

# MRS/Kavli Future of Materials: Flexible and Stretchable Bioelectronics

*Presented by MRS Bulletin*

8 am-5:45 pm, April 22, 2017

Phoenix Convention Center North, 100 Level, Room 121 AB

## PROGRAM

### AM Session (8 am-12:15 pm)

- 8:00 Breakfast and registration  
8:20 Gopal Rao, Editor, MRS Bulletin  
“Welcome Remarks”  
Miyong Chun, Kavli Foundation  
“Introduction and Opening Statement”  
8:30 Introductions of attendees  
8:45-9:05 Darren Lipomi, University of California San Diego  
“Opening Remarks & Organic Haptics”  
9:05-9:15 Discussion

### **AM Talks: Biological Applications**

- 9:15-9:35 Benjamin Tee, National University of Singapore/A\*STAR  
“A Skynet Future”  
9:35-9:45 Discussion  
9:45-10:05 Roozbeh Ghaffari, MC10 Inc.  
“Fully Integrated Epidermal Systems for Wireless Monitoring of Motion,  
Electrophysiology and Hemodynamics”  
10:05-10:15 Discussion  
10:15-10:30 Break  
10:30-10:50 Joseph Wang, University of California, San Diego  
“Stretchable and Self-Healed Printed Wearable Electrochemical Devices”  
10:50-11:00 Discussion  
11:00-11:20 Pooi See Lee, Nanyang Technological University  
“Stimuli Responsive Stretchable Devices for Bioelectronics”  
11:20-11:30 Discussion  
11:30-11:50 Sheng Xu, University of California, San Diego  
“A Hybridized Approach to Soft Electronics”  
11:50-12:00 Discussion  
12:00-12:45 Panel Discussion  
(Joseph Wang, Pooi See Lee, Roozbeh Ghaffari, Benjamin Tee)  
Exploration of trends & high-impact collaborations

### **Working Lunch (12:30-1:30 pm)**

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| 12:50-1:10 | Talk by Siegfried Bauer, Johannes Kepler University Linz<br>“Soft devices: perspectives” |
| 1:10-1:20  | Discussion   |
| 1:20-1:30  | Lunch wrap-up & break  |

### **PM Session (1:30-5:45 pm)**

#### **PM Talks: Materials and Mechanics**

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| 1:30-1:50 | Rebecca Kramer, Purdue University<br>“Soft Electronics for Soft Robotics”   |
| 1:50-2:00 | Discussion  |
| 2:00-2:20 | Martin Kaltenbrunner, Johannes Kepler University Linz<br>“Soft Electronics”   |
| 2:20-2:30 | Discussion  |
| 2:30-2:50 | Ying Diao, University of Illinois at Urbana-Champaign<br>“Increasing the Structural and Functional Complexity of Printed Electronics” |
| 2:50-3:00 | Discussion  |
| 3:00-3:15 | Break   |
| 3:15-3:35 | Robert Shepherd, Cornell University<br>“Engineering with hydrogels”   |
| 3:35-3:45 | Discussion  |
| 3:45-4:05 | Nanshu Lu, University of Texas at Austin<br>“E-Tattoos for Mobile Sensing and Therapy”  |
| 4:05-4:15 | Discussion  |
| 4:15-4:35 | Jeong-Yun Sun, Seoul National University<br>“Highly Stretchable, Transparent Ionic Touch Panel”                                       |
| 4:35-4:45 | Discussion  |
| 4:45-5:30 | Panel Discussion – (Martin Kaltenbrunner, Nanshu Lu, Siegfried Bauer)<br>Exploration of trends & high-impact collaborations           |
| 5:30-5:45 | Wrap-up of workshop and concluding remarks (Darren Lipomi)  |