<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Contribution</th>
<th>Speaker</th>
<th>Institution</th>
<th>Talk title</th>
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<tbody>
<tr>
<td>08:00-09:00</td>
<td>REGISTRATION</td>
<td>Opening</td>
<td>Ru Huang</td>
<td>Peking University</td>
<td>Welcome address</td>
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<tr>
<td>09:00-09:10</td>
<td>Opening (Chair: J. Joshua Yang)</td>
<td>Opening</td>
<td>Ru Huang</td>
<td>Peking University</td>
<td>10 Things You Didn’t Know About Memristors</td>
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<tr>
<td>09:10-10:40</td>
<td>Plenary</td>
<td>Leon Chua</td>
<td>University of California, Berkeley</td>
<td>10 Things You Didn’t Know About Memristors</td>
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<td>10:40-11:00</td>
<td>GROUP PHOTO &amp; COFFEE BREAK</td>
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<td>11:00-11:30</td>
<td>Memristor dynamics (Chair: M. Di Ventra)</td>
<td>Invited</td>
<td>J. Joshua Yang</td>
<td>University of Massachusetts, Amherst</td>
<td>Diffusive Memristors for Computing</td>
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<td>11:30-12:00</td>
<td></td>
<td>Invited</td>
<td>Jennifer Rupp</td>
<td>Massachusetts Institute of Technology</td>
<td>Oxide-Memristor Building Blocks for Neuromorphic Computing: Ionic and Protonic Transfer</td>
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<tr>
<td>12:00-12:30</td>
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<td>Invited</td>
<td>Yuchao Yang</td>
<td>Peking University</td>
<td>Memristive Devices: Switching Dynamics and Computing Applications</td>
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<td>12:30-14:00</td>
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<td>14:00-14:30</td>
<td>Architecture &amp; Systems (Chair: Daniele Ielmini)</td>
<td>Invited</td>
<td>Karlheinz Meier</td>
<td>University of Heidelberg</td>
<td>An Accelerated Physical Model Neuromorphic Machine with Hybrid Learning Capabilities</td>
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<td>14:30-15:00</td>
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<td>Invited</td>
<td>Tim Cheng</td>
<td>HKUST</td>
<td>Energy, Lifetime and Variation-Aware ReRAM Architectures for Memory and Neuromorphic Computing Applications</td>
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<td>15:00-15:30</td>
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<td>Invited</td>
<td>Hai (Helen) Li</td>
<td>Duke University</td>
<td>Enhance the Reliability and Efficiency of Memristor-based Neuromorphic Systems</td>
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<td>15:30-16:00</td>
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<td>Invited</td>
<td>Nanjian Wu</td>
<td>Chinese Academy of Sciences</td>
<td>Smart Vision Chip</td>
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<td>16:00-16:20</td>
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<td>16:20-16:50</td>
<td>Memcomputing (Chair: Jennifer Rupp)</td>
<td>Invited</td>
<td>Massimiliano Di Ventra</td>
<td>UC San Diego</td>
<td>MemComputing: a Brain-inspired Efficient Computing Paradigm</td>
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<td>Ronald Tetzlaff</td>
<td>TU Dresden</td>
<td>Memcomputing by Cellular Nonlinear Networks</td>
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<td>Fernando Corinto</td>
<td>Politecnico di Torino</td>
<td>Computing with Bio-inspired Memristor Networks</td>
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<td>17:50-18:05</td>
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<td>Regular</td>
<td>Vetriveeran Rajaman</td>
<td>Chonbuk National University</td>
<td>Morris-Lecar Model of Third-order Barnacle Muscle Fiber is Made of Memristors</td>
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<td>18:05-20:00</td>
<td>GALA DINNER</td>
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<tr>
<td>Time</td>
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<td>08:45-09:45</td>
<td>Future computing concepts (Chair: Ru Huang)</td>
<td>Plenary</td>
<td>R. Stanley Williams</td>
<td>HP Labs</td>
<td>Memristor Chaos as a Computational Resource</td>
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<td>09:45-10:15</td>
<td>Invited</td>
<td>Todd Hylton</td>
<td>UC San Diego</td>
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<td>Thermodynamics and the Future of Computing</td>
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<td>10:30-11:00</td>
<td>Neuroscience &amp; Algorithm (Chair: Wei D. Lu)</td>
<td>Invited</td>
<td>Joe Z. Tsien</td>
<td>Augusta University</td>
<td>The Basic Wiring and Computational Logic of the Brain</td>
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<td>Tiejun Huang</td>
<td>Peking University</td>
<td>Mapping and Emulating the Primate Retina</td>
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<td>Invited</td>
<td>Lihong Cao</td>
<td>Communication University of China</td>
<td>Predicting Spikes with Artificial Neural Networks</td>
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<td>Si Wu</td>
<td>Beijing Normal University</td>
<td>Atoms of Neural Computation</td>
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<td>Wei Lu</td>
<td>University of Michigan</td>
<td>Feature Extraction and Image analysis using memristor networks</td>
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<td>Daniele Ielmini</td>
<td>Politecnico di Milano</td>
<td>Bio-inspired Neuromorphic Computing with Resistive-switching Plastic Synapses</td>
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<td>15:00-15:30</td>
<td>Neuromorphic Applications (Chair: Karlheinz Meier)</td>
<td>Invited</td>
<td>Jeehwan Kim</td>
<td>Massachusetts Institute of Technology</td>
<td>Uniform Epitaxial RAM Towards Large-scale Neuromorphic Arrays</td>
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<td>Luping Shi</td>
<td>Tsinghua University</td>
<td>Memristors for Brain Inspired Computing</td>
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<td>Miguel Romera</td>
<td>CNRS/Thales</td>
<td>Pattern Classification with Coupled Spintronic Nano-oscillators</td>
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<td>Hyongsuk Kim</td>
<td>Chonbuk National University</td>
<td>Excitatory and Inhibitory Actions of a Memristor Bridge Synapse</td>
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<td>17:15-18:15</td>
<td>Roundtable Discussion (Chair: J. Joshua Yang)</td>
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<td>Topic: Prospect and Challenges of Neuromorphic Computing</td>
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