

Qualcomm Institute

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Calit2: 15 years of Institutional Innovation

- **Reinventing Land Grant Mission for 21st Century**
 - The University of Tomorrow, Here Today
 - Living Laboratories of the Future
 - Community Deployments of Leading Edge Technologies
 - Novel Partnerships with Industry
 - Preparing the Workforce of Tomorrow (Cross-Trained Students to CTOs)
 - Engaging the State, National, and International Institutions
- **Complementing Departmental Capabilities:**
 - Catalytic Cauldron for Multidisciplinary Team Formation
 - Broad Range of Full-Time Technical Professionals
 - Projects at Scale and Persistent Infrastructure
 - Multi-Departmental and Multi-Campus
 - Real-World Applications
 - Shared World-Class Facilities
 - System Integration of Faculty Research Components

Qi Creates Shared-Use Facilities

- **Nano3 Cleanroom Nanofabrication Facilities**
 - 7,000 sq. ft. of Class 100, 1000 and 10,000 rooms
 - 3,000 sq. ft. of analytical, design and materials characterization labs
 - E-beam lithography and photolithography, atomic layer deposition etc.
- **Circuits Labs / Design and Fabrication Laboratory**
- **Photonic Systems Laboratory**
 - Industry-scale lab modeled on Bell and AT&T Labs
 - 2,000 sq. ft. lab supports true terabit-scale networking and signal processing
- **Chip-Scale Photonic Testing Facility**
 - In-kind donations from Agilent Technologies
 - Part of Qi's participation in Center for Integrated Access Networks ERC
- **Immersive Visualization Laboratory**
 - StarCAVE 3D, 360-degree virtual reality environment
 - NexCAVE
 - Virtulab
- **HIPerSpace / GRAVITY Lab**



Qi Nurtures Large-Scale Projects

- **Ocean Observatories Initiative Cyberinfrastructure**
 - \$32M NSF
 - Will peak at 40 staff
- **Community Cyberinfrastructure for Advanced Microbial Ecology Research and Analysis (CAMERA)**
 - \$24.5M from Gordon and Betty Moore Foundation
 - Over 4,500 registered users from over 80 countries
- **OptIPuter**
 - \$13M NSF
- **King Abdullah University of Science and Technology**
 - \$8M from KAUST for visualization at new campus
- **Wireless Internet Information System for Medical Response in Disasters (WIISARD and WIISARD SAGE)**
 - \$7M NIH's National Library of Medicine (\$4M WIISARD, \$3M WIISARD SAGE)
- **Responding to Crises and Unexpected Events (RESCUE)**
 - \$3.5M NSF (plus \$9M at Calit2 Irvine)



Qi Initiates New Centers

- **Center for Information Theory and Applications**
 - Study of Information Theory fundamentals and applications to communications, computer- and life-sciences, finance, statistics, and related disciplines
 - Alon Orlitsky
- **Center of Interdisciplinary Science for Art, Architecture and Archaeology CISA3**
 - Maurizio Seracini, Falko Kuester
- **Center for Algorithmic and Systems Biology**
 - Pavel Pevzner, Steve Briggs



C-School?

- **Founders**

- Rene Cruz: Mushroom
- Sujit Dey: Ortiva
- Ingolf Krueger: LonoCloud

- **CEOs**

- Cahit Akin: Mushroom
- Kai Doer: HiPerworks

- **CTOs**

- Rajesh Mishra: Mushroom
- Don F. Kimball: MaxCentric
- Doug Palmer: Intellisys
- Babak Jafarian: SkyRiver
- Per Johansson: MaxCentric



QUALCOMM Institute Innovation Space



Qi : Path Forward

