Krishna V. Shenoy, PhD

Prof. Shenoy heads the Neural Prosthetic Systems Lab (NPTL) at Stanford University (www.stanford.edu/~shenoy/Group.htm) where his group conducts neuroscience and neuroengineering research to better understand how the brain controls movement, and to design medical systems to assist those with movement disabilities. His neuroscience (systems and cognitive neuroscience) research investigates the neural basis of movement preparation and generation using a combination of electrophysiological (single-electrode and chronic electrode-array recordings in rhesus monkeys), behavioral, computational and theoretical techniques. His neuroengineering (electrical, bio, and biomedical engineering) research investigates the design of high-performance neural prosthetic systems, which are also known as brain-computer interfaces (BCIs) and brain-machine interfaces (BMIs). These systems translate neural activity from the brain into control signals for prosthetic devices, which assist disabled patients by restoring lost function. This work includes statistical signal processing, machine learning, low-power circuits, and real-time system modeling and implementation. Education, awards and honors include: BS Electrical Engineering, UC Irvine, Summa Cum Laude, Prof. G.L. Shaw (1990); NSF Graduate Fellow (1990-1995); SM Electrical Engineering, MIT, Prof. C.G. Fonstad, Jr. (1992); Hertz Foundation Graduate Fellow (1992-1995); PhD Electrical Engineering, MIT, Prof. C.G. Fonstad, Jr. (1995); Hertz Foundation Doctoral Thesis Prize (1996); Postdoc, Neurobiology, Caltech, Prof. R.A. Andersen (1995-1998); Senior Postdoc, Neurobiology, Caltech, Prof. R.A. Andersen (1998-2001); Burroughs Wellcome Fund Career Award in the Biomedical Sciences (1999); Assistant Professor, Stanford University (2001-2008); Alfred P. Sloan Research Fellow (2002); Defense Science Research Council (DSRC/DARPA) Fellow (2003-2005); DSRC/DARPA Member (2005-2009); IEEE Senior Member, Engineering in Medicine and Biology Society (2006); McKnight Technological Innovations in Neurosciences Award (2007); Associate Professor (tenured), Stanford University (2008-); Program Co-Director/Co-PI, NSF Integrative Graduate Education and Research Traineeship (IGERT) interdisciplinary program entitled, "Emergent Functions of Neural Systems," part of Stanford's Center for Mind, Brain and Computation; Editorial board, Journal of Neurophysiology (2008-); Charles Lee Powell Faculty Scholar, School of Engineering, Stanford University (2008-2011); Co-Director (along with Co-Director Prof. Jaimie Henderson), Neural Prosthetics Translational Laboratory (NPTL), part of Stanford Institute for Neuro-Innovation and Translational Neuroscience (SINTN) and Stanford's Bio-X / NeuroVentures program (2009-); 2009 NIH Director's Pioneer Award (2009-2014); 2010 Stanford University Postdoc Mentoring Award.