

NUSGRIP

GRADUATE RESEARCH INNOVATION PROGRAMME



NUS GRIP **LIFT-OFF DAY**

NUS Deep Tech
Start-Ups Showcase

12 December 2019

A Flagship Innovation Programme by:



NUS
National University
of Singapore

Industry Liaison
Office

NUSGRIP

GRADUATE RESEARCH INNOVATION PROGRAMME

THE FLAGSHIP INNOVATION PROGRAMME

by NUS Industry Liaison
Office enabling NUS
postgraduate students
and researchers to
develop commercially
viable and investible deep
tech start-ups



About NUS GRIP

Launched in 2018, the NUS Graduate Research Innovation Programme (NUS GRIP) is the Industry Liaison Office's flagship innovation programme. Based on our extensive experience working with deep technology, the programme will provide step-by-step guidance to NUS postgraduate students and researchers to cultivate deep tech entrepreneurs, to transform the university's world-class research into their own deep tech start-ups.

Twice a year, 25 teams are selected from the best and brightest NUS researchers and postgraduate students to equip them with entrepreneurial skills and experience.

For the duration of one year, teams will undergo a transformation journey through a series of workshops, mentorships, industry linkages and incubation support, to develop commercially viable and investible deep tech start-ups. NUS will invest up to S\$100,000 in start-ups demonstrating high commercial potential to accelerate their growth. We are committed to take in 50 teams a year, generating a pipeline of up to 250 teams in five years.



Find out more at
<http://nus.edu.sg/grip/>

A hand is shown pointing at a glowing digital interface. The interface features various geometric shapes like hexagons and circles, along with lines and arrows, suggesting a futuristic or technological theme. The text 'EXPECT THE FUTURE' is prominently displayed in the center of the image.

**EXPECT
THE FUTURE**

NUS GRIP to date



3

RUNS

147

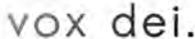
ENTREPRENEURS

56

TEAMS

\$4+

MILLION INVESTED





Programme Schedule

1.00PM - 1.30PM

Welcome

1.30PM - 3.00PM

TRACK 1

TRACK 2

**Advanced Materials,
Sustainability and
Health**

**AI and
Big Data**

- BiocharCorp
- MOS
(Membrane Oil Sep)
- CBE Chemicals
- Ecobinder
- Fronka
- Magloy Tech
- Enlipsisium
- SafeLight
- AuroraFood

- Vir-Pop
- UnoMove
- Synectify
- RightCode
- Matchpreneur
- REOMEx
Technologies

3.00PM - 5.00PM

Networking

5.00PM

Close

An abstract graphic featuring a large blue circle with a white border. Inside the circle, the word "TRACK" is written in white, bold, italicized capital letters. To the right of "TRACK" is a large white number "1". Below "TRACK" is the text "Advanced Materials, Sustainability and Health" in white, italicized font. The graphic is set against a solid blue background and is surrounded by several orange lines and blue dots, suggesting a network or data flow.

TRACK 1

*Advanced Materials,
Sustainability and
Health*



Souradeep GUPTA (PhD)
Product Development Lead



KUA Harn Wei (Assoc Prof)
Technical and Opportunity
Advisor



Kristina RAZANSKAITE (BSc)
Marketing Lead



LEONG Siew Why
Commercial Champion



Jack SO
Venture Dev Mngr

Grace WEE
Tech Mngr

Build Green, Build Strong, Build Durable

Water seepage in concrete poses a great risk to long term durability of buildings and infrastructure. Repair works are often expensive, and disrupts the routine functions of the buildings.

BiocharCorp's innovation involves application of engineered biochar, prepared from waste biomass, as admixture in cement mortar and concrete. Their technology reduces permeability of the concrete, makes it water-tight and improves its durability performance under different exposure scenarios. Biochar-concrete is a low carbon material technology with lower demand of cement and sand, and provides a means of sequestering carbon in future constructions.



To Deliver Superior Solutions to Oily Wastewater Problems

MOS (Membrane Oil-Sep) is a Singapore-based company with the vision to eliminate the global environmental issue of oil pollution. Its first product, ZerOil, is an affordable membrane designed specifically for oily wastewater treatment.

This membrane is capable of tolerating high concentration of oil in wastewater and is a patented technology in Singapore and the United States. With this technology, MOS hopes to fulfil its mission of delivering superior solutions to the issues posed by oily wastewater.



YANG Xuan (PhD Candidate)
Co-Founder



LIEW Shuo Ren (BEng)
Co-Founder



Kelvin LING Jeihan (MBA Student)
Co-Founder



LEE Kum Leong
Commercial Champion



OU Chung-Pei
Venture Dev Mngr



BAI Renbi (Assoc Prof)
Tech Advisor

YONG Yoke Ping
Tech Mngr



YAO Zhiyi (PhD)
CEO



Babu CADIAM MOHAN (PhD)
CTO



Alvin SALIM (MBA)
COO



LEONG Siew Why
Commercial Champion



Jack SO
Venture Dev Mngr

Prasanna SHIRIDI
Tech Mngr

Carbon for A Better Environment

CBE Chemicals converts waste carbon into activated carbon, therefore making financial profit while creating positive environment impacts.

There are two main advantages of their product, CarbonSP. First, their technology is proprietary, allowing maximum efficiency in the process resulting in lower price offered for the same product quality. Second, sustainable supply from waste carbon producer, ensuring stable supply and raw material price.



Innovative Battery Material Solutions

Ecobinder provides advanced material solutions for energy storage. Its first product, ECOBINDER™, is a water-based battery binder targeted at replacing the conventional PVDF-based binder which is toxic and costly to manage.



ECOBINDER™ is suitable for various types of electrode materials such as NMC, LTO, and graphite, and has shown great potential in achieving high performance. Ecobinder is also involved in developing other battery components, to create greener and more affordable energy storage solutions.



Christopher QUEK (PhD Candidate)
CEO



Abhinav TRIPATHI (PhD Candidate)
CTO



DU Kang (PhD Candidate)
COO



Simons LIEU
Commercial Champion



David SHER
Venture Dev Mngr



Palani BALAYA (Assoc Prof)
Advisor

Prasanna SHIRIDI
Tech Mngr



Rui GUO (PhD)
Founder



Nandakumar CHARI
Commercial Champion



OU Chung-Pei
Venture Dev Mngr



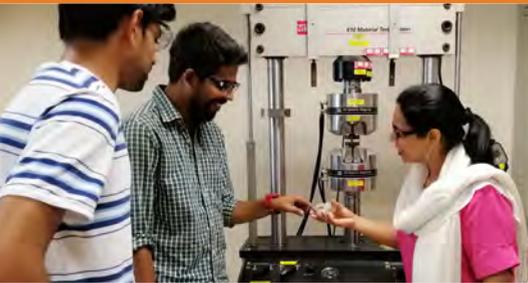
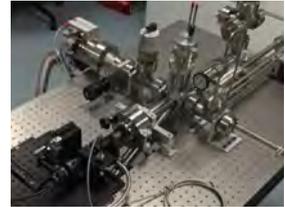
Wei CHEN (Prof)
Tech Advisor

Haujiun CHEN
Tech Mngr

Empower Material Scientists Into Frontier Research

Conventional characterization system for semiconductor-based electronics and optoelectronics in industry is outdated for low-dimensional materials such as graphene and carbon nanotube. Existing characterization system for nanoscale devices all focus on single measuring function.

Fronka's FR1000 system equips customers with the ability to conduct in-situ electrical, optical, and optoelectrical measurements on nanoscale semiconductor devices with integrated multifunction, high accuracy, smart software & convenient operation.



Crafting New Generation Bioresorbable Magnesium Alloys

Magloy Tech is founded by a team of material scientists from NUS to radically enhance the orthopedic fracture fixation procedures with a disruptive bioresorbable magnesium alloy technology produced by their proprietary green manufacturing technique.

Current generation of implants is inadequate to provide the optimal solution, and secondary surgery is often required to remove the implants from the body, with enormous physical, emotional and financial trauma to the patient, and increased hospital time and procedural complications for the orthopedic surgeons as a result. Magloy Tech's unique magnesium alloy fully dissolves in the body without adversely affecting the patient.



Vyasaraj MANAKARI (PhD Candidate)
Co-Founder



Gururaj PARANDE (PhD Candidate)
Co-Founder



Manoj GUPTA (Assoc Prof)
Co-Founder



Pooja Kinra BISHNOI
Commercial Champion



David SHER
Venture Dev Mngr

Joseph YANG
Tech Mngr



Tommy THAM (BEng)
Founder



KOH Phee Wah
Commercial Champion



YZHAR Perry
Venture Dev Mngr & Tech Mngr



LIU Xiaogang (Prof)
Tech Advisor

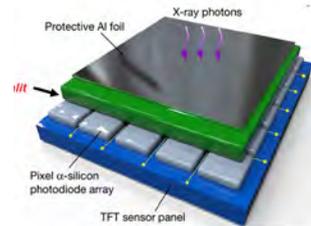


CHEN Qiushui (Prof)
Tech Advisor

Shaping the Future of X-Ray Detection

Enlipsium has developed Enlit, a new material for X-Ray detection that is in a class of its own. It can be produced with greater efficiency, requiring as little as a day to manufacture compared to the 2 weeks production time of traditional crystal materials.

On top of that, Enlit is flexible, with no restrictions in sizes, enabling a whole new range of X-Ray applications. All of these benefits come without compromising on image quality and X-ray sensitivity. Join us now in shaping the future of X-Ray!



Harnessing the Power of Visible Light

SafeLight produces visible light disinfection systems that are completely safe to humans. They are based on a novel LED-based technology that kills bacterial cells by targeting photosensitive compounds inside them.



Compared to current technologies that can only be used episodically, Safelight's systems are designed to provide constant protection against bacteria contamination on high-risk surfaces, such as in food processing, healthcare, drug manufacturing and in homes. The systems are sensor-enabled, designed to evolve into a smart solution.



Vinayak GHATE (PhD)
Business Lead



Tania AHLAWAT (MSc)
Design Lead



ZWE Ye Htut Ivan (PhD)
Technology Lead



Shivendu NADKARNI (Adjunct Prof)
Commercial Champion



OU Chung-Pei
Venture Dev Mngr

ZHAO Na
Tech Mngr



GAO Jing (PhD)
CEO & Co-Founder



JIN Xiaoxuan (PhD Student)
CTO & Co-Founder



Adriel HO
Commercial Champion



David SHER
Venture Dev Mngr

Grace WEE
Tech Mngr

Make Sweet Healthier

Type 2 diabetes is a global epidemic. AuroraFood is passionate to bring their 30+ years of research to combat diabetes.

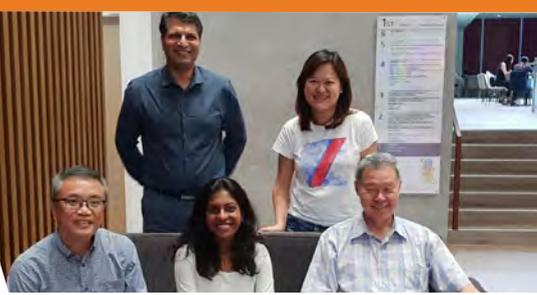
With their glycaemic lowering technology, they have built a platform to transform sweet indulgences to become healthy and diabetic-friendly. JoieJoy Baking Mix will be the first product in the market with a slower sugar release without any sugar alternatives added. Aurorafood enables everyone to enjoy a sweet moment without guilt or health concerns.





TRACK 2

AI and Big Data



Population in the Cloud

Vir-Pop provides Immersive, Personalized and Adaptive Conversation Technologies (IMPACT) for realistic virtual conversations. They enable more naturalistic digital communication across domains ranging from medicine to social sciences and beyond, augmenting each user's experience through a plethora of artificial intelligence (AI) and deep tech-driven platforms.

Vir-Pop partners with field experts to develop customisable modalities for educational and training purposes. Their flagship product, Virtual Integrated Patient, aims to add value to the medical education landscape.



Edmund LEE (Prof)
CEO



Viveka KALIDASAN (PhD)
COO



Hock Meng YEOW
Commercial Champion



Mayank GURNANI
Venture Dev Mngr

Liting LIM
Tech Mngr



UnoMove

Enabling Full Autonomy in Robot Navigation

UnoMove's novel visual processing and control technology enables fully autonomous robotic navigation without the need for high-definition maps or expensive LIDAR sensors.

Simple low-fidelity floor plans and low cost cameras are all that is needed to help robots navigate visually like humans. UnoMove will deploy this technology to make robotic autonomy more feasible for a wider variety of consumer and industrial applications.



GAO Wei (PhD Candidate)
Founder & CEO



BAI Haoyu (PhD)
CTO



CHEN Bai'an
Chief Scientist



TAN Weejin
Commercial Champion



John PHILLIP
Venture Dev Mngr



David HSU (Prof)
Advisor



Jane SHEN
Advisor

YUAN Ziyang
Tech Mngr



Peter FINN (PhD Candidate)
CEO



Jonathan KOCHMER (MSc)
CTO



Echo WANG (PhD)
CBO



Andre STOLZ
Commercial Champion



John PHILLIP
Venture Dev Mngr

Yzhar PERRY
Tech Mngr

The Root of Trust

RootChain by Synectify is a 'Trust-as-a-Service' counterfeit detection solution. Leveraging internet-of-things (IoT) and Blockchain technologies, RootChain creates a verifiable virtual representation of any physical product.

This enables the brand owner to minimise losses from counterfeiting. It also collects granular consumer interaction data that can help product managers optimise their supply chains and boost customer engagement.



Programming on Steroids!

RightCode boosts productivity and collaboration in software development teams by helping programmers maximise their coding efficiency through the use of machine learning and natural language interpretation algorithms.

RightCode generates pertinent code snippet recommendations within an integrated development environment (IDE) to help programmers get unstuck. RightCode also helps teams stay synchronised through easy collaborative documentation of best-practice code patterns.



Prasanna PAWAR (MSc)
Founder



Manish GHUMNANI (MSc)
Co-Founder



Nuno COVAS
Commercial Champion



John PHILLIP
Venture Dev Mngr



Anjaney BHUTADA
Advisor

YUAN Ziyang
Tech Mngr



Wendy PEH (PhD)
Data Analytics Executive



Mabel CHEW (BEng Hons)
Operations Executive



Pamela TOH (BBA Hons)
Business Dev Executive



Rawwinton TAN (BSc Hons)
System Engineer



Francine MARTINDALE
Commercial Champion



Cato GULLICHSEN
Venture Dev Mngr



Pete KELLOCK
(Adjunct Prof)
Advisor

YUAN Ziyang
Tech Mngr

Engage Talent Live

Matchapreneur aims to revolutionize how employers engage job seekers at career fairs, to recruit the best candidates. Matchapreneur is a one-stop mobile platform to align information sharing between organisations and job seekers, with AI-backed interactive features to direct suitable candidates to the organisations' booths, and help job seekers land on-site interviews.

Career fair organisers can easily leverage Matchapreneur for live engagement and intelligent data analytics to receive feedback about their event.



Reduce Equipment Operation and Maintenance Expenditure

Existing online Condition Monitoring systems for motors tend to detect some of the critical anomalies only at high severity levels, resulting in higher operational and maintenance cost. Additionally, multiple monitoring systems are required for a single equipment, further decreasing the affordability.

REOMEX Technologies provides a unique, single and holistic monitoring system for various critical anomalies of a motor with our proprietary technology which detects fault at an early stage and provides multi-signatures based efficient maintenance schedule.



Subash Chandar
ATHIKESAVAN (PhD)
Co-Founder



Sanjib Kumar PANDA (Assoc Prof)
Co-Founder



Paul Singh GILL
Commercial Champion



Jack SO
Venture Dev Mngr

Haujiun CHEN
Tech Mngr

Download Team Factsheet



NUS INDUSTRY LIAISON OFFICE

The NUS Industry Liaison Office (ILO) is the technology translation and commercialisation arm of the National University of Singapore (NUS). Over the last five years, ILO has played a pivotal role in getting more than 580 patents granted and more than 60 technology-based companies spun off from the NUS.





Industry Liaison Office

More than
580

Patents
Granted

More than
60

Tech Company
Spin-offs
from NUS

Through innovative programmes delivered in a customer-centric manner, ILO provides funding, connections and expertise to students, researchers and professors, whether they are seeking to create a spinoff company or partner with established industry players to translate their innovations into the market place.

The ILO team comprises of technical, business and legal expertise that commercialises any technology-based opportunities.



NUSGRIP

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 nus.edu.sg/grip

 linkedin.com/company/nusgrip

 grip@nus.edu.sg