CONVERGENCE 2018

UCF FAIRWINDS ALUMNI CENTER
ORLANDO, FLORIDA
FEBRUARY 21–23, 2018

Receive a $75 discount when you register by January 31, 2018

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COURSE HIGHLIGHTS

- Convergence calls for groups within the biomedical sciences, life sciences, physical sciences, engineering, and other fields to come together to solve unmet scientific needs.
- This conference brings together physicians, engineers, and scientists with the aim of discovery of educational gaps inherent to one's own discipline.
- The goal is to create a space for discussion and creative collaboration in shared problem solving for these areas.

TARGET AUDIENCE

This course is designed for physicians, scientists, allied health, and students working in the fields of biomedical sciences, life sciences, physical sciences, engineering, and other scientific fields.

LEARNING OBJECTIVES

Upon conclusion of this program, participants should be able to:

- Discuss complex scientific conditions and challenges. Future health problems are too complex for an individual scientist approach, and therefore, convergence of various scientists is needed to solve complex scientific challenges.
- Recognize emerging innovations and potential converged solutions, since technology innovation occurs too rapidly for our current models of diagnosis and treatment.
- Create actionable convergence concepts by group discussion.
- Examine opportunities for scientific collaboration, discovery, and problem solving.
- Create a growing network of convergence science teams.

COURSE DIRECTORS

Tushar Patel, MB, ChB; Y.S. Prakash, MD, PhD; W. David Freeman, MD

KEYNOTE SPEAKERS

Richard Ehman, MD, Professor of Radiology, Mayo Clinic
Walter J. Koroshetz, MD, Director of the National Institute of Neurological Disorders and Stroke
James A. Rogers III, JD, Mayo Clinic Ventures, Mayo Clinic
Charles Bruce, MD, Mayo Clinic Ventures, Mayo Clinic

ONLINE REGISTRATION

CE.MAYO.EDU/CONVERGENCE2018

REGISTRATION FEES *(Includes 3 Days of Conference Access, Breakfast, Lunch, Break Refreshments, and Opening Reception)*

Physicians	$595
Scientists, Residents, Physician Assistants and Nurse Practitioners	$395

CANCELLATION POLICY

Please visit ce.mayo.edu/cancellation for more information.

ABSTRACTS

See ce.mayo.edu/convergence2018 for more information.

SOCIAL PROGRAMS

Welcome Reception – 2/21/2018

Attendees are cordially invited to join the course faculty for the Welcome Reception on February 21, 2018. This casual reception takes place immediately after the first day's talks adjourn, officially opens the course, and offers you the perfect opportunity to make connections with existing and new colleagues. Pre-registration is requested.

PROGRAM AT-A-GLANCE

DAY #1 - WEDNESDAY FEB 21
Engineering Science and Health

7:00-7:45 am	Registration and Continental Breakfast
8:00–8:30	3D Printing in Education
8:30-9:00	Optics and Photonics Highlights – Seeing the Future
9:00- 9:30	The Operating Room of the Future
9:30-10:00	Biomedical Engineering Needs for the Future
10:00-10:30	Aging Science
10:30-10:45	Q&A
10:45-11:00	Break
11:00-Noon	Breakout Groups: *Nanomedicine / Biomaterials Artificial Intelligence*
12:15- 1:45	Lunch and Learn Keynote speaker: Inventions, Convergence, and Pasteur's Quadrant
1:45-3:00	Breakout Groups: *Big Data and Machine Learning Robotics*
3:15	Convergence Brainstorm Q&A Summary
3:45-5:30	Opening Reception, Networking

DAY #2 - THURSDAY FEB 22
Harnessing the Data Revolution for 21st Century Science & Engineering

7:00-8:15 am	Registration and Continental Breakfast
8:30-9:00	Using Big Data for Health Impact
9:00-9:30	Putting the BIG in Big Data: The Future of Connected Healthcare
9:30-10:00	Regenerative Medicine
10:00-10:30	Using Ultrasound imaging to Determine Stiffness of Tissues
10:30-10:45	Q&A
10:45-11:00	Break
11:00 -11:30	(When) Will Computers Replace Physicians
11:30-Noon	Keynote Speaker: Brain Research through Advancing Innovative Neurotechnologies: the US BRAIN Initiative
Noon-12:15	Q&A
12:15-1:15	Lunch and Networking: Research Networking
1:15 -2:30	Mini-Presentation FLoRDA Breakout Groups: *Convergence Teams Convergence Opportunities for Cancer Information Security in Health Care Precision Medicine Tissue Engineering and Regenerative Medicine*
2:30-2:45	Break
2:45	Outputs from Convergence Teams Poster Session
3:15-3:45	

DAY #3 - FRIDAY, FEB 23
The Human-Technology Frontier: Shaping the Future

7:00-8:15 am	Registration and Continental Breakfast
8:15-8:30	Introduction and Welcome
8:30-9:00	Innovations in Medical Education
9:00-9:30	Nanobiotechnology for Healthcare
9:30-10:00	Bionanomaterials in Health Applications Materials
10:00-10:15	Q&A
10:15-10:430	Break
10:30-11:00	Cancer Highlights and Convergence Needs
11:00-11:40	Keynote Speakers: The Entrepreneur's Path in Biomedical Innovation
11:40-Noon	Q&A
12:00– 1:30	Lunch and Networking
1:30-3:00	Breakout Groups: *Technology in the Future of Medical Education Convergence Pathways to Commercialization Artificial Intelligence and Machine Learning in Healthcare*
3:00-3:15	Break
3:15-4:00	Summary of Breakout Group Challenges
4:00	Adjourn

CREDIT

Mayo Clinic College of Medicine and Science is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Mayo Clinic College of Medicine and Science designates this live activity for a maximum of 17.5 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

AOA This program has been accredited by the American Osteopathic Association for 17.5 credits of AOA Category 2-B.

Other Health Care Professionals A certificate of attendance will be provided to other health care professionals for requesting credits in accordance with state nursing boards, specialty societies, or other professional associations.