

NTU Supervisors & Projects

Civil and Environmental Engineering

Supervisor	Email Contact	Research areas of potential PhD studies
Chang Wei-Chung, Victor	WCChang@ntu.edu.sg	Air quality with special emphasis on aerosol physics and chemistry, indoor/outdoor air quality monitoring, human exposure assessments via inhalation, photo-catalytic technology in indoor air quality control, and energy efficiency on HVAC systems.
Chiew Yee Meng	CYMCHIEW@ntu.edu.sg	Flow-sediment-structure interaction; Scour and scour protection; Fluvial and coastal hydraulics
Cheng Nian Sheng	CNSCheng@ntu.edu.sg	Particle-flow interactions with applications in the areas of environmental hydraulics, river and coastal engineering.
Huang Zhenhua	ZHHuang@ntu.edu.sg	Wave-structure interaction; Hydrodynamics; Large scale circulations and transport phenomena in coastal waters; Environmental fluid mechanics; Ocean and Coastal Engineering
Lim Teik Thye	CTTLim@ntu.edu.sg	Development of environmental nanomaterials for pollution control; Environmental remediation; Waste treatment for reuse; Contaminant fate and transport in surface waters and groundwater
Lim Siow Yong	CSYLIM@ntu.edu.sg	Hydraulic Engineering; Sediment Transport and Scouring Phenomena; Open Channel Hydraulics
Tan Soon Keat	SoonKeat_Tan@pmail.ntu.edu.sg	Physical and Numerical modelling of coastal, hydraulics and hydrological processes; Water Resources Engineering
Chen Po-Han	CPHChen@ntu.edu.sg	Pattern recognition / image processing / signal processing; Artificial intelligence applications; Financial management / construction management; Optimization of construction processes
Chu Jian	CJCHU@ntu.edu.sg	Laboratory and in-situ testing, engineering properties of soil, land reclamation, soil improvement, disaster mitigation and rehabilitation techniques, and geo-environmental engineering
Goh Teck Chee, Anthony	CTCGOH@ntu.edu.sg	Deep excavations; Soil-structure interaction; Numerical methods; Genetic algorithms
Low Bak Kong	CBKLOW@ntu.edu.sg	Reliability analysis in geotechnical engineering; Engineering soil improvement methods; Computer applications and optimization in geotechnical engineering
Lum Kit Meng	CKMLUM@ntu.edu.sg	Waste Re-Cycling as Pavement Materials for Singapore Roads; Asphalt Mix Design for Singapore Environmental Conditions; Traffic Network Analysis and Simulation; Dynamic Traffic Assignment
Ting Seng Kiong	CSKTING@ntu.edu.sg	Research in composite and prefabricated structures, deep beams behavior, construction procurement methods and construction productivity.
Teo Chee Chong	TeoCC@ntu.edu.sg	Logistics Management, Supply Chain Design, Production Management for Marine/Offshore Industry, Operations Research
Wong Yiik Diew	CYDWONG@ntu.edu.sg	Driver and traveller behaviour, road safety engineering and practices, pavement materials, and freight research
Fung Tat Ching	CTCFUNG@ntu.edu.sg	Tubular joint connections; Finite element method; Structural Dynamics; Computational Mechanics
Chiew Sing Ping	CSPCHIEW@ntu.edu.sg	Fatigue and fracture of steel structures; Structural stability; Tubular structures; Steel and composite construction

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Kusnowidjaja Megawati	Kusno@ntu.edu.sg	Seismic hazard identification and modeling; Seismic risk modelling and assessment; Seismic performance of structure subjected to long-duration ground motion; Seismic response of sedimentary basin structure
Lee Chi King	Ccklee@ntu.edu.sg	Reliable error estimation procedures for finite element analysis; Automatic accurate adaptive finite element analysis for solid mechanic; Computer graphic and automatic mesh generation procedures using advancing front technique for finite element analysis
Lie Seng Tjhen	CSTLIE@ntu.edu.sg	Structural control; 2D symmetric Galerkin boundary element for cracked problems; Coupling boundary element and finite element using variational approach; 3D analysis of high strength friction grip bolts using frictional contact boundary element method
Low Ying Min	YMLow@ntu.edu.sg	Structural dynamics; Offshore structures
Tan Teng Hooi	CTHTAN@ntu.edu.sg	Behaviour of concrete under multi-axial stress; Appraisal, repair and strengthening of concrete structures; Effect of high temperature e.g. fire on concrete structures; Precast connections; Durability of concrete
Susanto Teng	CSTENG@ntu.edu.sg	Experimental behaviour, computational modeling, and design of concrete flat-plate structures, including investigations on various slab-column connections, prestressed flat-plate slabs, effect of opening, column rectangularity, size effect, various shear reinforcements, irregular column layout, etc. Other areas of research includes beam-column joints under cyclic loading, prestressed and nonprestressed deep beams under fatigue loading, time dependent effect in concrete structures.
Zhao Zhiye	CZZHAO@ntu.edu.sg	Stress evaluation in Boundary Element Method (BEM); Adaptive Boundary Elements; Sensitivity analysis using BEM; Structural optimum design; Neural Network in civil engineering applications; Case based design using AI
Ng Wun Jern	wjng@ntu.edu.sg	Biotreatment processes, Bioreduction – dehalogenation, cyclic systems, anaerobic processes doped sorbents, competitive sorption-desorption
Benoit Guieysse	BJGuieysse@ntu.edu.sg	Environmental biotechnology with focus on the development of biological processes (biofilm reactors, two liquid-phase partitioning bioreactors, hybrid physicochemical-biological processes, photosynthetically aerated bioreactors) for the removal of toxic and recalcitrant organic contaminants (i.e. endocrine disrupters, pharmaceuticals, pesticides etc) from soil, air and water.
Cahyadi Jong Herman	chcjong@ntu.edu.sg	Durability of concrete, Carbonation of concrete, Mechanism of carbonation on concrete, Prediction of carbonation depth, microstructure of concrete and its affects on strength and durability of concrete, Utilization of blended cement and its affects on microstructure, Physical and chemical properties of concrete, computerized concrete mixed design.
Chen Chin-Kuang, Jim	jimchen@ntu.edu.sg	Membrane Science and Technology; Computational Modeling and Simulations; Colloidal Transport; Multiphase and Multi-Scale Flow; Fluid Dynamics
Chen Po-Han	cphchen@ntu.edu.sg	Pattern recognition / image processing / signal processing; Artificial intelligence applications; Information technology in construction; Financial management / construction management; Optimization of construction

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		processes
Chew Ah Seng, David	caschew@ntu.edu.sg	Management of international construction joint ventures for infrastructure projects; international construction marketing; strategic management of China construction industry.
Chua Hock Chye, Lloyd	chcchua@ntu.edu.sg	Water resources; Real time monitoring/simulations, urban catchment hydrology, modeling of rainfall-runoff from urban catchments and water quality of urban runoff; Artificial neural networks in the modeling of the rainfall-runoff process.
Chuang Poon Hwei	cphchuang@ntu.edu.sg	Reinforced Concrete Columns; Optimization in Civil Engineering; Neural Network Applications in Civil Engineering; AI Techniques in Civil Engineering
Chui Peng Cheong	cpchui@ntu.edu.sg	Wastewater treatment; Solid waste management
Edmond Lo Yat Man	cymlo@ntu.edu.sg	Wave mechanics; Urban water resources management
Fan Sau Cheong	cfansc@ntu.edu.sg	Concrete material modeling in finite element analysis; Numerical simulation of ballistic penetration; Numerical simulation of explosion in underground caverns; Numerical simulation of fluid-structural interactions in submarine structures; Cardiac dynamics; Train-Rail interaction; Vibration and thermal effects on bridges; Meshless methods
Goh Pong Chai	cpcgoh@ntu.edu.sg	Geographic Information systems; Digital mapping; Applications in GPS; Cadastral systems
Harianto Rahardjo	chrahardjo@ntu.edu.sg	Rainfall - induced landslides; Behaviour of unsaturated tropical soils; Soil improvement for tree stability; Laboratory soil testing for saturated and unsaturated soils; Specialised soil testing techniques and their interpretation; Analytical techniques in geotechnical engineering
Henry Fan	chenryf@ntu.edu.sg	Transport planning, congestion management, airport planning and design, mathematical modelling and computer simulation of transport systems.
Karina Gin Yew-Hoong	cyhgin@ntu.edu.sg	Water quality; Rapid detection methods for micro-organisms; Environmental modelling and impact assessment; Eutrophication and plankton dynamics; Biological oceanography; Remote sensing
Law Wing-Keung, Adrian	cwklaw@ntu.edu.sg	Environmental fluid mechanics, with special emphasis on wastewater disposal and impact, wastewater treatment processes, and pollutant transport in coastal environment.
Lee Sai Cheng	csclee@ntu.edu.sg	Behaviour of concrete flat plates; Behaviour of damaged r c beams; Behaviour of upgraded r c beams
Leong Eng Choon	cecleong@ntu.edu.sg	Laboratory and field testing for saturated and unsaturated soils; Dynamic behaviour of soil; Foundation engineering; Numerical and analytical methods in geotechnical engineering
Li Bing	cbli@ntu.edu.sg	Earthquake and Blast Resistant Design: Seismic and blast resistant design of reinforced concrete buildings and buildings incorporating precast concrete elements. Development blast testing for explosive effects on reinforced concrete structures. Structural Concrete: Design and behaviour of reinforced and precast concrete structures, reinforcement detailing and cyclic strut-and-tie models. Structural Dynamics: Non-linear dynamic response of buildings subjected to blast and seismic loadings.

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		Probabilistic performance assessment of reinforced concrete structures in blast environments.
Liu Yu	cyliu@ntu.edu.sg	Biogranulation process; Innovative water and wastewater treatment processes; Development of novel type of biofilm reactor; Population dynamics of suspended and attached cultures; Modeling and mechanisms of microbial energy uncoupling; Nutrients removal
Lok Tat Seng	ctslok@ntu.edu.sg	Weapons Effects on Structures; Assessment of Blast and Ballistic Performance of Structures; Steel Fibre; Reinforced Concrete; Thin-Walled Structures; Stability of Tall Steel Framed Buildings
Ma Guowei	cqwma@ntu.edu.sg	Damage assessment and protection of civil structures against blast load; Structural dynamics; Rock dynamics; Material testing in high strain-rate loading; Dynamics constitutive relations of geomaterials; Computational dynamics
Pan Tso-Chien	cpan@ntu.edu.sg	Damage assessment of buildings subjected to dynamic loading; Structural design for blast loading and missile impacts; Vibration isolation for structures and equipment; Seismic hazard, vulnerability and risk assessments; Seismic soil/fluid/structure interaction analysis of surface and underground structures
Paulus Irawan	cirawan@ntu.edu.sg	Path-Dependent Three-Dimensional Constitutive Laws of Reinforced Concrete; Path-Dependent Behaviour of Concrete under Triaxial Stresses; Path-Dependent Nonlinear Analysis of Reinforced Concrete Structure; Shear Strength of Reinforced Concrete Column under Multi-directional Loading; Cyclic Response of Lightly Reinforced Concrete Beam-Column Joints; Punching Shear Strength of Flat-Plate Structures; Behavior of Reinforced Concrete Deep Beams
Shuy Eng Ban	cshuyeb@ntu.edu.sg	Quantity and quality modelling and management of urban storm runoff; Sustainable urban drainage systems; Analysis and control of water hammer in pipelines; Density stratified flow; Aquifer storage and recovery; Air pollutant dispersion modeling
Soh Chee Kiong	csohck@ntu.edu.sg	Structural connections; Computational mechanics; Evolutionary computation; Protective technology; Smart Structures and materials
Sun Delai, Darren	ddsun@ntu.edu.sg	Emission abatement in particular odor, indoor air, car exhaust and landfill gases
Tan Kang Hai	ckhtan@ntu.edu.sg	Behaviour of sandwich structures; shear behaviour in concrete beams and pile caps; behaviour of steel frames in fire; behaviour of composite beams
Tan Yan Weng	cywtan@ntu.edu.sg	Transportation planning, traffic flow analysis, analysis of travel behavior and simulation of traffic and parking systems
Tang Chuyang	CYTANG@ntu.edu.sg	Membrane technology, with special emphasis on membrane characterization, membrane fouling, and emerging contaminant removal using reverse osmosis and nanofiltration membranes.
Tay Joo Hwa	cjhtay@ntu.edu.sg	Wastes recycling and reuse; Hazardous waste management; Biotechnological applications on wastewater treatment; Membrane filtration technology; Advanced oxidation processes technology; Sludge management
Teh Cee Ing	cciteh@ntu.edu.sg	Soil-structure interaction; Interpretation of in-situ tests;

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		Soil improvement methods; Probabilistic and reliability analysis in geotechnical engineering
Tiong Lee Kong, Robert	clktiong@ntu.edu.sg	Construction project management, international project risks and financing
Tor Yam Khoon	cyktor@ntu.edu.sg	Precise engineering and industrial surveying; Automatic monitoring and analysis of deformation; Height derivation from GPS survey; 3D Geographical Information Science
Volodymyr Ivanov	CVIvanov@ntu.edu.sg	Environmental Microbiology, Biotechnology and Bioengineering
Wang Jing-Yuan	jywang@ntu.edu.sg	Waste to bioenergy; Bioremediation of contaminated soils and sediments; Electrokinetic removal of heavy metals from soils, sediments, and sludge
Wong Kai Sin	ckswong@ntu.edu.sg	Deep excavation; Building foundation; Reclamation and numerical analysis
Wong Sai Wai, Tommy	cswwong@ntu.edu.sg	Urban storm drainage; Flood hydrology; Hydrologic computer modeling
Wong Wai Fan	cwfong@ntu.edu.sg	Appraisal, Repair and Strengthening of reinforced concrete structures; Construction project management; International Construction joint ventures; Organizational research; Risk management
Yang Yaowen	cywyang@ntu.edu.sg	Evolutionary Computation; Structural Health Monitoring; Smart Materials and Structures; Multi-Scale Modeling
Wang Rong	rwang@ntu.edu.sg	Development of various novel membranes; Simulation and optimization of various membrane processes; Mass transfer and computational fluid dynamics
Sourav Saha Bhowmick	assourav@ntu.edu.sg	Data Mining, Systems Biology data management, Web data management, XML data management
Srikanthan Thambipillai	astarikan@ntu.edu.sg	Algorithms to Architectures; Re-configurable Computing; Embedded System; Design Methodologies
Sun Aixin	axsun@ntu.edu.sg	Text/Web Mining, Information Retrieval, Digital Libraries
Sun Chengzheng	czsun@ntu.edu.sg.	Computer-Supported Cooperative Work (CSCW), distributed systems and computer communication networks, human-computer interaction, and software engineering
Tang Xueyan	asxytang@ntu.edu.sg	Mobile and pervasive computing, wireless sensor networks, distributed systems, Web and Internet
Tay Leng Phuan, Alex	aslptay@ntu.edu.sg	Investigations into Cognitive Autonomous Robotic Systems
Xu Dong	dongxu@ntu.edu.sg	Computer Vision and Multimedia Content Analysis
Yeo Chai Kiat	asckyeo@ntu.edu.sg	Mobile and Adhoc Networks, P2P Systems, Overlay Networks, Speech Enhancement and Processing
Yow Kin Choong	kcyow@ntu.edu.sg	Computer Vision, image processing, wireless network, mobile computing, computational intelligence
Zhang Jun	jzhang@ntu.edu.sg	Databases and Web
Zheng Jiamin	asjmzheng@ntu.edu.sg	Computer graphics, geometric modeling, visualization, computer animation, CAD/CAM, digital media processing
Zhou Suiping	asspzhou@ntu.edu.sg	Distributed Virtual Environments, Massive Multiplayer Online Games, Human Behavior Representation for Computer Games

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