



Massachusetts
Institute of
Technology



MENS
MANUS AND
MACHINA



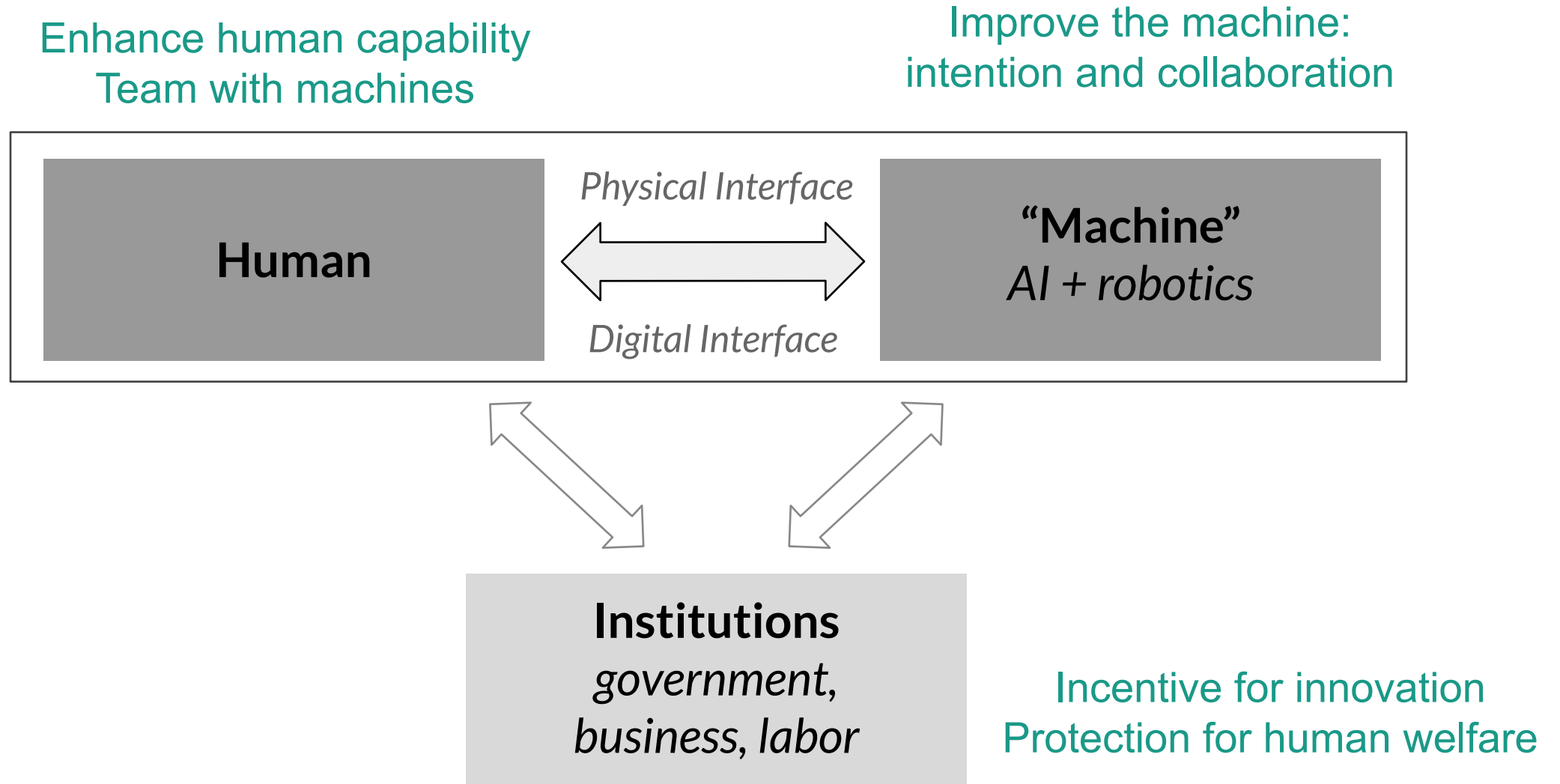
MIT-Singapore Symposium on Embodied and Scalable AI

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Professor of Cities and Transportation, MIT

Monday, July 28, 2025

Mens, Manus and Machina (M3S)



Mens, Manus and Machina (M3S)

How AI Empowers People, Institutions and the City in Singapore

1. How will we design technology and train humans to build the skills and habits for human success in a AI and robotics-heavy environment?
2. How will we adapt our social and business institutions to create the incentives and protections for innovation and human welfare?

Mens, Manus and Machina (M3S): Evolving Vision

● Embodied and Scalable AI

- Multi-modal perception
- Bimodal Manipulation
- Data and Memory efficient large models
- ...

● Using AI to solve today's problems

- Stand/Gate Allocation at Airports
- Reimagining and optimizing business processes
- Urban design and planning
- ...

● Get ready for an AI- & Robotics-driven future

- Human-AI/Robots Team Design
- Human Capital Development for future. "Education for AI and AI for Education"
- Rethink Career planning and decision
- ...

Why Embodiment in AI?

#1: Two way process

1. AI enables robotics
2. Embodiment deepens AI

#2

Embodiment as a scientific instrument

#3

Embodiment brings A.I. closer to humans

PROJECT TEAMS

LEAD PIs



Zhao Jinhua
Lead Principal Investigator



Daniela Rus
Co-Lead Principal Investigator



Archan Misra
Co-Lead Principal Investigator

M3S Management



Kakali Basak



Alok Prakash



Jackson Thong

Principal Investigators

T1

Towards an Immersive Workplace



Sanjay Sarma



Archan Misra



Zhao Jinhua



Daniela Rus



Andres Salazar

T2

Intuitive Interfaces between Humans and Machines



Daniela Rus



Marcelo Ang



Cecilia Laschi



Carlo Ratti



Fabio Duarte

T3

Resource Efficient Machine Learning: Towards Sustainable AI



Daniela Rus



Bryan Low



Alex 'Sandy' Pentland



Armando Solar-Lezama

T4

AI for Human Capital Development in Future of Work



Zhao Jinhua



Archan Misra



Alex 'Sandy' Pentland



Wang Shenhao



Andres Salazar

T5

Integrated Human-Machine Intelligence for Economic Growth



Alex 'Sandy' Pentland



Simon Chesterman



Zhao Jinhua



Zheng Siqi



Wang Shenhao

T6

Designing Human-AI Teams



Thomas Malone



Marcelo Ang



Bryan Low



Daniela Rus



Sanjay Sarma

T7

Human-Machine Dynamics in Task Allocation



Zhao Jinhua



Hai Wang



Hamsa Balakrishnan



Amedeo Odoni



Jason Jackson

M3S Researchers



Ila Gokarn



Dulanga Weerakoon



Dulaj Weerakoon



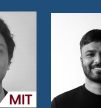
Dharshana Rathnayake



Do Van Minh



Alexandre Urpi



Hemanth Sabbella



Luis Hernandez



Cheng Yanchun



Tang Zhiqiang



Nikalas Hagemann



Dongen Li



Wang Haozhe



Wang Peiyi



Wong Zhi Cong



Zhaoxuan Wu



Arun Verma



Zhou Zijian



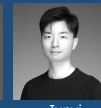
Noel Loo



Qiao Rui



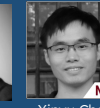
Zheng Yunhan



Junyi Li



Teresa Yeo



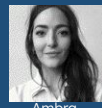
Xinyu Chen



Dingyi Zhuang



Yuebing Liang



Ambra Amico



Baoshen Guo



Kailai Sun



Tobin South



Robert Mahari



Donghang Li



Sun Shuo



Soe Min Thant



Dicle Uzunyayla



Robert Laubacher



Steven Rick



Iman YekkehZaare



Vicky Charisi



Dingdong Yang



Liu Yubin



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Quek Tong Boon
Chief Executive, National Robotics Programme



Gaurav Sukhatme
Professor at the University of Southern California



Tan Kok Yam
Chief Executive, Skills Future Singapore



Frank Pasquale
Professor at Cornell Tech and Cornell Law School