

## NTU Supervisors & Projects

### Mechanical and Aerospace Engineering

Supervisor	Email Contact	Research areas of potential PhD studies
Lin Rongming	mrmlin@ntu.edu.sg	Aerospace Noise and Vibration
Ng Teng Yong	MTYNg@ntu.edu.sg	Aerospace Materials and Structures
Liu Yong	MLiuY@ntu.edu.sg	Aerospace Materials and Structures
Ang Whye Teong	MWTAng@ntu.edu.sg	Applied and engineering mathematics. Applied mechanics. Boundary element techniques. Stress analysis around cracks. Heat transfer. Non-classical initial-boundary value problems in engineering and physical sciences.
Chai Gin Boay	MGBCHAI@ntu.edu.sg	Structural and failure analysis of composite materials. Engineering. Application of finite element software. Vibrational study of engineering problems.
Chou Siaw Meng	MSMCHOU@ntu.edu.sg	Orthopaedic biomechanics. Buckling of cold-formed thin-walled structures.
Lam Khin Yong	lamky@ntu.edu.sg	Computational mechanics. Development of refined meshless (element-free) techniques. Smart (piezoelectric/magnetostrictive) materials modelling for active control. Computational nanoscience/BioMEMS. Multiscale simulations
Lu Guoxing	GXLu@ntu.edu.sg	Energy absorption of metallic structures and cellular materials.
Ong Lin Seng	MLSONG@ntu.edu.sg	Optical fibre sensors for smart structure applications. Stress analysis of cylindrical pressure vessels. Pressure vessel codes and practice. Local loads on shell structure. Finite element analysis
Pang Hock Lye, John	MHLPANG@ntu.edu.sg	Micro/Nano-mechanical deformation analysis. Nano-indentation analysis of strain-rate effects. Intermetallic compound diffusion kinetics. Constitutive modelling of lead-free solders. Fatigue and fracture mechanics. Design for reliability of microelectronic assemblies
Rajendran Sellakkutti	MSRajendran@ntu.edu.sg	Development of mesh-distortion-tolerant finite elements. Hybrid FE-meshless methods. Molecular Dynamics (MD) simulation of carbon nanotubes. Computational methods for large eigen-problems. Simulation of MEMS. Delamination buckling of composites.
Seah Leong Keey	MLKSEAH@ntu.edu.sg	Buckling behaviour of steel structure. Design of cold-formed steel structure. Experimental stress analysis. Structural analysis and testing. Optical Fibre Sensor. Smart Structures.
Wu Mao See	MMSWu@ntu.edu.sg	Micromechanics of defects: disclinations, dislocations, microcracks. Simulation and analysis of materials: polycrystal and grain boundary modelling. Fracture mechanics: crack interactions, cohesive cracks, crack nucleation.
Xiao Zhongmin	MZXIAO@ntu.edu.sg	Fracture and fatigue analysis. Mechanics of nano-scale materials and applications. Micromechanics study of interacting defects in advanced engineering materials. Piezoelectric materials and their applications. Interfacial crack problems in composite materials. Fabrication and computational modelling of MEMS devices.
Chian Kerm Sin	ASKSChian@ntu.edu.sg	Tissue engineering, bio-materials

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Khor Khiam Aik	MKAKHOR@ntu.edu.sg	Polymers, ceramics
Liu Erjia	MEJLiu@ntu.edu.sg	Thin films, coatings
Lye Sun Woh	MSWLYE@ntu.edu.sg	Intelligent decision support systems for engineering design, Engineering product/package design, Computer aided design, manufacture and assembly, Monitoring of real-time processes
Yue Chee Yoon	MCYYUE@ntu.edu.sg	Polymers, composites
Yeo Swee Hock	MSHYEO@ntu.edu.sg	Micro-machining
Chen I-Ming	mimchen@ntu.edu.sg	Reconfigurable automation, biomedical applications of robotic systems, parallel kinematics machines (PKM).
Lau Wai Shing	MWSLAU@ntu.edu.sg	Active vibration control, Modelling and Control of Underwater Robotic Vehicles, Mechatronics System Design
Lee Yong Tsui	MYTLEE@ntu.edu.sg	CAD/CAM, Geometric Modelling, Rapid Prototyping, Computational Methods in Engineering
Ng Wan Sing	MWSNG@ntu.edu.sg	Medical robotics and computer assisted surgery
Sunita Chauhan	MCSunita@ntu.edu.sg	Medical Robotics, Computer Assisted/Integrated Surgery, Ultrasound in Medicine, Sensors/ transducers signal processing.
Xie Ming	mmxie@ntu.edu.sg	Robotics and vision
Yap Fook Fah	MFFYAP@ntu.edu.sg	Vibration Analysis and Control, Vibro-acoustics, Statistical Energy Analysis Simulation of Multi-body Systems
Yeo Song Huat	MYEOSH@ntu.edu.sg	Kinematics of modular robots, mechanics of gripping and manipulation, mechanism design.
Zhong Zhaowei	MZWZhong@ntu.edu.sg	Electronics Packaging. Mechatronics and control. Precision machining.
Appa Iyer Sivakumar, Siva	msiva@ntu.edu.sg	Dynamic Schedule Optimization in Manufacturing, Logistics and Supply Chain, Analysis and Optimization of Manufacturing Systems
Rajesh Piplani	MRPiplani@ntu.edu.sg	Supply Chain Coordination, Supply Chain Planning, Logistics, Production Planning
Chan Siew Hwa	mshchan@ntu.edu.sg	Fuel Cell
Lua Aik Chong	maclua@ntu.edu.sg	Environmental Technology
Huang Xiaoyang	MXHUANG@ntu.edu.sg	Microfluidics
Yeo Joon Hock	MJHYEO@ntu.edu.sg	Biomedical Engineering
Lee Siang Guan, Stephen	msglee@ntu.edu.sg	Product lifecycle management, Service-oriented Enterprise Collaboration, Knowledge-based, sustainable design and manufacturing
Ang Hock Eng	MHEAng@ntu.edu.sg	Fracture Mechanics analysis using boundary element method. Instrumentation and Control of fluid power systems
Au Chi Kit	Mckau@ntu.edu.sg	Geometric Modelling; Physically Based Modelling
Chan Weng Kong	mwkchan@ntu.edu.sg	Bio-fluid mechanics. Flow investigation in left ventricular assist devices. Experimental fluid mechanics.
Chen Chun-Hsien	mchchen@ntu.edu.sg	Product Design and Development, Knowledge Management, Design Strategy & Methodology, AI in Design & Manufacturing.
Chen Yan	chenyan@ntu.edu.sg	Deployable Structures, Design, Analysis and Control; Cell mechanics ;Mechanism Theory ; Morphing Structures ; Re-configuration and Multi-configuration Structures ; Computational Mechanics ; Topology Optimisation ; Kinetic Architecture.
Choi Haejin	hjchoi@ntu.edu.sg	Robust design under uncertainty, materials design, multi-scale simulation-based design, distributed, collaborative product realization

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Christopher Shearwood	mcshearwood@ntu.edu.sg	MEMS, BioMEMS, Thin Film Technology, Remote Actuation, Nano-particles, sintering
Chua Leok Poh	mlpchua@ntu.edu.sg	Hot-wire (velocity) and cold-wire (temperature) measuring techniques in turbulence research. Confined jet measurement. Three dimensional jet. Bio-fluid engineering especially in artificial blood pump and respirator.
Damodaran Murali	mdamodaran@ntu.edu.sg	Aerospace Engineering. Computational Fluid Dynamics. Transonic Aerodynamics. Aeroelasticity. Multidisciplinary Design Optimization. Numerical Modelling. High Performance Computing. Modelling of Physiological Systems. Computer Graphics.
Fan Hui	MHFAN@ntu.edu.sg	Micromechanics and its applications in composite and modern materials. Fracture mechanics and dislocation theories. Material and micro-system evolution under non-equilibrium thermodynamics scheme
Foo Check Teck	mctfoo@ntu.edu.sg	Strategy, Productivity, Legal and Projects, Neural Firm Listed in US World Who's Who
Gong Haiqing, Thomas	mhqgong@ntu.edu.sg	BioMEMS for genetic testing, microfluidics, instrument design for disease diagnostics, microfabrication, rapid prototyping
Ho Hiang Kwee	mhkho@ntu.edu.sg	Gas turbine engines, fuel cells, integrated energy systems. Energy & the environment. Computer-based modelling, analysis, design and monitoring of thermal and energy systems. Knowledge based systems and artificial intelligence approaches in engineering problem solving.
Hoon Kay Hiang	MKHHOON@ntu.edu.sg	Buckling and stress analysis of thin-walled steel and composite structures. Structural testing and analysis
Huang Weimin	MWMHuang@ntu.edu.sg	Shape memory polymers and composites. Shape memory alloys. Thin films. Laser local annealing. Indentation size effect. Micro/nano patterning/fabrication. Nanocoils. Yield surface of materials. Materials selection. Devices/materials for minimally invasive surgery.
Jiang San-Ping	mspjiang@ntu.edu.sg	Solid oxide fuel cells, Proton exchange membrane fuel cells, Solid state ionic materials, High temperature electrochemistry and behaviour
Jorg Schluter	Schluter@ntu.edu.sg	Aerodynamics, Computational Fluid Dynamics, Multi-Physics Simulations, High-Performance Computing
Khong Poh Wah	mpwkhong@ntu.edu.sg	Knowledge-Based Product Design, Healthcare Technology, Engineering Management
Khoo Li Pheng	mlpkhoo@ntu.edu.sg	AI and its applications; Systems diagnosis; CIM
Lam Chung Yau	mcylam@ntu.edu.sg	Unsteady fluid mechanics, turbulence modelling. Aerodynamics. Human engineering. Computer applications.
Leong Kah Fai	MKFLeong@ntu.edu.sg	Industrial and Product Design; Biomedical Applications of Rapid Prototyping; Design Education; Design Management
Leong Kai Choong	mkcleong@ntu.edu.sg	Thermal aspects of powder coating. Modeling and experimental techniques in heat transfer. Heat transfer in electronic packages. Performance evaluation of heat exchanger surfaces.
Lim Chu Sing, Daniel	mchslim@ntu.edu.sg	Mechanics of Respiratory Management, Biomedical Sensors, Bio-Rapid Prototyping and Tooling, High Content Screening & Analysis, Monitoring of Mutation in Progress

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Lim Enk Ng, Lennie	LLIM@ntu.edu.sg	Production systems, in particular industrial audit/productivity, JIT implementation and industrial automation especially assembly automation, Product design for assembly/manufacture (DA/M) and automatic feeding and orienting of parts
Lim Mong King	MMKLim@ntu.edu.sg	Structural dynamics modelling. Smart (piezoelectric/magnetostrictive) materials modelling for transducer/sensor applications. Computational nanoscience/BioMEMS. Multiscale simulations. Noise and Vibration control.
Lim Choon Seng	mcslim@ntu.edu.sg	Statistical Process Control (SPC), Design of Experiments (DOE).
Loh Ngiap Hiang	mnhloh@ntu.edu.sg	Micro powder injection molding, Powder injection molding and powder forming processes
Ng Heong Wah	MHWNG@ntu.edu.sg	FEA of thermal-elastic problems. Remaining life assessment, creep-fatigue, ratchetting and design of pressure vessel components. LOCA modelling. Multibody impact. Stress modelling of plasma sprayed ceramic coatings.
Ong Nan Shing	mnsong@ntu.edu.sg	Design for manufacturing of electrical and mechanical products, Gas-assisted plastic injection molding, Simulation of plastic flow, Micro-fabrication of precision components
Ooi Kim Tiow	mktooi@ntu.edu.sg	Conventional and micro-scale air and refrigeration compressors as well as refrigeration systems, and micro-electronic cooling techniques. Application of computer optimization techniques in engineering design and analysis.
Sathyan Subbiah	sathyan@ntu.edu.sg	Applying micro-machining; multi-scale material models in simulation & modeling; advanced aerospace materials processing; mass manufacturing micro-systems; micro-fixturing; environmentally friendly manufacturing
Seet Gim Lee, Gerald	mglseet@ntu.edu.sg	Mechatronics, Robotics, Hydraulics
Shang Huai Min	MHMSHANG@ntu.edu.sg	Optical nondestructive testing and evaluation
Shu Dong Wei	MDSHU@ntu.edu.sg	Drop testing simulation of Seagate micro hard disk drives used in iPod and MP4. Buckling, vibration detection and stitching in fibre reinforced plastics with delamination. Hopkinson bars. Smart material sensors in vibration control. Robustness, fragility and drop test of consumer electronics products.
Shu Jian Jun	mjjshu@ntu.edu.sg	Thermo-Fluid Mechanics, Applied Mathematics and Biophysics. His current research works on Nano/Micro Fluids, DNA/Protein Modelling and Mathematical Strategame Theory
Sim Siang Kok	mskim@ntu.edu.sg	AI in Design, Machine Learning, Design Theory and Methodology, Knowledge Management
Sridhar Idapalapati	msridhar@ntu.edu.sg	Powder consolidation, Sandwich panels design, Ultrasonic NDT, Adhesion and friction modelling (nanotribology), Thin-film batteries; Biomechanics
Tai Kang	MKTAI@ntu.edu.sg	Optimisation. Evolutionary and genetic algorithms. Structural design optimisation. Design of compliant mechanisms (flexural structures) by topology and shape optimisation. Unfolding and geometric design of flat patterns of 3D folded structures.
Tan Soon Huat	MSHTAN@ntu.edu.sg	Analysis and testing of steel and cold-formed thin-walled structures. Structural connections.

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		Experimental stress analysis. Biomedical Engineering: Field of Orthopaedics, especially the human spinal vertebrae and hand.
Teo Ee Chon	MECTEO@ntu.edu.sg	Orthopaedic biomechanics: Development of finite element models of spine and knee joints for simulation and implant devices analyses. Structural integrity analysis of off-shore deep seas connectors.
Tor Shu Beng	msbtor@ntu.edu.sg	Micro Fabrication, Mould design, Process Modelling, CAD/CAM System
Wong Teck Neng	mtnwong@ntu.edu.sg	Two phase flow and heat transfer. Flow boiling phenomena, two-phase flow in evaporator, condenser and capillary tube expansion devices, heat driven pump and pulsating heat pipe for electronic cooling. Micro-scale heat transfer and fluid flow. Two-fluid electroosmotic pump for non-conducting fluid, electroosmotic control of the interface between two fluids in microchannels and flow switching in microfluidic devices.
Wu Zhang	mzwu@ntu.edu.sg	Statistical Process Control, Tolerancing, Design of Experiment.
Yeo Khim Teck	mktyeo@ntu.edu.sg	Project and Systems Management, Management of Technology and Innovations, Global Operations Management.
Yu Ching Man	mcmym@ntu.edu.sg	Biofluid mechanics. Turbulent mixing flows and applications of non-intrusive laser measurement techniques to fluid flows.
Zheng Lianxi	LXZheng@ntu.edu.sg	"Smart" nanotube based bio-sensors. Full CNT electronics and ICs. Nanowire and nanoparticles for solar cells/lighting applications. Novel enable technologies on nano-materials synthesis. Traditional semiconductor material and devices. Thin film deposition and crystal epitaxy, and High-strength nanotube fibers.

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