

Future Health Technologies

at the Singapore-ETH Centre



Director



Prof. Nicole Wenderoth
ETH Zurich

Developing a mobile digital health technology concept to transform healthcare towards a community-based and patient-centric model

To meet the healthcare needs of the future, mobile digital health technologies play a pivotal role in a future-oriented and sustainable healthcare model.

This shift requires a holistic and evidence-based approach to gain public trust and acceptance of these technologies.

Future Health Technologies (FHT) aims to transform the continuum of care towards a community-based and patient-centric model. Leveraging on scalable digital technologies, the team will tackle

chronic diseases such as diabetes, obesity and stroke.

Multidisciplinary teams pursue a holistic approach by combining scientific and technological innovations with clinical and stakeholder needs and requirements.

The goal is to generate an evidence-based roadmap towards high-value healthcare within Singapore's ecosystem.

FHT is the third programme of the Singapore-ETH Centre, established by ETH Zurich and Singapore's National Research Foundation, as part of its Campus for Research Excellence and Technological Enterprise (CREATE).

Co-director



Prof. E Shyong Tai
NUS



Research Modules

I. Early Detection and Prevention

Using data from sensors and screening algorithms, personalised biomechanical models will be built to screen and assess individuals with high fall risk in order to predict and reduce their risk of fractures.

II. Mobile Health Interventions

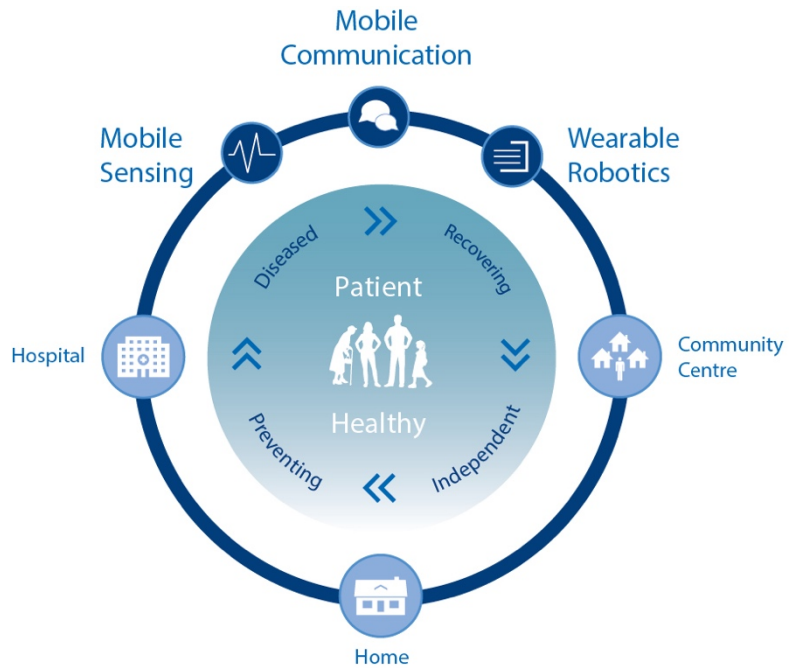
The team will promote behavioural change through mobile apps, in order to overcome individual, cultural, legal, and organisational barriers in reducing the risk of chronic diseases, specifically diabetes and depression.

III. Connected Rehabilitative Technologies

A “rehab gym” with clinical intelligence (robotic devices and brain-computer interfaces) will allow remote functional assessments of stroke patients to chart and promote recovery with suitable rehabilitative therapies.

IV. Health Data Governance

A “trustworthy data governance” concept will be developed. Health forecasting, treatment response prediction and cost estimation will be enabled by a “health data microcosm” that mimics real-world health systems.



Partners

Future Health Technologies brings together leading Singapore- and Swiss-based researchers and clinician scientists from the fields of health engineering, medicine, computer science and artificial intelligence, economics, bioethics, social sciences, neuroscience, and rehabilitation science. It is a collaboration among:

- ETH Zurich
- Nanyang Technological University
- National University of Singapore
- Duke-NUS Medical School
- National Health Group
- National University Health System
- SingHealth

Researchers will work closely with the Ministry of Health, government agencies, industry and other relevant stakeholders, as well as participate in nation-wide research initiatives.

For more information about Future Health Technologies, visit www.fht.ethz.ch or email: fht@sec.ethz.ch.

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