
The Thirty-Ninth Asilomar Microcomputer Workshop

April 24-26, 2013

(Motto: Crowdsourcing microprocessors since 1975!)

Wednesday, April 24

1:30pm **Opening Remarks** – Marianne Mueller, *Asilomar Microcomputer Workshop*,
General Chair

1:45pm **Eponymous Microprocessor Session** – Andy Glew, *MIPS Technologies*, Session Chair †

- Thirty Ops in One Blow: Three Cycles from Cache Line to Adder
Ivan Godard, *Out of the Box Computing*
- What a Long Strange Trip It's Been
Allen Baum, *9th Wave Technologies*
- "This time, for sure! Presto!" said Bullwinkle J. Moose: Fusing FPGAs and Processors
Steve Leibson, *Xilinx, Inc.*

3:15pm **Break**

3:45pm **Low Power Innovations** – Brian A. Berg, *Berg Software Design*, Session Chair

- The IVRs Are Coming: Power Architectures for PCs 2015
David Kanter, *Real World Tech*
- Malicious Marketing Malarky and the Truth about Ultra Low-Power Design
Jack Ganssle, *The Ganssle Group*
- Long-Lived Leaf Nodes for the Internet of Things
Joe Decuir, *CSR*

5:15pm **Welcome Reception and Dinner**

7:30pm **Athematic Short Talks** – Bill Cheswick, *University of Pennsylvania*, Timekeeper

- Self-Driving Cars
Hy Murveit, *Google, Inc.*
- CXP: How to Write a Function the Hard Way
Matthew Voss, *West Valley College* and Matthew Smith, *independent learning*
- Nuclear Notes
Chris Cockey, *Mistral Mountain*
- Coming to Grips with the New First-Inventor-to-File Patent Law
Bennett Smith, *PatentVentures*
- Inspiring Mathematics: Martin Gardner and Vi Hart
Nancy Blachman, *Inspiring Math*
- Test Automation: Waking Up from the Nightmare of the
787 Dreamliner Electrical Systems, David Shier, *Shier Systems*
- Smartest Phone in the Room: An Update from the Trenches of the Mobile Phone Wars
John Feland, *Argus Insights*
- Russian Rocket Politics
Rick Voreck, *Space Systems/Loral*

10:20pm **Wednesday RATS** – Bill Cheswick, *University of Pennsylvania*, Timekeeper

Thursday, April 25

- 8:30am** **“Secure the network, HAL.” “I’m sorry, Dan. I’m afraid I can’t do that.”**
Dan Kaminsky, *DKH, Inc.*, Session Chair
- Lessons from Stuxnet
Bill Cheswick, *University of Pennsylvania*
 - Rethinking High-Assurance Security from the Ground Up
Peter Neumann, *SRI International*
 - Coping with Digital Herpes, or, Industrial Cyber-Insecurity
Jon Steinhart, *Jonathon Steinhart Consulting, Inc.*
- 10:00am** **Break**
- 10:30am** **Clouds on the Horizon** – Brian A. Berg, *Berg Software Design*, Session Chair
- Transporter: Building a Secure and Private Peer-to-Peer File Sharing System
Geoff Barrall, *Connected Data*
 - OpenStack: The Open Source Operating System for the Next-Generation Data Center, Chris Kemp, *Nebula*
 - RAMCloud: Low-Latency Data Center Storage
Mendel Rosenblum, *Stanford University*
- 12:00n** **Lunch**
- 1:30pm** **FutureMed: Bacteria, Bugs, and Brains** – Marianne Mueller, *UCCE Master Gardeners of Santa Clara County*, Session Chair
- uBiome: Sequencing the Human Microbiome
Jessica Richman, *uBiome/Oxford University*
 - The Smartphone Will See You Now: Harnessing Mobile Computing for Diagnosis in the Third World
Raj Kulkarni, *Dengue Relief Foundation*
 - Saving Science, Starting with Neuroscience: A Project on Scientific Transparency
Dave Cardinal, *Cardinal Photo*
- 3:00pm** **Break**
- 3:30pm** **The Robots Are Here! The Robots Are Here! But Have We Noticed?**
John Markoff, *The New York Times*, Moderator ††
- Opening remarks and group discussion. Panel members to include:*
- Virgil Griffith – *California Institute of Technology*
 - Kurt Bollacker – *The Long Now Foundation*
- Additional panel members to be announced.*
- 5:00pm** **Reception and Dinner**
- 7:30pm** **Open Discussion: A Rich Asilomar Tradition** – Mary Eisenhart, *YOYOW*, RAT Patrol
Ten-minute presentations on any subject you choose. Contact Mary Eisenhart after registration to secure your time slot, randomly assigned.

Friday, April 26

- 5:30am** *Beach launch of cloud-navigating drones (Self-organizing; Bring your own drone)*
- 8:30am** **Crowd*** – David Weekly, *Facebook*, Session Chair
- Crowdfunding and Distributing eBooks: Libraries and the Creative Commons
Eric Hellman, *unglue.it*
 - Crowd-Driven Computer Vision
Kathleen Tuite, *University of Washington*
- 9:30am** **Break**
- 10:00am** **CrowdCoin and Disruptive Currencies** – Tim Pozar, *Fandor*, Moderator
Opening remarks and group discussion. Panel members to include:
- Dan Kaminsky – *DKH, Inc.*
 - Brad Templeton – *Electronic Frontier Foundation*
 - Virgil Griffith – *California Institute of Technology*
- Additional panel members to be announced.*
- 11:45am** **Closing Remarks** – Marianne Mueller, *Asilomar Microcomputer Workshop*, General Chair
- 12:15pm** **Outdoor Lunch** (weather permitting)
- 1:45pm** **Workshop Adjourns**
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Program Committee

Brian A. Berg
Bill Cheswick
Sandy Clark
Fred Clegg
Mary Eisenhart
John Feland

Janet Guns
Dewayne Hendricks
Dan Kaminsky
Bruce Koball
Stan Mazor
Anne Mitchell
Marianne Mueller

Tim Pozar
David S.H. Rosenthal
Ken Shoemaker
Fred Terman
David Weekly
John Wharton

Look for an Iridium flare of magnitude -7.1 at 8:21:17pm Wednesday, 34° above NNW.

Three ISS overflights may be visible: 9:02pm Wednesday, 28° above the northwest horizon, moving toward 34° above ESE (three minutes); 8:11pm Thursday, moving from 24° above due north to 11° above due east (four minutes); and 9:47pm Thursday, moving from 12° above due west to 19° above southwest (two minutes.)

This week NASA launched three CubeSats that use standard commercial smartphones to perform all computation, navigation, imaging, and communication functions.



† Special thanks to returning AMW veteran and Guest Chair Andy Glew for assembling the leadoff session on eponymous microprocessors.

†† Congratulations to John Markoff and the NYT staff writers who last week received the 2013 Pulitzer Prize in Explanatory Reporting.

(And keep an eye out for rogue asteroids!)