

# Examples of Interdisciplinary Research

## Lyle Fearnley

- Empowering Traditional Trades and Forging Sustainable Households with Smart Recycling Platform, 2017-2019
- Co-PI: LKYCIC
- Collaborator: Aspiring Citizens Cleantech

## Lyle Fearnley

- Sustainable Futures (Land and Liveability National Innovation Challenge), 2016-2018
- PI: EPD
- Collaborators: SMT, ASD

## Lyle Fearnley

- Virulent animals or unsafe meat: The qualification of food safety in live animal 'wet markets' and supermarkets in China, Academic Research Fund (AcRF) Tier 2, 2021-2024
- Collaborator: CUHK

## Jeffrey Chan

- Ethics in Human robot interaction, SGP Grant, 2022-2024
- PI: DAI
- Collaborator: Georgia Tech

## Cheng Nien Yuan

- CoHabit: Eco-social Artmaking for Sustainable Human-Nature Co-existence; Knowledge Partnership Programme @LKYCIC, 2024-2025
- Collaborator: Drama Box

## Pang Yang Huei

- International Relations, Political Science, Science & Technology Studies, Educational Research, 2023-27
- Collaborators: NYC; Academy of Singapore Teachers; RSIS-NTU; Texas Council for the Social Studies

## Jin Murakami

- Does Green Urbanism Work Together with TOD? A Spatial Analysis of Energy Consumption, Transit Ridership, and Price Appreciation, Academic Research Fund (AcRF) Tier 2, 2025-2028
- Collaborators: SMU, EHL

## Nilanjan Raghunath

- Social mixing for better educational outcomes for GenZ from low SES households, SMF Social Mobility Foundation grant, 2023-2024
- Co-PI: NUS

## Alastair Gornall

- Buddhist Ecological Thought in Early Modern Southeast Asia, Academic Research Fund (AcRF) Tier 2, 2022-2025
- Co-PI: ISTD

## Grace Dixon

- "Materials driven innovation: Two case study perspectives". Third Asian Materials Education Symposium, 2018; won Best Paper
- PI: EPD

## Grace Dixon

- Archiving a personal life history with technology: Reflections on 'seeing' and the impact of visual recording". International Conference on New Media, Memories and History, 2012,
- PI: ISTD
- Collaborator: MIT

## Yow Wei Quin

- An Adaptive Compensatory Framework – How Social Cognition Changes with Aging, Academic Research Fund (AcRF) Tier 2, 2021-2024
- Co-PI: NUS

## Yow Wei Quin

- Design and Develop a Tool to Support In-Situ Language Learning for Children with Dyslexia, Singapore Millennium Foundation (SMF) Research Grant, 2017-2020
- Co-PI: EPD

## Yow Wei Quin

- Project Coriolis: Multimodal Interaction Research and Simulator Development, TL@SUTD Research Project Grant, 2020-2022
- PI: EPD

## Yow Wei Quin

- The New Urban Kampong – Project Geo-sociographics to Redefine Segments of Residents, Land & Liveability National Innovation Challenge (L2 NIC) Grant, 2017-2020
- PI: ASD; Co-PI: ISTD

## Yow Wei Quin

- NOURISH: Next-Generation Brain-Computer-Brain Platform – A Holistic Solution for the Restoration & Enhancement of Brain Functions, AME Programmatic Fund, 2020-2025
- PI: NTU
- Co-PIs: EPD, NTU, TTSH

# HASS Research at SUTD

## Population Health & Wellbeing

Cognitive & social wellbeing in older adults

Practices of kindness

Empathy, comms, behavioral change

Arts, metaverse, wellbeing

Cultural transmission, global health

Green Finance, EV, & ESG

## Green Economy & Sustainability

Investing ecologies, cryptocurrency & sustainability

Food safety & Recycling

Global connectivity & city resilience

Human-Animal Relations

Design & robots ethics

## AI-Ethics & Organizations

Organization management

Fairness in speech(AI)

Surveillance/ Face Recognition

Platform & behavioral economies

Literature

## Human Flourishing

Poetry & virtuality

Global film: Art & technology

Modern global & Asia history

Ancient philosophy & classic studies

# HASS at SUTD



# Samples of Interdisciplinary Research Excellence

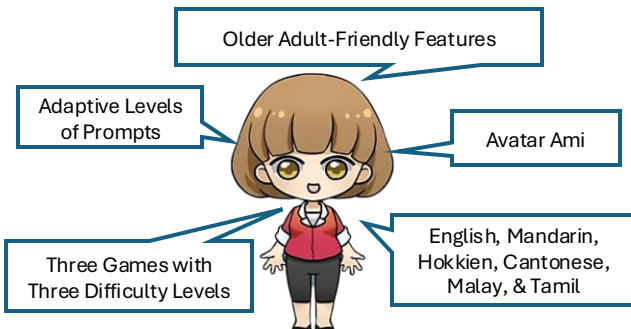
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**PI:** Prof Yow Wei Quin; **Co-PI:** Dorien Herremans (ISTD, Game Lab, SUTD)

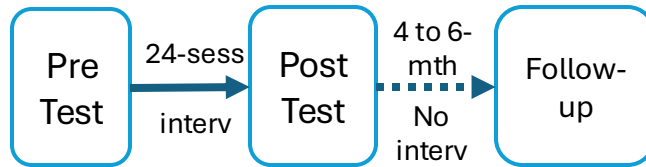
**Project Title:** Dual-Language Intervention in Semantic Memory-Computerized (DISC) - MOH-NIC Grant

**Aim:** To develop a scalable, elder-friendly, dual-language cognitive intervention tool that can be broadly implemented across elderly care settings to provide cognitive stimulation, and thus delay the onset of cognitive decline

## PROGRAM



## OUTCOMES



- DL improved verbal memory and visuospatial skills among CH
- DL showed delayed improvement in verbal memory among CI
- Both CH and CI showed increase in attitudes toward tech after intervention



## IMPACT

8 Q1 Journal Publications + Conference Proceedings

2 In top 10% journal ranked by Clarivate in Gerontology

### Community Implementation

-Implementation of Ami on devices on Lions Befrienders

1000

- Affordable
- Group activity
- For AAC
- Developing



### Upcoming Grant

CARES-AI (NICCOG2024-0009: NIC HML - Cognition Grant Call 2024)



National Neuroscience Institute  
SingHealth



## WHO



### Potential Partners





**PI:** Alastair Gornall (HASS, SUTD); **Co-PI:** Roy Lee (ISTD, SUTD)

**Project Title:** Buddhist Ecological Thought in Early Modern Southeast Asia - MOE AcRF Tier 2

**Aim:** To digitizes and analyze previously unstudied Southeast Asian, Buddhist natural philosophical writings preserved in palm-leaf manuscripts to understand religious perspectives on the environment.

## PROGRAM

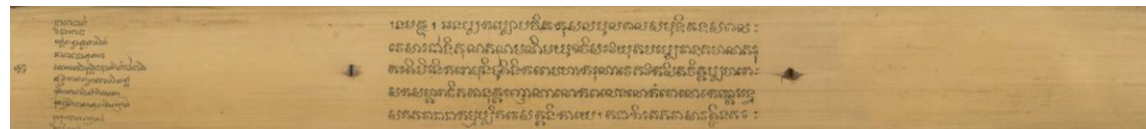
- Create digital editions of fifteen untranslated Buddhist texts on natural philosophy.
- Create a digital repository for these texts and use NLP techniques to analyze their relationships.
- Based on a close reading of these texts, write the first histories of Buddhist ecological thought in pre-colonial Southeast Asia

Pending Continuation Grant



## FINDINGS

- Computational analysis of text reuse between Buddhist texts has allowed us to create a relative chronology for these works and date them more precisely.
- The project has discovered new philosophical frameworks for Buddhist animal and environmental ethics.
- The project is the first to document SE Asian Buddhist theories of collective rather than individual theories of moral retribution (karma).



## IMPACT

6 Journal Publications, 3 Q1

3 In top 10% journal ranked by Clarivate in Gerontology

## WHO



Information  
Systems Technology  
and Design

**PI:** Lyle Fearnley; **Collaborator:** City University of Hong Kong

**Project Title:** Virulent animals or unsafe meat: The qualification of food safety in live animal ‘wet markets’ and supermarkets in China - MOE AcRF Tier 2

**Aim:** To explore why some shoppers in China prefer live poultry over pre-slaughtered options, despite health risks, using ethnographic methods to inform policy and improve interventions in live poultry markets.

## PROGRAM



- The study in Yongkang, South China, explored why shoppers prefer live poultry over pre-slaughtered, using interviews conducted from March to July 2022.
- Researchers interviewed 30 shoppers, 28 market vendors, and 18 supermarket staff, achieving data "saturation" to understand the poultry value chain.

## FINDINGS

- Broader concerns about food safety and quality, rather than freshness alone, drive the demand for live poultry markets.
- Live poultry provide sensory information that enable shoppers to evaluate safety and quality in ways that are not possible with pre-slaughtered, refrigerated meat.
- Hygienic interventions into LPMs should recognize that not only freshness, but also trust, must be constructed and maintained in any intervention.

## IMPACT

3 Q1 Journal Publications and Book Chapters

1 In top 10% journal ranked by Clarivate

## WHO



Centre for Applied One Health  
Research and Policy Advice

香港城市大學  
City University of Hong Kong

**PI:** Jin Murakami **Collaborators:** Sock-Yong Phang (Economics, SMU); Masaki Mori (Business, EHL)

**Project Title:** Does Green Urbanism Work Together with TOD? A Spatial Analysis of Energy Consumption, Transit Ridership, and Price Appreciation - MOE AcRF Tier 2

**Aim:** To investigate how urban spatial planning can work together with investment in smart technologies for green urbanism in Asia. This ongoing project aims to identify key urban conditions that can attract greater foreign direct investments in strategic locations and promote green transition on an inclusive development pathway.

WHO

## PRELIMINARY STUDIES



- Murakami, J. 2024. Strategic Investment for Green Growth. Economic Diagnostic Study for Uzbekistan. Asian Development Bank (forthcoming)
- Lwasa, S., Seto, K.C., Bai, X., Blanco, H., Gurney K.R., Kilkiş, S., Lucon, O., Murakami, J., Pan, J., Sharifi, A. and Yamagata, Y., 2022. Urban systems and other settlements. In: IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK and New York, NY, U.S.A.

<https://doi.org/10.1017/9781009157926.010>

