INTELLECTUALVENTURES®

Caltech-Intellectual Ventures Invention Competition 2013

All subjects are eligible, however, Intellectual Ventures is interested especially in the following topics and closely related subject areas.

SOFTWARE

- Gaming in the Cloud
- Replication of Computing Environment for Data Centers
- Communication and Security between Disparate Cloud Operators
- Security
    - Data Center Application Certification
    - Protecting Against Side Channel Attacks
    - Security while Moving Large Customers between Clouds
    - Security for Software Defined Networks
- Data Lifetime Management
- Software Automation to Reduce Data Center Labor
- Load Balancing Over Geographies
- Cloud Based Rendering

PHOTONICS

- Scalable Optical Interconnects
    - Optical Coupling, Opto-Mechanical Alignment and Assembly.
- Optical Backplanes
- LED Light Extraction Efficiency Enhancements

ELECTRONICS

- Advanced Solid State Drive
    - Petabyte-Scale SSDs
    - Read/Write Control Methods
    - Reliability, Self-Repair, and Operating Life Improvements
- Multi-Core Computing
    - Heterogeneous and Homogeneous Multicore Systems
    - Reliability and Self-Repair of Multicore Integrated Systems
    - Hardware Accelerators
    - On-Chip Power Delivery and Management

MATERIALS

- Materials Recycling
    - Carbon Fiber-Reinforced Polymers (CFRPs)
    - Tracking and Tagging in Recyling
- Thermostatic and Sustainable Food Packaging
- Embedded Chemical Sensors
- Optoelectronics
    - Uniform Illuminating Materials
    - Printable Optoelectronics
- Novel Materials for Stretchable or Flexible User Interfaces

Questions?

Mary Beth Campbell
Caltech OTT
marybeth@caltech.edu