

Qualcomm Innovation Fellowship (QInF) 2016 Finalists

Submission #	Innovation Title	School	Students	Faculty Advisor(s)
S2016-11399	Revolutionizing mobile imaging from a newly discovered amplification mechanism in semiconductor	UCSD	David Hall Lujiang Yan	Yuhwa Lo
S2016-11403	Label-Free Diagnostic Lab on a Smartphone	UIUC	Hojeong Yu Minji Kim	Brian Cunningham Olgica Milenkovic
S2016-11408	A Battery- and Crystal-Free 28GHz Transceiver for the Internet of Everything	Stanford	Ashwin Raghunathan Timothy McKenna	Thomas Lee
S2016-11412	Software-Defined Error-Correcting Codes	UCLA	Mark Gottscho Clayton Schoeny	Puneet Gupta Lara Dolecek
S2016-11423	High-performance Primitives for Machine Learning Targeting Mobile Platforms	UT Austin	Chenhan Yu Jianyu Huang	Robert A. van de Geijn George Biros
S2016-11431	Three-Dimensional Deep Learning for Robot Perception	Princeton	Shuran Song Daniel Suo	Jianxiong Xiao Thomas Funkhouser
S2016-11437	Reconfigurable Radios using Integrated Phase-Change RF Switches	CMU	Rahul Singh Min Xu	Jeyanandh Paramesh James A. Bain
S2016-11439	Validating Application Behavior against User Expectations	UIUC	Wing Lam Wei Yang	Tao Xie
S2016-11441	Securing Internet-of-Everything with IoTSec	CMU	Tianlong Yu Seyed Kaveh Fayazbakhsh	Vyas Sekar Srinivasan Seshan
S2016-11446	Hypervisor-level System Protection with SafeVisor	UIUC	Fardin Abdi Taghi Abad Renato Mancuso	Marco Caccamo
S2016-11450	3D Learning Accelerators: A Path through the Era of Dark Silicon and Big Data	Georgia Tech	Divya Mahajan Sandeep Kumar Samal	Hadi Esmaeilzadeh Sung Kyu Lim
S2016-11453	Feedback for Vision	UMD	Michael Maynord Anupam Guha	Yiannis Aloimonos Cornelia Fermuller
S2016-11457	Hardware-Accelerated Programming System For Sequence Alignment	Stanford	Yatish Turakhia Karthik Jagadeesh	Bill Dally Gill Bejerano
S2016-11464	High-Speed Quantitative Phase Imaging on a Smartphone Microscope using Color Multiplexing	UCB	Zachary Phillips Michael Chen	Laura Waller
S2016-11466	IDCam: Object Identification and Localization for Activity Inference using RFID and RGB-D Cameras	Washington	Hanchuan Li Josh Foamm	Shwetak Patel Alanson Sample
S2016-11472	Reverse-engineering neural encoding for implantable retinal prosthesis	Stanford	Nishal P. Shah Karthik Ganesan	EJ Chichilnisky Subhasish Mitra
S2016-11479	Hardware Acceleration for Mobile Computing on Encrypted Data	MIT	Chiraag Juvekar Utsav Banerjee	Anantha Chandrakasan
S2016-11484	Continuous Finger Tracking on the Skin Using the Body as a Waveguide	CMU	Anhong Guo Yang Zhang	Chris Harrison Jeffrey P. Bigham
S2016-11492	Building mmWave Wireless Systems Using the Sparse Fourier Transform	MIT	Omid Abari Ezz Hamed	Dina Katabi Haitham Hassanieh
S2016-11501	Towards a Safer IoE: Detecting and Correcting Abnormal Interactions between Things in Smart Homes	UIUC	Earlence Fernandes Alex Gyori	Darko Marinov Atul Prakash
S2016-11504	Modified Doherty Power Amplifiers for 5G Handsets	UCSD	Cooper Levy Voravit Vorapipat	Peter Asbeck James Buckwalter
S2016-11507	Body-Brain-Avatar Interface: a tool to study sensory motor integration and neuroplasticity	Rutgers	Vilemini Kalampratsidou Ji-Hye Ryu	Elizabeth Torres Dimitris Metaxas
S2016-11511	Low Latency, High Bandwidth Burst Mode Interconnect Design for Next Generation Computing Systems	UCB	Nicholas Sutardja Jaeduk Han	Elad Alon
S2016-11522	Fully-Integrated Reconfigurable Magnet-less Non-reciprocal Components for Next-Generation Wireless Communication Systems	Columbia	Negar Reiskarimian Ahmed Kord	Harish Krishnaswamy Andrea Alu

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S2016-11526	Adaptive and Robust Stimulus Artifact Cancellation for Bidirectional CMOS Neural Interfaces	Washington	John Uehlin Eric Pepin	Jacques C. Rudell
S2016-11528	Encyclopedic Real-time Visual Recognition	Michigan	Yu-Wei Chao Johann Hauswald	Jia Deng Jason Mars
S2016-11548	Improving Hospital Operational Efficiency with Machine Learning	Stanford	Neal Master Zhengyuan Zhou	Nicholas Bambos David Scheinker
S2016-11551	A Chip-Scale Optomechanical Accelerometer for Precision Inertial Positioning and Sensing at the Quantum Limits	UCLA	Vito Iaia Jaime Flor	Chee Wei Wong Sudhakar Pamarti
S2016-11552	An Ultra-High Speed Wireless Communication System based on Turing Pattern Frequency Combs	UCLA	Shang-Hua Yang Abhinav Vinod	Mona Jarrahi Chee Wei Wong
S2016-11555	Semantic Exploration through UAV's	CMU	Sankalp Arora Daniel Maturana	Sebastian Scherer
S2016-11556	Advanced Ultrasound Sensing in the Modern Wireless World: a Miniaturized Ultrasound Transducer System for Biomedical Applications	Stanford	Spyridon Baltasvias Junyi Wang	Amin Arbabian Butrus T. Khuri-Yakub
S2016-11558	Communicating through Physical Vibrations	UIUC	Nirupam Roy Shailesh Venkatakrishnan	Romit Roy Choudhury Pramod Viswanath
S2016-11559	Robust SDN through Optimal Control and Formal Synthesis	Caltech	Dimitar Ho Sumanth Dathathri	John C. Doyle Richard Murray
S2016-11563	Deep Perceptive Flight Control of Autonomous Aerial Vehicles in Dynamic Environments	UCB	Gregory Kahn Tuomas Haarnoja	Pieter Abbeel