

Caltech

Graduate Student Orientation 2020 Faculty Panel

Dianne Newman

Gordon M. Binder/Amgen Professor of Biology and Geobiology; Executive Officer for Molecular Biology



Professor Newman received her BA from Stanford University in 1993 and received her Ph.D. under Francois Morel at Massachusetts Institute of Technology in 1997. She was a postdoctoral fellow under Roberto Kolter at Harvard Medical School. She was awarded the National Academy of Sciences (NAS) Award in Molecular Biology for her discovery of microbial mechanisms underlying geologic processes. Additionally, Professor Newman was one of the recipients of the 2016 MacArthur Fellowships and was elected to the National Academy of Sciences in 2019. The Newman group how microorganisms co-evolve with their environment, with a focus on understanding how electron transfer reactions support energy conservation in the absence of oxygen. <http://dknweb.caltech.edu/>

William M. (Bil) Clemons, Jr.

Professor of Biochemistry



Professor Bil Clemons received his B.S. at Virginia Tech and his Ph.D. from the University of Utah, spending two years as a visiting scientist at the Laboratory of Molecular Biology in Cambridge, England. He was a Harvard Medical School Research fellow from 2001-2005, before joining Caltech in 2004. Professor Clemons' honors include the Damon Runyon Cancer Research Foundation Fellowship in 2011, an NIH Pioneer Award, and the Dr. Fred Shair Award for Programming Diversity in 2017. The Clemons group uses a structural biology approach to characterize important biological systems. The Clemons lab currently works on problems related to protein transport across membranes and post-translational modification of proteins. <http://clemonslab.caltech.edu/>

David Hsieh

Professor of Physics



Professor David Hsieh obtained his B.S. from Stanford and his Ph.D. from Princeton University. He was a Pappalardo postdoctoral fellow at MIT from 2009 – 2012 and joined the Caltech Physics faculty in the fall of 2012. Professor Hsieh is the recipient of the William L. MacMillan Award (2012), an Alfred P. Sloan Research Fellowship (2014), and a Packard Fellowship in Science and Engineering (2015). In 2017, President Barack Obama announced Professor Hsieh as a recipient of the Presidential Early Career Award for Scientists and Engineers. Professor Hsieh's research centers on developing new laser-based spectroscopic probes to study quantum phases of matter in solids.

<http://hsiehlab.caltech.edu/>

Melany Hunt –

Dotty and Dick Haymen Professor of Mechanical Engineering



After earning her bachelor's degree at the University of Minnesota and master's and PhD from the University of California, Berkeley, Professor Melany Hunt joined Caltech in 1988 as an assistant professor. She was named associate professor in 1995, professor in 2001, and Kenan Professor in 2012. She became Hayman Professor in 2013. She served as executive officer of mechanical engineering from 2002–07, and as vice provost from 2007–14. Among her contributions to Caltech, Professor Hunt founded in 2012 the Center for Teaching, Learning and Outreach (CTLO), which supports teaching and learning on campus as well as PreK-12 and public educational outreach. Despite her service in Caltech's administration, Professor Hunt has never taken a year off from teaching. Professor Hunt focuses on the transport and mechanics of multiphase systems including granular and particulate flows, fluidized beds, porous media, and related energy systems. Recently, Professor Hunt launched the [Giving Voice](#) project, which creates recorded vignettes that illustrate the challenges that disproportionately affect women in science and engineering labs and classrooms, and pairs them with online supporting materials aimed at effecting change. Professor Hunt is Caltech's 2020 recipient of the Richard P. Feynman Prize for Excellence in Teaching.

<http://www.hunt.caltech.edu/>

Andrew F. Thompson –

Professor of Environmental Science and Engineering; Divisional Academic Officer for Geological and Planetary Sciences



Dr. Thompson was awarded his B.S. from Dartmouth, his M.Phil. from the University of Cambridge and his Ph.D. from the Scripps Institute of Oceanography. He joined the Caltech faculty in 2011 and received the Packard Fellowship for Science and Engineering in 2014. His research focuses on the physics of the ocean's circulation and its impact on global climate. Current research projects include the circulation of the Southern Ocean and the Antarctic margins, ocean-ice interactions, the three-dimensional structure of the global overturning circulation and variability of ocean surface and bottom boundary layers.

<http://web.gps.caltech.edu/~andrewt/>