

Measuring Emotion to Improve Lives



Rosalind Picard
Professor, MIT Media Lab

CURRENT RESEARCH

Building novel machine learning and pattern analysis tools to understand and improve mental wellbeing

Emotions are an intricate part of the human condition. People experience stress, joy, varying levels of interest, anxiety, depression, and different mood changes. However, some individuals face serious emotional challenges that greatly impair their lives. Dr. Rosalind Picard, Professor of the Massachusetts Institute of Technology (MIT) Media Lab at MIT, develops novel technology to better understand and measure emotion in daily life. Using machine learning and pattern analysis of personal data, Dr. Picard's research explores human emotions relating to mental health, neurological conditions, autistic disorders, and mood regulation. Her innovative wearable+smartphone technology directly improves the lives of those facing these challenges.

Dr. Picard and her team of graduate students, research assistants, and postdoctoral fellows are building new machine learning and sensing tools for mental health. They create new ways to forecast mood and health conditions based on data from wearable technology and the internet of things. Their innovative tools measure data and patterns to improve healthy emotional wellbeing, prevent depression and suicide, and enable autistic students to decrease their anxiety and improve their learning experiences. Dr. Picard and her team's wearable sensors also measure important mood-influencing factors for many neurological conditions, such as Alzheimer's disease, epilepsy, multiple sclerosis, and Parkinson's disease. These conditions activate regions of the brain involved in the emotion system; they measure these changes to better understand how they impact a patient's quality of life. Their expansive research is actively tested in users and also used to collect basic data for new...

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AFFILIATION



Massachusetts Institute of Technology

EDUCATION

- Sc.D. in MIT Electrical Engineering and Computing Science 1991, Massachusetts Institute of Technology

AWARDS

- #9 on "30 Most Innovative Women Professors" list (Condoleezza Rice was #1) 2016
- CNN's 7 tech Superheroes to Watch in 2015
- Sigma Xi Walston Chubb Award for Innovation 2014
- IEEE Trans on IT Systems best paper of the decade 2013
- Popular Science Top Ten Inventions of 2011
- and 2 more...

RESEARCH AREAS

Health IT, Technology, Electronics / Sensors, Informational Sciences / Internet

FUNDING REQUEST

Your funding will expedite Dr. Picard's important research, and enable its findings to improve the lives of people outside the lab. Dr. Picard is paid by MIT and her research costs are ~\$2M/year. \$90k/yr supports a graduate student, \$150k/yr supports a postdoc, and \$50K-\$500K funds equipment and human participant fees for high-impact studies (more funding enables more participants and data, as well as faster and improved results focused on forecasting mood, preventing depression, and improving lives).