



# “Translating Thoughts to Speech”

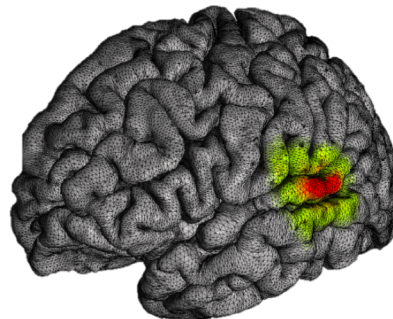
Dr. Edward Chang



**Dr. Edward Chang** is a neurosurgeon at UC San Francisco specializing in the treatment of intractable epilepsy, trigeminal neuralgia, and movement disorders. His surgical practice includes advanced brain mapping to preserve crucial areas for speech. His scientific research focuses upon the human brain mechanisms for speech, emotions and cognition. He co-directs the Center for Neural Engineering & Prosthesis at UC Berkeley, which brings together engineering, neuroscience, neurology and neurosurgery.

### Some recent publications

- |   |             |      |
|---|-------------|------|
| • Real-time decoding of question-and-answer speech dialogue using human cortical activity | Nature comm | 2019 |
| • The Encoding of Speech Sounds in the Superior Temporal Gyrus                            | Neuron      | 2019 |
| • Speech Synthesis from Neural Decoding of Spoken Sentences                               | Nature      | 2019 |
| • An Amygdala-Hippocampus Subnetwork that Encodes Variation in Human Mood                 | Cell        | 2018 |
| • Intonational speech prosody encoding in the human auditory cortex                       | Science     | 2017 |
| • Towards large-Scale, human-Based, mesoscopic neurotechnologies                          | Neuron      | 2015 |



**NeuroTec**

Hosted by Dr. Maxime Baud, University Department of Neurology

October 4 2019 16h00-17h15  
 Auditorium SITEM-Insel\*