

Cleveland State University
Maxine Goodman Levin School of Urban Affairs
Bonda Room, UR 254 (second floor) ~ or join us on Zoom



**Society 5.0 – Advanced
Technologies & the Future**
Nicholas C. Zingale, Ph.D.
Introductory Topic and Moderator
Associate Professor, Levin College
of Public Affairs and Education
Cleveland State University



**International Perspectives on
Transdisciplinarity & Public Policy**
Sue L. T. McGregor PhD, IPHE
Professor Emerita
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**A Case of Team Science in
Disability Research**
Eric Schearer, Ph.D.
Associate Professor, Engineering
Director, Center for Human-Machine
Systems, Cleveland State University



**Socio-Technical Controversies
and Transdisciplinarity**
Anouk Geenen
PhD Candidate
Human Centered Design Group
University of Twente

Society 5.0: Advanced Technologies in the Existential Era

Nicholas C.
Zingale, PhD
March 30th, 2023



CLEVELAND STATE UNIVERSITY



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*feeling
of
feeling*



produced by Aaron W
lan Flick

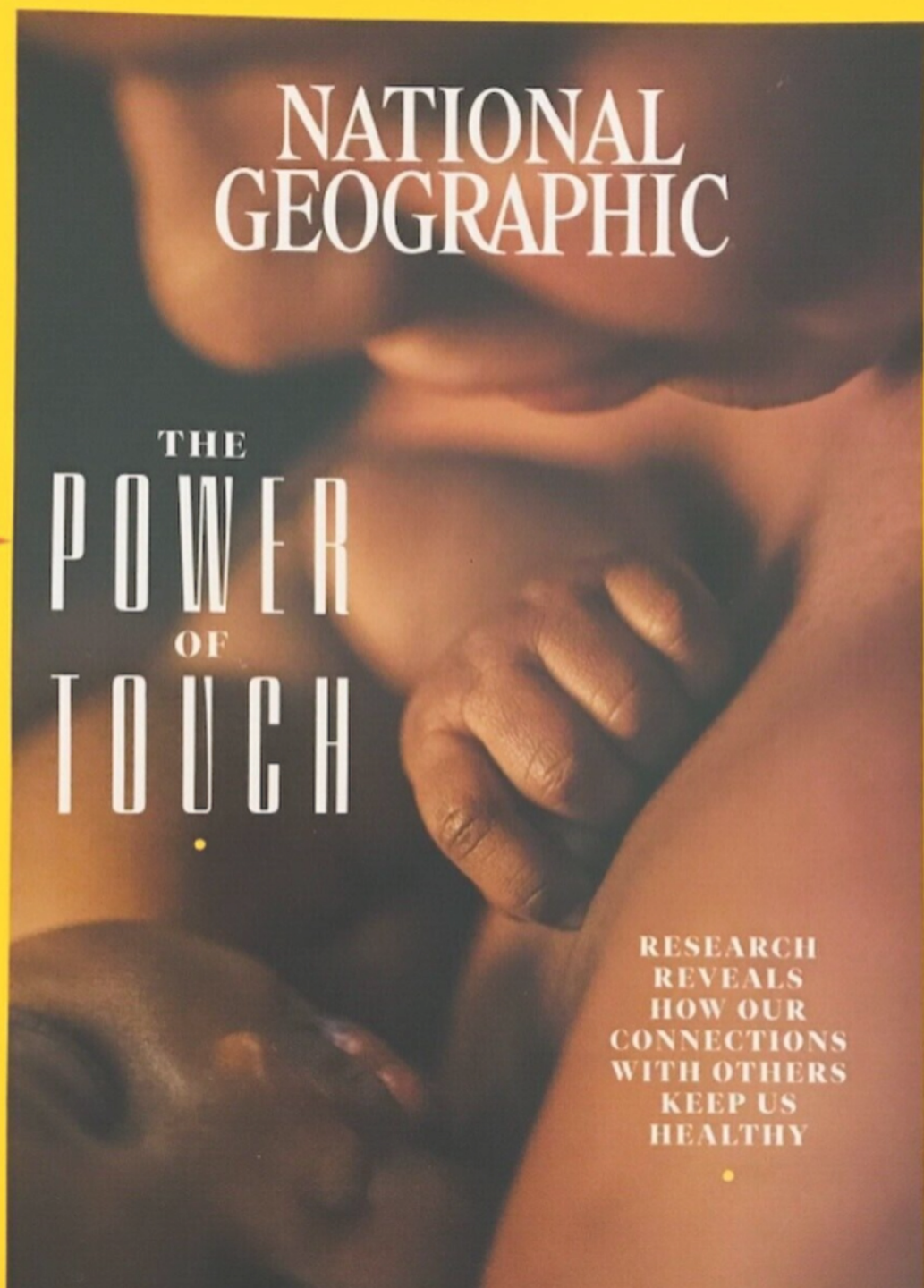
We don't often think about how
sense of touch is possible.
grip a paper cup is perfect for
hold it but not crumple it. Yet always
the floor. But for people with artificial
or those with sensory loss of
touch can be a challenge.
Seven years ago, a team
launched a project to
revitalize the sense of
you might be able to
feel. The project is
P...

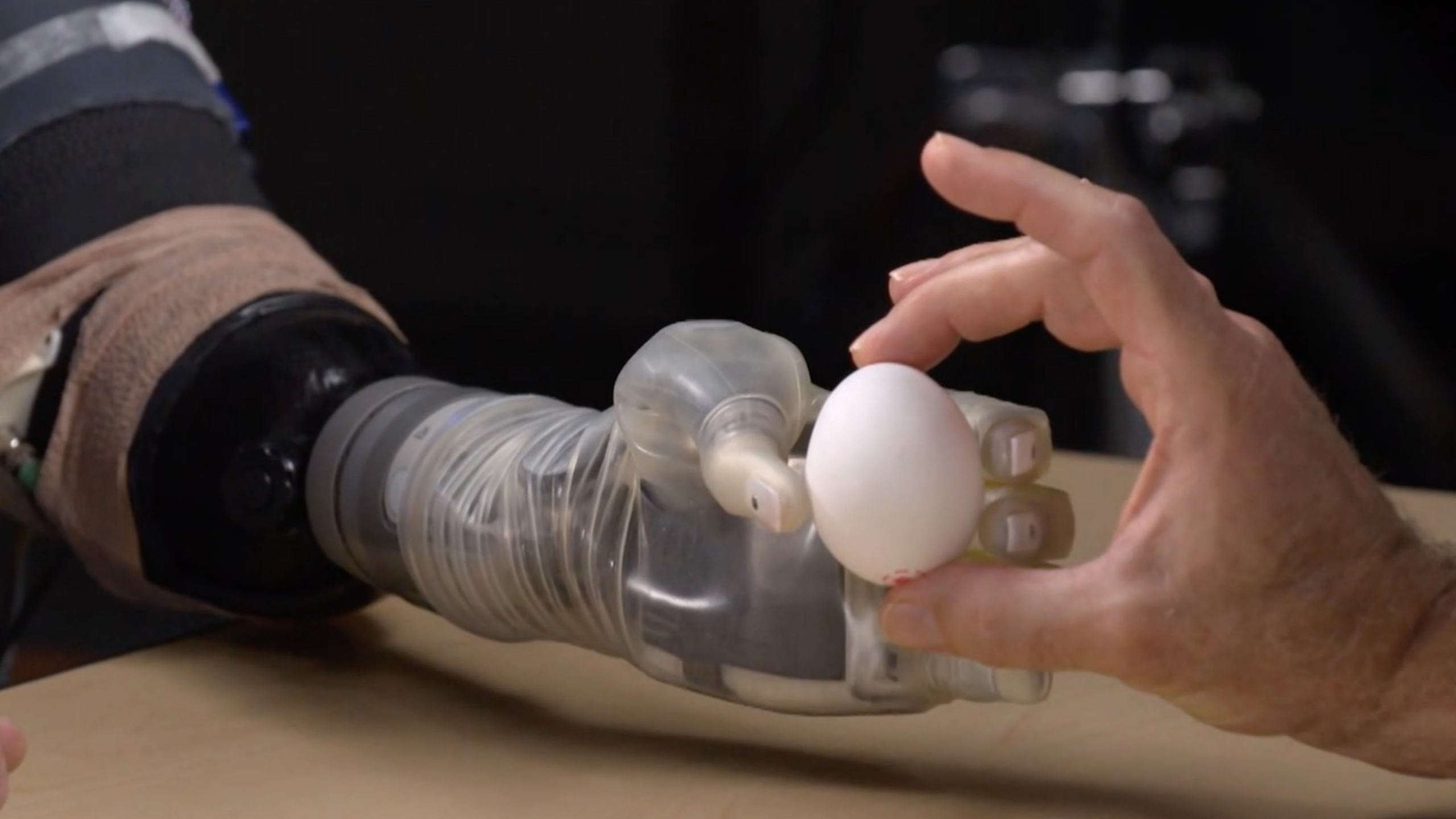


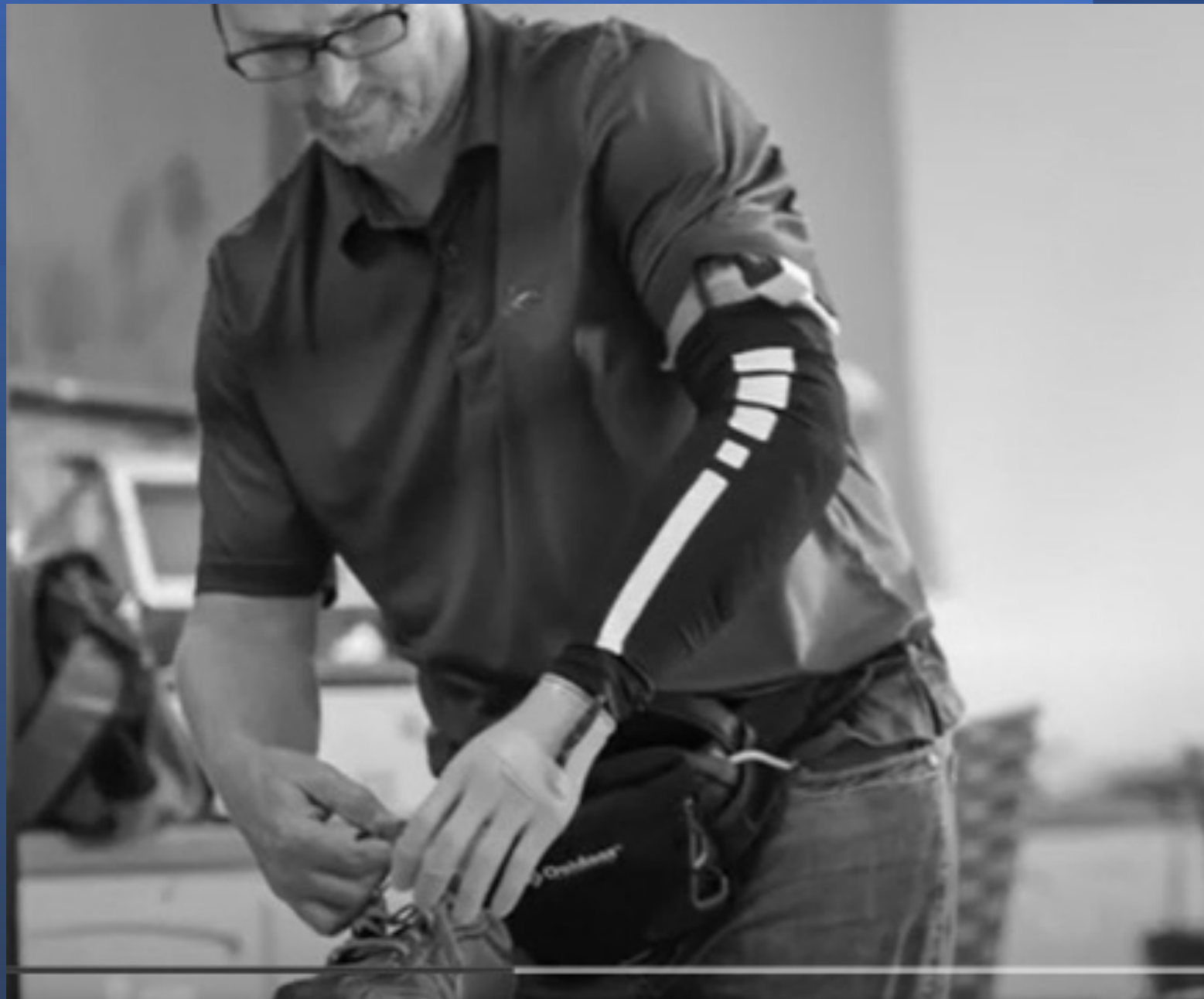
NATIONAL
GEOGRAPHIC

THE
POWER
OF
TOUCH

RESEARCH
REVEALS
HOW OUR
CONNECTIONS
WITH OTHERS
KEEP US
HEALTHY











Los Angeles

Cleveland

OTHERnet



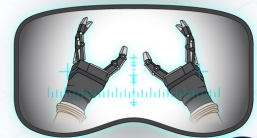
XPRIZE
AVATAR



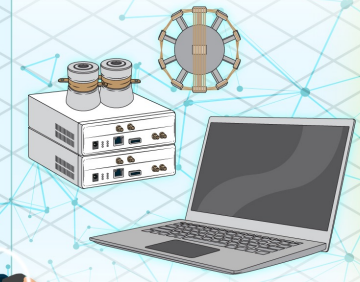
ANA 

The ANA logo, consisting of the letters 'ANA' in a bold, italicized, sans-serif font, followed by a stylized symbol of three parallel slanted lines.

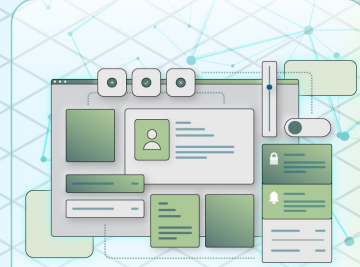
VIRTUAL AND IMMERSIVE REALITY



CONNECTION AND SECURITY



SW INTEGRATION PLATFORM

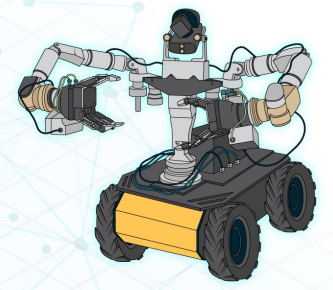


HUMAN INTERFACES

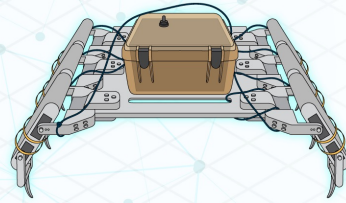


USE CASES

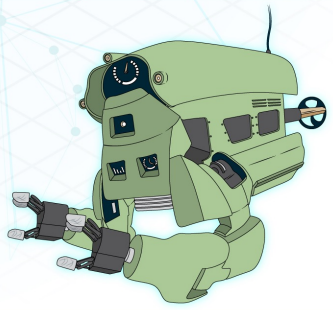
Ground Based



Coastal



Open Water



Artificial Intelligence in action

NASA 'Holoported' a Doctor Onto the International Space Station

We're living in a Star Trek episode, basically.

Monisha Ravisetti
April 17, 2022 12:27 p.m. PT



Artificial intelligence to predict heart disease

Capital... MAY 2021 | 2 MINS
A new project using artificial intelligence technology could spell a medical breakthrough for people suffering from, or at risk of, coronary artery disease, the single leading cause of death in Australia. The approach being developed by researchers at The University of Western Australia could allow for more accurate diagnosis and reporting across all aspects of healthcare, improving the quality and consistency of patient care. A UWA team of experts in cardiac imaging and artificial intelligence was awarded \$896,606 through a Medical Research Future Frontiers grant to develop a tool to predict the risk of coronary heart disease from heart computed tomography (CT) scans.

Coronary artery disease resulting from the build-up of plaque affects more than 1.2 million Australians; however traditional methods of CT imaging of the heart are cumbersome, time-consuming and may have limited accuracy.

Beyond synthetic biology, synthetic ecology boosts health by engineering the environment

by Kat J. McAlpine, Boston University



In a new *Nature Communications* study, researchers from BU's Microbiome Initiative...

There's a lot of interest right now in how different microbiomes—like the one made up of all the bacteria in our guts—could be harnessed to boost human health and cure disease. But Daniel Segrè has set his sights on a much more ambitious vision for how the microbiome could be manipulated for good: "To help



Mark Brown Arts correspondent

18 May 2021 09:09 EDT

Featured

Last Comments

Astronomers probe planetary nebula NGC 6302 with Hubble

26 MINUTES AGO

Candle box from 500 years ago found melting glacier in Norway

1 HOUR AGO

Could the source of the GW1908 be a black hole-strange quark star system?

1 HOUR AGO

Researchers claim to have sequenced entire human genome

JUN 07, 2021

A framework to simulate the same system using two different Hamiltonians

JUN 07, 2021

'Some people feel threatened': face to face with Ai-Da the robot artist

Self-portraits by ultra-realistic android go on show at Design Museum in London



Ai-Da, described as the world's first ultra-realistic robot artist, at the opening of the exhibition Ai-Da: Portrait of the Robot, at the Design Museum in London. Photograph: David Parry/PA

She, if it can be called a she, began her career with abstract art but has now moved to self-portraits and they are alarmingly good.

"She is getting better all of the time," said Aidan Meller, the force behind Ai-

In a world of pixels and code, Where reality's boundaries erode,
The future lies in a virtual realm, Where nothing is quite what it
seems.

Imaginary landscapes unfold, As new horizons are untold,
Where our minds can roam free, And our imaginations can be.

In this world of endless creation, We'll build new nations and
civilizations, And explore the vastness of space, With a virtual
reality interface.

The limits of time and space are gone, As we traverse new
worlds beyond, Where anything is possible, In a world that's
truly unstoppable.

We'll escape the monotony of life, And experience new
sensations with delight, In a world that's more than just a game,
Where we can be whoever we want to claim.

Our future lies in a virtual world, Where our imaginations can
unfurl, And the possibilities are endless, In a world that's truly
boundless.

Convergence

Experience

Society Change

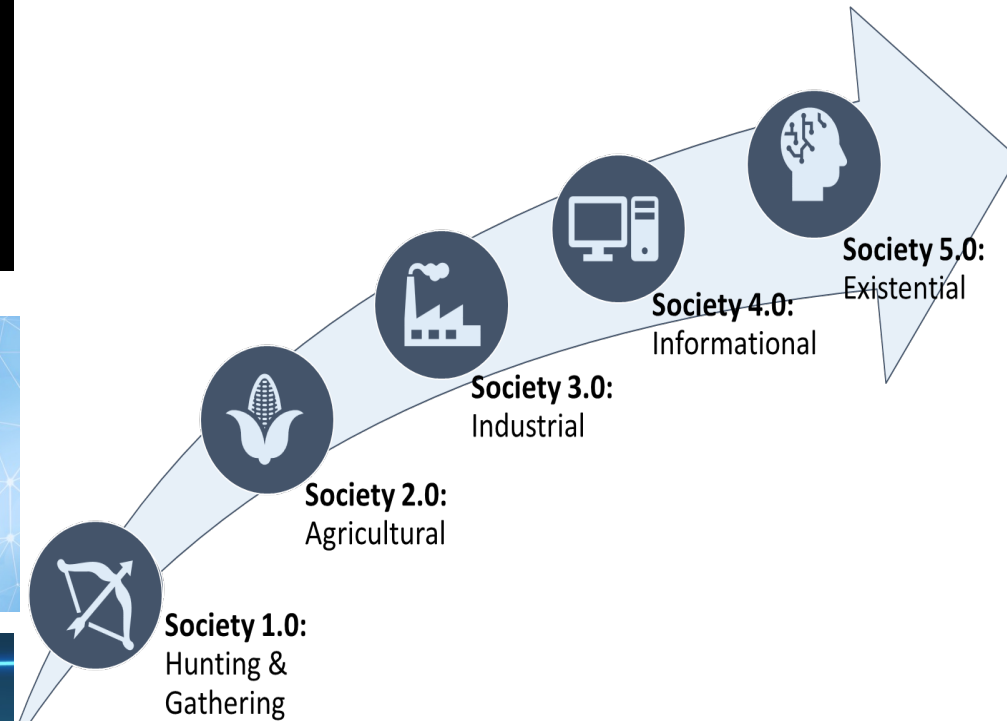
Artificial Intelligence



Human-machine Connect
Multi-Sensory Transfer



Extended Reality



Society 5.0 Situated at CSU

Internal
within CSU

Internet of
Things
Collaborative

T.E.C.H. Hub

Center for Human-
Machine Systems

National Science
Foundation Research
Traineeship Program

HELPPS
Consortium

Stanford
University
Fellowship

S5

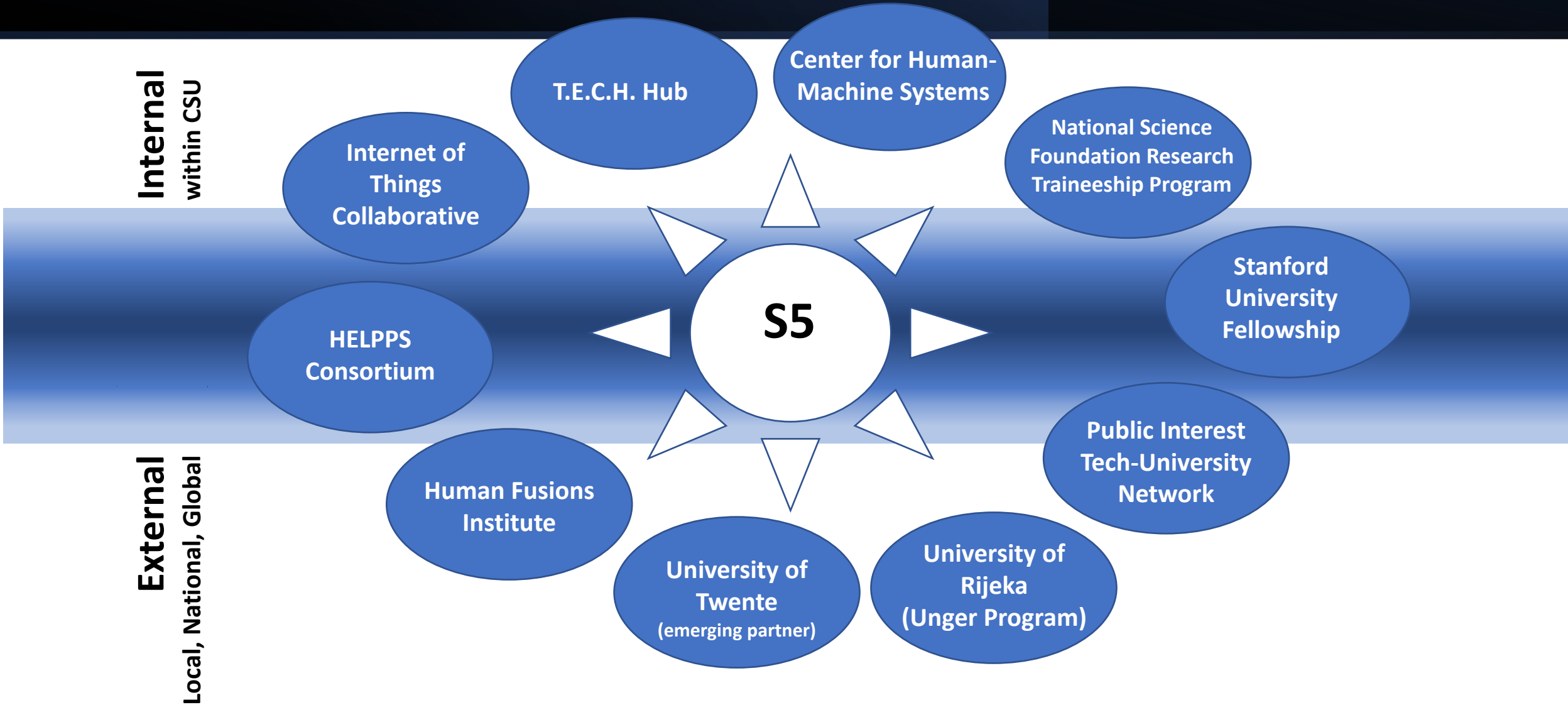
Public Interest
Tech-University
Network

Human Fusions
Institute

University of
Twente
(emerging partner)

University of
Rijeka
(Unger Program)

External
Local, National, Global



Graduate Certificate and Website

- Society 5.0 Graduate Certificate

- 4 courses
- Fall 2023: Empathy, Disabilities

- urban.csuohio.edu/society5.0

Maxine Goodman Levin College
of Urban Affairs >

SOCIETY 5.0

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Society 5.0

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- » News and Events
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Urban Building, Room 349
1717 Euclid Avenue
Cleveland, OH 44115
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Society 5.0

SOCIETY 5.0

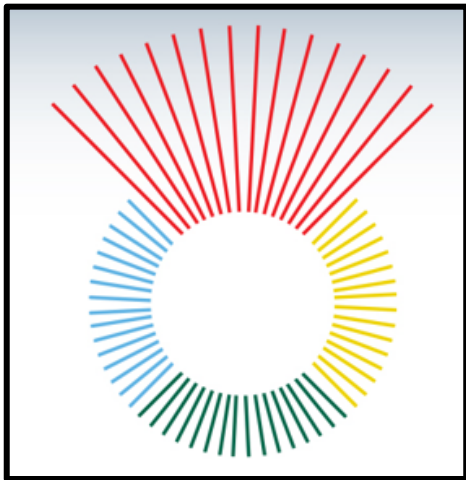


What is Society 5.0?

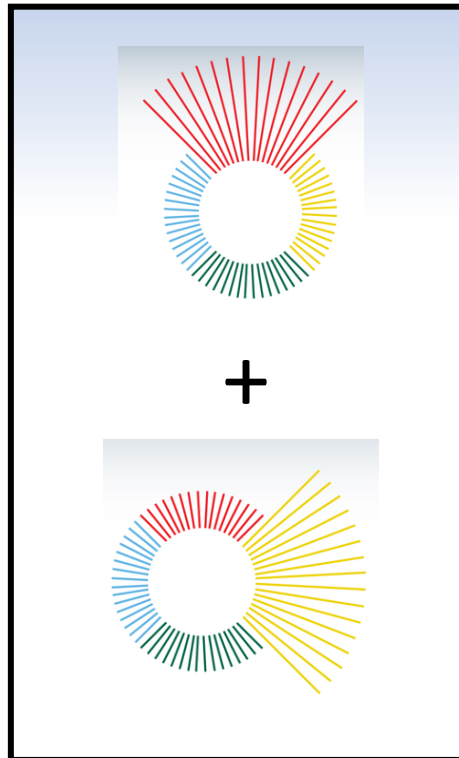
Society is rapidly approaching a fifth stage of development that includes emerging disruptive technologies, such as artificial intelligence, multi-sensory transfer, augmented and virtual realities, advanced robotics, and synthetic forms of life. As in the previous four stages of societal development, (1) hunter-gathering; (2) agrarian; (3) industrial, and (4) informational, the role of technology has shaped everyday

Transdisciplinarity

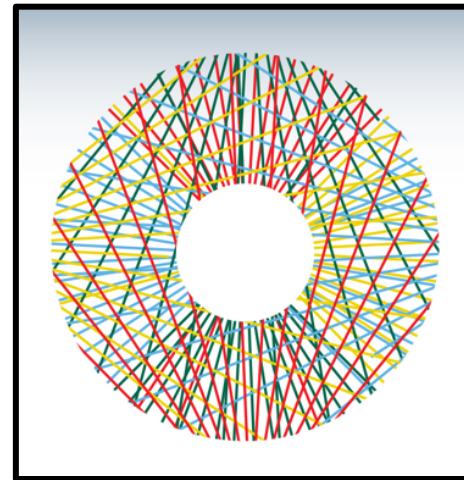
Monodisciplinary



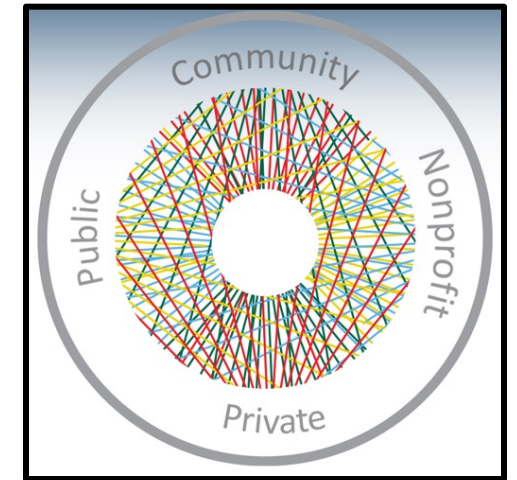
Multidisciplinary



Interdisciplinary

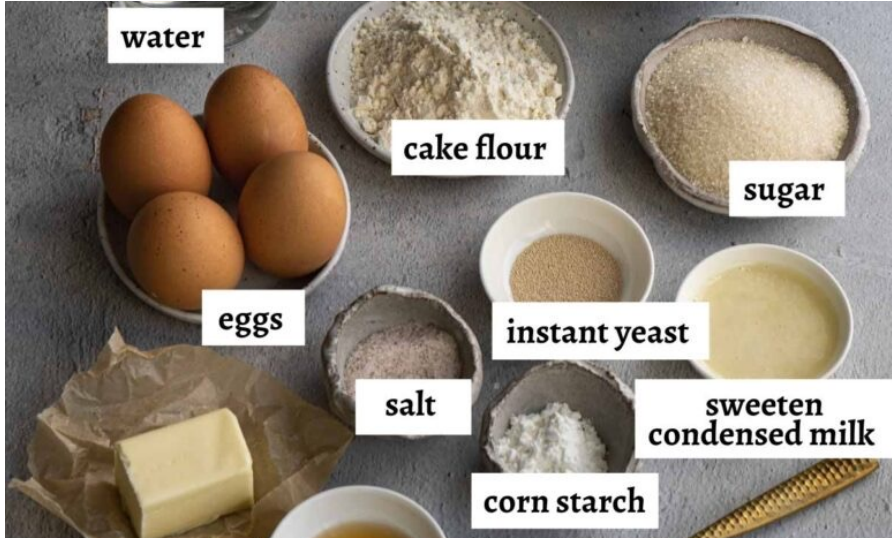


Transdisciplinary



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Adobe Stock | #163233856





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