

Brain-inspired computing has become extremely important over the past few years. The idea is to create powerful computing machines that can learn from available data to provide satisfactory answers to problems such as visual image processing, pattern / voice recognition, or language processing. These problems arise in a wide variety of application domains such as autonomous driving, social networks, or personalized medicine. There are multiple approaches to brain-inspired computing, and significant debate exists about their pros and cons. Artificial neural networks perhaps represent the most popular approach. While originally inspired by the architecture of the brain, today's artificial neural networks deviate from actual biological mechanisms inside the brain. In contrast, the neuromorphic computing approach tries to mimic intrinsic biological mechanisms inside the brain using electronic hardware and software. Brain-inspired computing is highly interdisciplinary linking the diverse fields of neuroscience, cognitive science, and psychology with electrical engineering, computer science, mathematics, and physics. The objectives of this workshop are: (1) re-connect scientists from biology and neuroscience with those creating brain-inspired computing architectures; (2) understand how recent brain-related discoveries can influence brain-inspired computing; and, (3) brainstorm potentially new opportunities for brain-inspired computing, beyond today's target applications.