

DESIGN COMPETITION

Judges : Mr Auyeong Hoh Wai, Prof Toh Siew Lok, Mr Low Kay Siang, Mr Chung Kwong Yuew, Mr Lim Seng Koon

Order	Name	Institution	Title of Abstract
1	Sim Yi Heng	NUS	Print-it-Yourself (PIY) Glove: A 3D Printed Soft Robotic Hand Rehabilitative and Assistive Exoskeleton for Stroke Patients
2	Deepika Ranganathan	NUS	Monitoring Stress via Asuris Stress Monitor
3	Jonathan William Ambrose	NUS	Stress Buster
4	Koh Jia Xin/Hongliang Ren	NUS	Open-Source Development of A Low-Cost Stereo-Endoscope System for Natural Orifice Transluminal Endoscopic Surgery
5	Liu Yixuan	NUS	Stress shield
1	Low Rui Qi	NUS	Soft Wearable Robotics for Assistive Trunk Support
2	Meliana	NTU	alziProbe
3	Ng Hui Min	NUS	Wearable Soft Knee Brace Robot for Rehabilitation with Control System
4	PANG YAO YI	SIT	Design of a low-cost and portable universal muscle strengthening and rehabilitation device for the elderly and post-stroke patients
5	Rachel Phua	NUS	Stress-3PO: Wearable Stress Tracker Device

Morning

5

1045 - 1230

Afternoon

5

1345 - 1530

JUNIOR COLLEGE (PODIUM)**JUDGES : Mr Ong Wai Sing, Dr Lim Kaiyang**

Order	Name	School	Title of Abstract
1	Phang Ting Ting	Anderson Junior College	Incorporation of sol-gel method and pattern design for the development of electrochromic smart windows
2	Felicia Tay	Anderson Junior College	Development of a Portable Network Enabled Control Using Arduino and QR Code
3	Cindy Ow	Hwa Chong Institution (College)	Functional Characterisation of Hepatocellular Carcinoma
4	Caleb Ng Wei Hao	Anderson Junior College	Resistive Switching Materials: Effect of Varying Oxygen Pressure on Oxygen Vacancy
5	Hoe Jun Leong	Anderson Junior College	Similarity Metric for Video Retrieval
6	Ng Yu Ci	Hwa Chong Institution (College)	Genetics of Oxidative Stress and Personality
1	Khant Nyi Nyi	Anderson Junior College	Rate of recovery of shape memory polymers
2	Darren Ng Wei Xuan	Anderson Junior College	3D Printed Platform for Chemotaxis Study
3	Clare Cheong Wei Zhen	Hwa Chong Institution (College)	Differential urinary polyphenol metabolic profiles following consumption of varying doses of mixed Indian spice: a randomised, crossover, clinical study

Morning

6

1045 - 1230

Afternoon

3

1345 - 1530

PODIUM(POLY + UG)

Judges : Dr Kah Chen Yong James, Ms Leow Jiamin, Dr Chua Kuang Chua

POLYTECHNIC

Order	Name	Institution	Title of Abstract
1	Tey Ming Chuan	NP	Verification of Nasogastric Intubation via Air Bolus Injection
2	Muhammad Akmal Khan	NYP	Design and development of a cost-effective fall prevention system for geriatric patients in hospital restrooms
3	Samuel GV	NYP	Development of antimicrobial coating via hybrid sol-gel method for biofilm prevention and antibacterial surface application
4	Ong Xin Min	SP	Advanced Material for Smart Biomedical Applications
5	Nathaniel Low	NYP	Development of an indoor navigation system for the visually handicapped
6	Lau Jia En Josias	SP	Aligned Mesenchymal Stem Cell Sheet Engineering for Constructing Aligned Tissues
7	Jarron Ng	TP	Intelligent Automation for Respiratory Wellness

UNDERGRADUATE

Order	Name	Institution	Title of Abstract
1	Mohammad Ehsan Bin Mansoor	NTU	INVESTIGATION OF INDUCIBLE PROMOTERS IN GLUCONACETOBACTER
2	Jawahar Ali Mohamed Javid Naseem	NTU	INVESTIGATING ELECTROSPUN COLLAGEN ON DECELLULARISED PORCINE BLOOD VESSELS
3	Kasturi Markandran	NTU	Investigating the impacts of different levels of RLC phosphorylation on the contractility of skeletal muscles
4	R Abirami	SUSS	VISUAL INTELLIGENCE: A SPATIAL PERCEPTION SYSTEM FOR VISUALLY IMPAIRED

Morning	7	1045 - 1230
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Afternoon	4	1345 - 1530
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PODIUM (G)

Judges : Dr Zhang Huiyu, Dr Ngoh Shwu Lan, Dr Laxmi Iyer

Order	Name	Institution	Title of Abstract
1	Vidya Chamundeswari N	NTU	Electrospun Dual-Structured Biodegradable Scaffold for the Simultaneous Delivery of Hydrophilic and Hydrophobic Drugs for Applications in Tissue Engineering.
2	Duraisamy Shriram	SUTD	Computational Modeling of the Knee Joint Biomechanics for Investigating the Effects of Joint Injuries and Surgical Procedures
3	Tejas Canchi	NTU	A Computational Biomechanical Model to Predict Rupture in Abdominal Aortic Aneurysms
4	Gokula Krishnan. R	NUS	A Clinical Study for the Identification of Non-Invasive Breath Biomarkers of Gastric Cancer and Development of Gastric Cancer Diagnostic Device Based on Novel Flower Based Chemiresistive Volatile Sensors.
5	Satish Kumar Panda	NUS	Role of residual stresses in gastrointestinal wall
6	Foo Zi Hui	NUS	A Stochastic Method To Model Atherosclerotic Plaque Growth
7	Yu Longteng	NUS	Wearable microtubular sensor for pulse monitoring
1	Yap Hong Kai	NUS	Design and Evaluation of a Soft Wearable Robotic Glove for Hand Function Assistance of Stroke Survivors
2	Aishwarya Bandla	NUS	Peripheral Sensory Stimulation as an Adjuvant Neuroprotective Therapy for Thrombolysis in Hyperacute Ischemic Stroke
3	Vidya	NTU	Dual Structured and Spongy scaffold systems for Sustained Release of biomolecules and Tissue Engineering Applications.
4	CHAN CHOW KHUEN	NUS	Squatting Modality in Young and Elderly Individuals: Modification of the Lower Extremity Biomechanics, Muscular Recruitment and Muscle Fiber Adaptation due to Different Depths and Speeds
5	Ho Yan Teck	NUS	The effect of the protein corona on the margination of nanoparticles in microflow
6	Shreyas Kuddannaya	NTU	Simple Strategy to Enhance MSCs Sheet Engineering on Polydimethylsiloxane Surfaces for Tissue Regeneration
7	Low Fanzhe	NUS	A Soft Robotic Sock Device Developed for Ankle Rehabilitation of Stroke Patients in Acute Stage

Morning

7

1045 - 1230

Afternoon

7

1345 - 1530

Judges : Mr Amit Kumar Singh, Dr Abdiel Foo, Dr Subburaj Karupppasamy

JC

Order	Name	Institution	Title of Abstract
	Apollos Michio	HCI	Buffering Infirmity: Telomere Length and Function-Retention in Old Age
	Xu Yuhan	HCI	GluN2C de novo mutation A166V is associated with hypoactivity of NMDA receptor function: A plausible link to neurological dysfunction
	Gwyneth Kong	HCI	Development of treatment for Chronic Hepatitis B infection
	Tiong Ung Sing	RVHS	Enhanced Diagnosis of Neuromuscular Disorders with Gene Prioritisation Tools in Targeted Next-Generation Sequencing
	Jonathan Lau Wei Jun	HCI	Optimising the stability of Pickering emulsions with protein E2 nanocage as the emulsifier by altering oil medium and energy input to produce the emulsion

POLYTECHNIC

Order	Name	Institution	Title of Abstract
	Jordon Tan	TP	Materiomics: Identification of Topographical Effects on the Differentiation of Hepatic Progenitor Cells
	Timothy Lim Chun Gao	NYP	Design and development of a cost-effective thermal imaging-based human vein display system
	Ernest Sim Zi-en	NP	Blephasteam Device Monitoring System

DERGRADUATE

Order	Name	Institution	Title of Abstract
	Arisha Melati Binte Abdullah	SIT	Development of a wearable device to measure posture deviations and posture rehabilitation in people with Parkinson's Disease (for torso region)
	Wai Kit (david) Chee	NUS	Protecting the optic nerve head: Evolutionary biomechanical strategies in vertebrates and Engineering a glaucoma implant
	Ang Zhi Ting	NTU	COMPARISON OF FLOW PATTERNS OF DIFFERENT STENTS WITHIN A SIMULATED DISEASE MODEL
	Joel Heng	NUS	On-Chip Biopanning of Yeast Surface Displayed Peptide Aptamers Against Circulating Tumor Cells
	Lam Jing Ying Adele	NUS	Maturation of Human Pluripotent Stem Cell-derived Endothelial Cells into Arterial and Venous Subtype Under the Influence of Shear Stress

Morning	8	1045 - 1230
Afternoon	5	1345 - 1530

POSTER (G)

Judges : Mr Johnny Chee, Dr Anju Mythreyi Raja, Dr Kannathal Natarajan, Dr Toh Yi-Chin

Order	Name	Institution	Title of Abstract
	Royston Tan	NUS	A Novel Pupil Expander Device
	Sun Yi	NUS	Development of a Shape-Morphing Soft Pneumatic Actuator: Soft Robotic Pad
	Nurul 'Ain Azman	NUS	Surface Chemistry Mediates Hematocompatibility of Therapeutic Gold Nanorods
	Rainier Natividad	NUS	The Dynamics of a Reconfigurable Soft Actuator for Robotic Rehabilitation
	Khin Phone May	NUS	Modular based soft pneumatic structures for assistive functions
	Lee Ji Chao Tristan	NUS	Neuroprotective Effect of Fluocinolone Acetonide on Mitochondria in Paclitaxel-induced Peripheral Neuropathy
	Nida Itrat Abbasi	NUS	Electroencephalographic Measures of Vigilance Decrement and Haptic Augmentation
	Marlena Raczowska	NUS	Personalized bioelectronics: adaptive closed-loop neuromodulation strategy for bladder control in rat
	Liang Xinquan	NUS	Design and Characterization of a Soft Robotic Arm
	Zhang Jingyun	NUS	Control biofilm formation for continuous bioproduction using synthetic biology approach
NC	LIN JIN	NUS	An Auto-Regeneratable Electrochemical Aptasensor for Continuous Monitoring of Biomolecules Enabled by Ion Concentration Polarization
NC	Tiana Miller-Jackson	NUS	Soft Robotic Tubular Jamming Actuators for Lower Leg Rehabilitation

Morning
NC

10 Confirmed
Not confirmed

1045 - 1245