NUS GRIP

GRADUATE RESEARCH INNOVATION PROGRAMME

GRIP LIFT-OFF

NUS Deep Technology Start-Up Investors Showcase

19 January 2019

9.00am - 4.00pm

3 Research Link . Innovation 4.0 . Singapore 117602

Flagship Innovation Programme by:

NUS National University of Singapore | Industry Liaison Office

NUS GRIP

GRADUATE RESEARCH INNOVATION PROGRAMME

THE FLAGSHIP INNOVATION PROGRAMME

by NUS Industry Liaison Office
Enabling NUS Postgraduate students and researchers to develop deep technology start-ups.

PROGRAMME SCHEDULE

0900 ~ 0930	**Welcome Address & Introduction**
0930 ~ 1100	**Engineering Track Showcase** *BeeX* *TEREDO* *H2C* *ENBED* *NuSpace* *NewGen Gas*
1100 ~ 1230	**Biomedical Track Showcase** *Craft Health* *HiCura* *NUSoil* *MIRNA HQ* *Heseed* *BiliOptics* *TuSense*
1230 ~ 1400	**Networking Lunch**
1400 ~ 1530	**ICT & Lifestyle Track Showcase** *Brain Pool* *Aruvii* *Atlastream* *Sharpen.AI* *SenseMór* *Vox Dei* *Libbie*
1530 - 1600	**Closing Address**

BeeX

BeeX dramatically reduces the cost of offshore and underwater inspections with their Autonomous Underwater Vehicles (AUVs) and Autonomous Surface Vessels (ASVs), which allows for more degrees of freedom than any other competitors.

BeeX's bespoke machine learning algorithms and software stack enable better perception even in murky waters and multi vehicle operations, helping users to obtain critical information about anomalous areas in the most cost and time efficient manner.

ENBED

Developed with instant plug-load identification mechanism, real-time control and electrical monitoring, ENBED's Smart Electrical Outlet/Socket (SEOS) provides high-fidelity intelligence to building controls. Coupled with its software infrastructure, SEOS can uniquely identify plugged in loads and correspondingly map manufacturer's information, electrical ratings, ownership, cost, health history – a plethora of metadata,

SEOS can be used to provide plug-load energy management solutions, demand response mechanisms and inventory management solutions among others.

TEREDO

Teredo Analytics aims to provide a comprehensive insight into the overall health status of oil, gas, water, and pharmaceutical pipeline networks.

Timely and periodic pipeline inspection is necessary to prevent leakage. However, current pipeline inspections methods are laborious, time-consuming, and only detect existing leaks.

Through machine learning and analysis on a plethora of data collected using our in-line inspection device, we strive to detect any detrimental pipeline caused by the environment, wear and tear, and aging.

NuSpace

NuSpace vision is to provide affordable global IoT connectivity. 85% of the world is not connected. This is preventing widespread adoption of IoT technology.

Existing solutions rely on expensive satellites that are designed for high data rate applications that result in high cost when used to transmit IoT data. Nanosatellites are palm sized satellites that are relatively cheaper to produce allowing a constellation to be deployed economically.

NuSpace builds nanosatellites which are optimised for IoT applications, allowing low cost IoT connectivity services to be offered.

H2C

Low-grade heat is abundantly available from many different sources such as waste heat from industrial processes, geothermal power plant and solar energy stations. The existing technologies for harnessing low-grade heat are complex, expensive and cannot utilize very low temperature heat (<100 degree C) in an effective way.

Our patented technology converts this abundantly available low-grade heat into cooling and power in a combined system that is compact, less expensive, efficient, effective and easy-to-operate.

NewGen Gas

Our innovative process, Solidified Natural Gas (SNG, patent pending), allows for safe, cost-effective and long-term storage of natural gas. By storing natural gas in the form of ice-like compounds such as gas hydrates at 0 degree C.

It eliminates the risks associated with handling of liquefied natural gas and compressed natural gas at high-pressures. In addition, SNG's capital cost is less than 50 % of the cost of current natural gas storage and transportation solutions

Our customers are natural gas producers, power generation companies, distributors, industrial users and energy hub companies.

Craft Health

Craft Health utilizes latest advances in 3D printing to simplify healthcare and enable patients to customize their medicines or supplements into a single pill.

Personalized. Each individual will be able to tailor-make their medicines to suit their lifestyle.

Simple. We drastically reduce the number of pills to consume.

Safe. We re-design the pill production process through our proprietary technology and perform rigorous testing and validation in order to demonstrate the safety of our products.

Heseed

Counterfeit seeds are an enormous and growing problem, which have lower quality and yield as compared to original seeds. Seed companies lose business and reputation. Currently, most anti-counterfeit measures focus on seed packaging.

Heseed's technology produces a 'watermark' at the seed level - proving the authenticity of each seed and which company "watermarked" it. Our proprietary technique is rapid, dry and chemical-free. Heseed's authentication technology arose from its priming method that increases the speed of seed germination by 40% to 200% for key vegetable crops and provides more abundant and profitable harvests for farmers.

HiCura

HiCura's automatic spinal landmark identification system together with a real-time needle insertion system will greatly assist clinicians to precisely determine the exact location where a drug needs to be delivered.

Our immediate application is focused on epidural administration where one in every three procedures faces an error and has the potential of causing severe harm. Our product has been extensively tested through clinical trials on 141 pregnant women at KK hospital, and demonstrated an accuracy of more than 92% for first time success rate for epidural delivery.

Bilioptics

Our mission is to make neonatal jaundice care and management simpler yet comprehensive. Our flagship product, the PTmaster™, is a simple-to-use and novel neonatal phototherapy machine, that adjusts its intensity based on continuous monitoring of bilirubin levels and providing new-borns' status in real time, non-invasively.

Other than treatment, monitoring is also within our scope. BiliScanner™, a pen-size bilirubin meter, measures bilirubin levels accurately, even during phototherapy treatment, reducing uncertainties and eliminating the need for additional blood tests.

NUSoil

Water is essential for plant growth. Soil-based farming requires frequent watering, accounting for 70% of global water extractions. Under water-limited conditions, plant growth is usually affected resulting in reduced crop harvests.

Our innovation, InnoGro™, is a superabsorbent hydrogel derived from a by-product of food productions. This patented hydrogel has great water absorbing capacity with up to 150 times swelling power. It acts as mini-water reservoir, retaining water nearer to the roots for longer periods of time. that is highly useful for both the agricultural and horticultural sectors.

TuSense

Our product, DewEasy™, is developed to obtain cough condensates from patients with pneumonia. It functions as a disposable, easy-to-use and entirely non-invasive sample collection and storage device.

DewEasy™ offers a painless and rapid solution for acquiring respiratory samples compared to the existing cumbersome and invasive methods. Collected specimens can then be processed by most existing technologies in medical laboratories to identify pneumonia.

MIRNA HQ

MIRNA HQ unlocks the genetic information contained in microRNAs and provides cancer researchers and clinicians the ability to detect cancer early and personalize treatment for patients.

Current cancer detection methods, such as PCR, are complicated and time consuming with significant delays in initiating treatments leading to increased morbidity and mortality. With a wide range of application areas, MIRNA HQ is poised to transform cancer detection.

Brain Pool

We use modern mapping technology as a tool for creating marketing and advertisement solutions in a digitally alive environment. Through 3D reconstruction, augmented reality, and GPS features, large physical spaces are transformed into interactive landscapes.

Our high-resolution, geo-located maps are especially useful in environments like sports and tourist venues. As a B2B2C company we generate revenue either through sponsors, the venues themselves, or both. Additionally, we will leverage data that we collect through our platform to improve brand value for our clients, i.e. sponsors and venues.

SenseMór

SenseMór has developed a technology that enables energy harvesting, sensing and motion control in three-dimensional space.

Developed using a highly durable and flexible sensing patch based on triboelectric mechanism, SenseMór's first application is an intuitive, ergonomic drone controller. The array sensing pad is exceedingly robust with long battery life and enables the creation of high performance controllers for drones and AR/VR.

These next generation controllers are naturally weather resistant and impervious to abuse and harsh environment.

Aruvii

Prognotron™ from Aruvii aims to tackle industrial asset downtime, energy wastage & resource underutilization.

Prognotron™'s AI-powered engine provides predictive analytics, health monitoring and fault-diagnostics capabilities for industry specific applications. This engine at its core utilizes ensembles of optimized deep learning and machine learning models for robust prediction. Its cross-platform dashboard interface delivers actionable insights and intuitive visualizations crafted for distinct user roles. Prognotron™ makes your data work for you!

Vox Dei

Our revolutionary algorithm is able to analyse text like a human, spotting categories and concepts, and making connections, quickly and unbiased, unlike a human reader, The system is able to analyse without fatigue and judgement.

Once the user decides on what to focus on, the algorithm will be able to isolate relevant information, and suggest related ideas.

Our software can do weeks' worth of work in just a few hours, is 100% transparent in its decisions, and brings a level of precision and objectivity to the task that no human could hope to match.

Atlastream

As the world moves towards more digital video content, Quality-of-Experience (QoE) in video streaming is crucial to video content providers, such as YouTube and Netflix.

Current web players use one CDN (Content Delivery Network) at a time. Our first product MSDASH leverages multiple CDNs in parallel for high quality streaming with minimum rebuffering.

As a result, MSDASH is able to achieve 50% higher QoE than single server systems and 30% higher QoE than and other solution in the market.

LIBBIE

Libbie is the first AI/IOT driven tool, integrating lab functionalities optimising research workflow, thereby creating a safer, more efficient "hands-free" work environment.

By using voice activation, coupled with an extensive suite of analytics, we are digitizing and creating key insights from the end users that will facilitate the creation of 'smart labs'.

Our one-of-a-kind information retrieval, data capture and information flow makes our solution unparalleled.

SHARPEN.AI

Sharpen.ai is fintech startup, specialized in AI and data-driven approach to generate alpha (trading signals) for institutional investors.

Our solution provides an unbiased, systematic trading signal through proprietary machine language, and state-of-the art Natural Language Processing (NLP), to incorporate market sentiments and option leaders voice into the decision marking process.

Together, as a system, our solution provide unparallel trading, real-time advantage in an otherwise risky investment market.

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