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FINAL SCHEDULE

Brain Computer Interfaces: Innovation, Security, and Society
Organizers: Rafael Yuste and Ken Shephard, NeuroTechnology Center, Columbia University

Thursday, November 19th, 2020
NeuroRights Initiative, Columbia University, NY, NY 10027

Supported by Columbia-IBM Center for Blockchain and Data Transparency

(Online symposium. All times in EST)
Registration Link: https://nri.ntc.columbia.edu/events/bci-symposium
Please note that this seminar will not be posted on YouTube

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Welcome: 10:00am – 10:15am
Rafael Yuste (Columbia U.)
Jeannette Wing (DSI, Columbia U.)

Vision: 10:15am – 11:15am
Darío Gil (IBM) – "Neurotech: The Need for NeuroEthics for the Benefit of Society"
Eberhard Fetz (U. Washington) – "Closed-loop brain-computer interfaces – past and future."

Coffee break: 11:15am – 11:30 am

Panel 1: 11:30am – 1:00 pm
BCIs in Academia
Moderator: Rafael Yuste (Columbia)
Ken Shepard (Columbia) – "Flexible CMOS brain interface devices"
Ed Boyden (MIT) – "Tools for Mapping, Recording, and Writing to the Brain"
Eddie Chang (UCSF) – "From Brain to Text"
José Carmena (UC Berkeley) – "Neuroprosthetic skill learning and control"
Paul Sajda (Columbia U.) – "Non-invasive closed-loop precision delivery of neurostimulation for treating depression"

Panel Discussion

Lunch break 1:00pm – 1:30pm

Panel 2: 1:30pm – 3:00pm
BCIs in Industry
Moderator: Ken Shepard (Columbia)
Mark Chevillet (Facebook) – "Imagining a new interface: Hands-free communication without saying a word."
Patrick House (Kernel) – "Kernel Flow: Precision Brain Imaging in Every Home"
Reardon (CTRL-Labs/Facebook) – "Expanding human output on the next computing platform with high fidelity EMG."
Ed Cutrell (Microsoft) – "Consumer BCI: EEG and multimodal sensing for productivity and entertainment"
Mary Lou Jepsen (Openwater) – TBA

Panel Discussion

Coffee break: 3:00pm – 3:15pm

Panel 3: 3:15pm – 4:30pm
Data Handling and Security
Moderator: Jeannette Wing (Columbia DSI)
Jeff Rogers (IBM) – "Neurodata & Mental Privacy"
Kristin Lauter (Microsoft) – "Private AI: Machine Learning on Encrypted Data"
Chaya Nayak (Facebook) – "Between a Rock and A Hard Place: Enabling Privacy-Preserving Data Sharing"
Xabi Uribe-Etxebarría (Sherpa AI) – "AI applied to data Privacy: Federated Learning and Differential Privacy"

Panel Discussion

Coffee break: 4:30pm – 4:45pm

Panel 4: 4: 45 pm - 6: 00 pm
Societal Impact and Regulation
Moderator: Moisés Velasquez-Manoff (NYTimes)
Francesca Rossi (IBM) – "Neuroethics vs AI ethics"
Anna Wexler (U. Penn) – "BCIs: Looking to the past to navigate the future."
Sara Goering (U. Washington) – "NeuroRights and Neurotechnology"
Rafael Yuste (Columbia U.) – "Implementation of NeuroRights in Chile and Spain"

Panel Discussion