

## IBM Research and UC San Diego Collaborate to Advance the Use of Artificial Intelligence for Healthy Living

UC San Diego is the first West Coast university to join the IBM Cognitive Horizons Network

ARMONK, N.Y. and SAN DIEGO, Sept. 28, 2017 [PRNewswire/](#) -- IBM (NYSE: [IBM](#)) and the [University of California San Diego](#) have announced a multi-year project to enhance quality of life and independence for aging populations through the new Artificial Intelligence for Healthy Living Center (AIHL), located on the campus of UC San Diego. The groundbreaking center will bring together the technology, artificial intelligence and life sciences knowledge of IBM and UC San Diego to promote critical research and applications in two thematic areas: Healthy Aging and the Human Microbiome.

This collaboration is part of the IBM [Cognitive Horizons Network](#), an international [consortium of leading universities](#) working with IBM to develop technologies needed to help fulfill the promise of artificial intelligence (AI). According to the National Institute on Aging, cognitive health—the ability to clearly think, learn and remember—is an important component of brain health.

"This is a very prestigious relationship for UC San Diego, the first university on the West Coast to collaborate with the IBM Cognitive Horizons Network," said Chancellor Pradeep K. Khosla. "Our campus, one of the top 15 research universities in the world, is home to changemakers whose innovation will help advance cognitive wellness to make a difference in our lives."

The collaborative research initiative will use AI to comb through massive amounts of data to enable healthier living. Funds will be used to support faculty research; trainee stipends including opportunities for UC San Diego graduate and undergraduate students; administrative support; equipment; and corporate affiliation.

"We're committed to collaborating with the best minds in academia to inspire the next generation of scientists by providing access to leading-edge AI tools and expertise to solve real problems that impact human lives," said Dr. John Kelly III, IBM senior vice president, Cognitive Solutions and IBM Research. "This new collaboration with UC San Diego is the latest example of how we're executing on this AI vision -- and we are thrilled to bring our global AI research resources to Southern California to engage the wealth of local talent."

The overall goals of the project are to develop and evaluate a cognitive framework for a supportive living environment that facilitates older adults to live independently longer and have a higher quality of life, and to discover and better understand the health implications of the human microbiome. During the project, the team anticipates that machine learning algorithms for sensing, understanding, modeling, personalizing and informing will be developed, with consideration to human-centered design, and testing in real world environments.

Co-directors of the Artificial Intelligence for Healthy Living Center will be Ruoyi Zhou and Ho-Cheol Kim from IBM Research; and

Tajana Rosing, holder of the Fratamico Endowed Chair and faculty member in the Jacobs School of Engineering's Computer Science and Engineering Department, and Rob Knight, a faculty member in the Department of Pediatrics and Computer Science and Engineering and Director of the UC San Diego Center for Microbiome Innovation.

The Healthy Aging project will be led by Virginia de Sa, a professor in Cognitive Science, and Laurel Riek, a Computer Science professor. The [Human Microbiome](#) theme will be led by Rob Knight and Larry Smarr, director of the California Institute for Telecommunications and Information Technology, as well as Sandrine Miller-Montgomery, a Jacobs School of Engineering faculty member and executive director of the Center for Microbiome Innovation. As part of the IBM-UC San Diego partnership, IBM will join the [UC San Diego Center for Microbiome Innovation](#) as a platinum sponsor.

This initiative will bring together the campus' top researchers in computer science, cognitive science, engineering and medicine, including psychiatry. A list of participating faculty can be found [here](#).

Over the course of five years this project plans to, for the first time, study in depth the impact that a combination of daily habits, the environment, genetics and the microbiome have on the cognition of older adults. The project expects to model the subtle changes of aging, and will deploy personalized interventions via robots that help support wellness. The ultimate goal is to enable older adults to live independently longer and have a higher quality of life.

Through training experiences centered on the thematic areas, undergraduates, graduate students, postdoctoral scholars and project scientists will be positioned to gain knowledge, experience and expertise in these new and important areas of IBM advancement. Hands-on research experience with UC San Diego and IBM scientists is planned and will be complemented by jointly taught classes and seminars, as well as showcase opportunities for trainee and faculty projects.

### ***About UC San Diego***

At the University of California San Diego, we constantly push boundaries and challenge expectations. Established in 1960, UC San Diego has been shaped by exceptional scholars who aren't afraid to take risks and redefine conventional wisdom. Today, as one of the top 15 research universities in the world, we are driving innovation and change to advance society, propel economic growth and make our world a better place. Learn more at [www.ucsd.edu](http://www.ucsd.edu).

### ***About IBM Research***

For more than seven decades, IBM Research has defined the future of information technology with more than 3,000 researchers in 12 labs located across six continents. Scientists from IBM Research have produced six Nobel Laureates, 10 U.S. National Medals of Technology, five U.S. National Medals of Science, six Turing Awards, 19 inductees in the National Academy of Sciences and 20 inductees into the U.S. National Inventors Hall of Fame. For more information about IBM Research, visit [www.ibm.com/research](http://www.ibm.com/research).

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