOLA Scientist II vastolag@ihpc.a-star.edu.sg	Numerical modeling of powder-bed fusion additive manufacturing	NUS/NTU/SUTD
Harish Gopalan Scientist gopalanh@ihpc.a-star.edu.sg	Urban Flows, Turbulence Modeling, Wind Energy, Solar Energy, Wind-Driven Rain, Dispersion Modeling	NTU / NUS / SUTD
Hee Joo POH Scientist II\ CGM(ENV) pohhj@ihpc.a-star.edu.sg	Urban Heat Island, Computational Wind Engineering, Building Performance Simulation, Heat and Mass transfer, Urban Physics	NUS
Keni Wu Chih-Hua Scientist keni-wu@ihpc.a-star.edu.sg	Computational fluid dynamics, Fluid-structured interactions, and heat transfer.	NTU / NUS / SUTD
Qide ZHANG Senior Scientist I zhangqd@ihpc.a-star.edu.sg	Airflow, flow-induced vibration, Fluid bearings, spindle motor and rotor dynamics, Computational fluid dynamics, heat transfer, vibration analysis, Natural ventilation and thermal comfort.	NTU / NUS / SUTD
Ren Weiqing renw@ihpc.a-star.edu.sg	Complex fluids, contact theory.	NUS

Yu CHEN Scientist chenyu@ihpc.a-star.edu.sg	"1. Fluid dynamics 2. Heat transfer enhancement 3. Fluid-structure interactions 4. Hydrodynamics 5. Turbulence control 6. Microfluids"	NUS
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### Computational Material Sciences

Name	Project	Degree By
Dr Bai Kewu Senior Scientist II\ CGM(AT) baikw@ihpc.a-star.edu.sg	Thermodynamic and kinetic modelling of materials	NUS/NTU
Dr David Wu Deputy Department Director (MSE)\ CGM(MS) davidwu@ihpc.a-star.edu.sg	Nucleation and growth, grain growth, additive manufacturing, phase field	NUS/NTU
Dr Gan Chee Kwan Senior Scientist II ganck@ihpc.a-star.edu.sg	1. Simulation of magnetic materials 2. First-principles calculations of thermal properties	NTU / NUS
Dr HO Junming Scientist I hojm@ihpc.a-star.edu.sg	1. Organocatalysis 2. Solvation Modelling 3. Biomolecular Simulations/ Computational Chemistry/Biophysics	NTU / NUS
Dr Ilya Farber farberi@ihpc.a-star.edu.sg	Cognitive computing, social behavioural sciences.	NTU/NUS/SUTD
Dr Jerry Quek Senior Scientist quekss@ihpc.a-star.edu.sg	Deformation and failure behaviour of materials.	NUS/NTU/SUTD
Dr Jin Hongmei Senior Scientist I jinhm@ihpc.a-star.edu.sg	DFT/MD simulations on surface and interface / additive/ corrosion and coatings	NTU / NUS
Dr Khoo Khoong Hong khookh@ihpc.a-star.edu.sg	Spintronics in nanostructures and 2D materials.	NUS
Dr Michael Sullivan Department Director (MSE)\ Senior Scientist II michael@ihpc.a-star.edu.sg	1. Computational Chemistry 2. Catalysis 3. Materials Chemistry 4. Energy Conversion and Storage	NUS
Dr Michael Sullivan Adjunct Associate Professor at NGS, NUS michael@ihpc.a-star.edu.sg	Computational chemistry and materials chemistry including catalysis, polymers and artificial intelligence	NUS

Dr Ong Phuong Khuong ongpk@ihpc.a-star.edu.sg	Hybrid perovskites. Nano structure optical materials. Multiferroics materials.	NUS/NTU
Dr Rajeev Ahluwalia Senior Scientist I rajeev@ihpc.a-star.edu.sg	Modeling Microstructural evolution in phase transforming materials: Ferroelectrics, Shape memory Alloys, Solid State transformations. Modeling role of microstructure on mechanical behavior	NUS/NTU/SUTD
Dr Ramanarayan Hariharaputran Scientist III hariharaputran@ihpc.a-star.edu.sg	1. Additive manufacturing for alloys, ceramics 2. Mechanics of nanostructures 3. Growth and stability of 2D Materials, thin films, surfaces 4. Multiscale modeling of phase transformation 5. Integrated Computational Materials Engineering	NTU / NUS
Dr Reddy Chilla Damodara reddy@ihpc.a-star.edu.sg	Mechanical properties of nanomaterials.	NUS/NTU/SUTD
Dr Robert Laskowski rolask@ihpc.a-star.edu.sg	Method development for DFT, ab-initio, solid state, augmented plane wave basis set. Computational spectroscopy, optical and x-ray photons (XAS, XES, RPES ...). NMR (chemical shifts, EFG), with focus on the relation to the electronic and atomic structure.	NUS/NTU/SUTD
Dr Sridhar Narayanaswamy Director\ CGM(EM) narayanas@ihpc.a-star.edu.sg	Mechanics of materials.	NUS/NTU/SUTD
Dr Viacheslav Sorkin sorkinv@ihpc.a-star.edu.sg	Mechanics of nanomaterials.	NUS/NTU/SUTD
Dr Yang Shuo Wang Senior Scientist II yangsw@ihpc.a-star.edu.sg	2D coordination complex structures and thermoelectric materials	NUS/NTU
Dr Yu Zhigen Scientist III yuzg@ihpc.a-star.edu.sg	Ab initio study on electrical properties of 2D materials	NUS
Dr Zhang Gang Senior Scientist I\ CGM(ME) zhangg@ihpc.a-star.edu.sg	1. Physics & Applied physics 2. Materials Science	NUS/NTU/SUTD
Dr Zhang Jia Scientist II\CGM(IF) zhangj@ihpc.a-star.edu.sg	Surface/interface catalysis of 2D materials / Catalysis	NUS/NTU/SUTD

Dr Zhang Yong Wei Deputy Executive Director/Principal Scientist II zhangyw@ihpc.a-star.edu.sg	1. Modelling and simulations of two-dimensional materials 2. Modelling and simulations of structures, defects and mechanical properties of metals and metallic glasses 3. Modelling and simulations of metallic material processing in additive manufacturing	NTU / NUS
Dr Zheng Jianwei Deputy Dept Director/Senior Scientist II zhengjw@ihpc.a-star.edu.sg	1. Self-assembly 2. Polymer composite 3. Antifouling coating	NTU / NUS
GUO Tianfu Senior Scientist II guotf@ihpc.a-star.edu.sg	1. Surface pattern & instability of soft matter 2. Cavitation and void coalescence in ductile fracture	NUS
Man Fai, Andy NG Senior Scientist I / Adjunct Assistant Prof at NUS ngmf@ihpc.a-star.edu.sg	1. Materials modelling for energy conversion and storage 2. Battery modelling	NUS
Mark Hyunpong JHON Scientist II jhonmh@ihpc.a-star.edu.sg	1. Multi-scale modeling of microstructure and mechanical properties in metals 2. Statistics-based models of mechanical and structural instabilities	NUS/NTU
Teck Leong TAN Senior Scientist tantl@ihpc.a-star.edu.sg	1. Machine-learning/AI for new alloy discovery (e.g., high entropy alloys) 2. High-throughput first-principles search for corrosion-resistant alloys 3. Prediction of alloy phase diagrams	NTU / NUS / SUTD
Tsz Sian Jeremy CHWEE Scientist II chweetsj@ihpc.a-star.edu.sg	Computational modeling of singlet fission materials for dye-sensitized solar cells	NTU / NUS / SUTD

### Computer Science

Name	Project	Degree By
Dr Feng Ling Scientist II & NUS adjunct assistant Prof fengl@ihpc.a-star.edu.sg	Complex networks, Network dynamics in Deep learning	NUS

Dr Fu Xiuju Senior Scientist I fuxj@ihpc.a-star.edu.sg	<ol style="list-style-type: none"> <li>1. Data pattern recognition</li> <li>2. Discrete event and agent-based modelling and simulation</li> <li>3. risk management and optimisation</li> <li>4. Planning and scheduling</li> <li>5. Network modeling, mathematical modeling</li> <li>6. modeling and simulation for logistics and supply chain, maritime related industries, public health area etc.</li> </ol>	NTU
Dr Lim Chi Wan Scientist III\ CGM(GM) limcw@ihpc.a-star.edu.sg	<ol style="list-style-type: none"> <li>1. Mesh Generation</li> <li>2. Computational Geometry</li> </ol>	NUS
Dr Liu Yong Scientist II/CGM(AI) liuyong@ihpc.a-star.edu.sg	deep learning, reinforcement learning, machine learning, Artificial Intelligence	NUS
Dr Muhamad Azfar Bin Ramli Scientist II, CS ramlimab@ihpc.a-star.edu.sg	Complex networks, Transportation systems	NUS
Dr Rick Goh Department Director gohsm@ihpc.a-star.edu.sg	<ol style="list-style-type: none"> <li>1. High performance computing</li> <li>2. Neuromorphic computing</li> <li>3. Artificial intelligence</li> <li>4. Deep learning</li> <li>5. Natural language processing</li> </ol>	NTU / NUS / SUTD
Dr Su Yi Deputy Department Director (CS)\ Senior Scientist III suyi@ihpc.a-star.edu.sg	<ol style="list-style-type: none"> <li>1. Biomedical engineering</li> <li>2. Mesh generation</li> <li>3. Mesh processing</li> <li>4. Computational geometry</li> <li>5. Medical image analysis</li> </ol>	NUS
Dr Teo Soo Kng teosk@ihpc.a-star.edu.sg	Biomedical engineering, computational biomechanics using numerical techniques (finite element method).	NUS/NTU

Dr Wang Zhaoxia wangz@ihpc.a-star.edu.sg	Big data analytics, knowledge discovery and data mining. Social computing and Social analytics. Opinion mining and automatic sentiment categorization. Multilingual sentiment analysis and Social sensing.	NUS/NTU/SUTD
Dr Yang Feng Scientist I yangf@ihpc.a-star.edu.sg	1. Industrial Health 2. Monitoring, Predictive Modelling	NTU
Dr Yang Yinping yangyp@ihpc.a-star.edu.sg	Social computing, social analytics, behavioural informatics, cognitive computing.	NUS/NTU/SUTD
Li Zengxiang Scientist I liz@ihpc.a-star.edu.sg	1. Big Data Analytics 2. Network Analytics and Graph Processing 3. Parallel and Distributed Computing	NTU / NUS
Liang Huiguang Scientist I hliang@ihpc.a-star.edu.sg	Social- and Welfare-Related Aspects and Applications of IoT	NTU / NUS / SUTD
Yang Bo Scientist I yangbo@ihpc.a-star.edu.sg	1. Traffic modelling 2. Transportation engineering 3. Non-linear and statistical physics 4. Condensed matter physics	
Degree by Yeo Si Yong Scientist I yeosy@ihpc.a-star.edu.sg	1. Biomedical Image Analysis 2. Deep Machine Learning	NTU / NUS / SUTD

### Nano Science & Technology

Name	Project	Degree By
BAI Ping Senior Scientist III/PM(Healthcare) baiping@ihpc.a-star.edu.sg	Design and modeling of nanophotonic and quantum photonic structures/devices	NTU / NUS / SUTD
Daniel Cheong dcheong@ihpc.a-star.edu.sg	Molecular dynamics simulations, soft matter, surfactants, polymers, peptides, self-assembly, encapsulation	NTU / NUS / SUTD

### Material Sciences

Name	Project	Degree By
Dr Gan Chee Kwan ganck@ihpc.a-star.edu.sg	First principles calculations of structural and thermal properties of thermoelectric and magnetic materials.	NUS/NTU/SUTD
Dr Ong Phuong Khuong ongpk@ihpc.a-star.edu.sg	Hybrid perovskites. Nano structure optical materials. Multiferroics materials.	NUS/NTU



Dr Rajeev Ahluwalia rajeev@ihpc.a-star.edu.sg	Microstructural evolution in phase transforming materials. Modelling of domain patterns in ferroic materials. Modelling of mechanical behaviour (fracture and plasticity).	NUS/NTU/SUTD
Dr Sridhar Narayanaswamy narayanas@ihpc.a-star.edu.sg	Mechanics of materials.	NUS/NTU/SUTD
Dr Viacheslav Sorkin sorkinv@ihpc.a-star.edu.sg	Mechanics of nanomaterials.	NUS/NTU/SUTD
Dr Yu Zhigen yuzg@ihpc.a-star.edu.sg	Structures and defects and electronic properties of nanomaterials.	NUS/NTU/SUTD
Dr Zhang Jia zhangj@ihpc.a-star.edu.sg	1. Heterogeneous Catalysis; 2. Surface and interface properties of materials	NUS/NTU/SUTD

#### Electronics/ Solid State Devices

Name	Project	Degree By
Liu Zhuangjian Senior Scientist I liuzj@ihpc.a-star.edu.sg	1. Mechanics of flexible and wearable electronic 2. Numerical analysis of Structures Strength.	NTU / NUS

#### Physical Science and Engineering

Name	Project	Degree By
Dr. Kat Agres Research Scientist; Adjunct Assistant Professor (NUS) kat_agres@ihpc.a-star.edu.sg	Music Cognition; Neural Networks/AI; Cognitive Simulation; MedTech; Music BCI/EEG; Auditory Perception; Music Technology	NUS/NTU/SUTD