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# AMW41

## The 41st Asilomar Microcomputer Workshop

April 15-17, 2015

*Motto: "In a Clean Room, No One Can Hear You Scream."* †

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### Wednesday, April 15

- 1:30pm** **Opening Remarks** – Marianne Mueller, *Asilomar Microcomputer Workshop*, General Chair  
John Wharton, *Applications Research*, Program Coordinator
- 1:45pm** **Looking Backward: Retrospectives on Emerging Technologies** – Brian Berg, *Berg Software Design*, Session Chair
- The Fairchild Notebooks: Curating Silicon Valley's Sacred Scrolls  
David Laws, *The Computer History Museum*
  - The Internet Archive: Hacking Cultural Institutions  
Brewster Kahle, *Internet Archive*
- 3:00pm** **Break**
- 3:30pm** **Eponymous Microprocessor Session: Redefining Architecture** – Ken Shoemaker, *Intel Corporation*, Session Chair
- Flash and Chips: A Case for Solid-State Warehouse-Scale Computers using Custom Silicon – Krste Asanović, *University of California, Berkeley*
  - Balboa: FPGA Time- and Space-Sharing on Novena  
Star Simpson, *Orion Labs*  
Andy Isaacson, *Noisebridge*
  - How It Really Works: Chip Design in the Age of IP Providers and Foundries  
Udo Walterscheidt, *Ericsson*
- 5:00pm** **Welcome Reception and Dinner**
- 7:30pm** **Athematic Short Talks** – Marianne Mueller, *Asilomar Microcomputer Workshop*, Timekeeper
- Minitel: The Web Before the Web  
Bernard Peuto, *Concord Consulting*
  - Preserving Minitel's Legacy  
Marc Weber, *Computer History Museum*
  - Recursive Interaction Between Concepts of Virtual Worlds and the Technology That Creates Them – Bob Jacobson, *Bluefire Consulting*
  - It's Not Just About Computers: Rethinking Architecture for the Internet of Things – Pete Wilson, *Freescale Discovery Labs*

- Recovering and Recycling Out-of-Service Undersea Cables  
Sebastian Stephens, *The SubSea Group*
- Getting in Touch With Your Storage  
Tom Coughlin, *Coughlin Associates*
- Revisiting Mr. Cheswick: Fifty Facts for Finding Folks  
Ellen Cousins, *Primos Research*
- Notes of a Russian Serf: Working for Silicon Valley's Nouveau Nobility  
Lee Felsenstein, *Fonly Institute*

**10:30pm Late Night Snacks**

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**Thursday, April 16**

**8:15am The Changing Face of Embedded Applications** – John Wharton, *Applications Research*, Session Chair

- Eight-Bit  $\mu$ Cs and the Serendipity of Smart-Transducer Networks  
John Wharton, *Applications Research*
- Fun With Embedded Arduinos!  
Mark Dahmke, *Information Analytics*
- Autonomous Vehicles on the Horizon  
Brad Templeton, *Singularity University*

**9:45am Break**

**10:15am Capturing and Reconstructing Reality** – Tim Pozar, *Late Night Software*, Session Chair

- Bridging the Physical and Digital Worlds Through 3D Reconstruction  
Matt Bell, *Matterport*
- A Cheap, Homemade LIDAR Scanner  
Robert Cousins, *Primos Storage Technology*
- The Death of Mass Production: How 3D Scanning and Printing will Lead to Custom Everything – Adrian Perez, *The Braject*
- Unexpected 3D Scanning  
Nikolai Oreshkin, *Artec 3D Group*

**11:45am Lunch**

**1:30pm To Infinity and Beyond!** – John Wharton, *Applications Research*, Session Chair

- NASA Explorations of Space: Everything Old is New Again  
Dennis Wingo, *Skycorp*
- Evaluating Commercial Off-the-Shelf Computers in Low-Earth Orbit  
Kathleen Morse, *Yosemite Space*
- Design Strategies for Long-Duration Space Missions  
Frank Zegler, *United Launch Alliance*

**3:00pm Break**

**3:30pm Security and Privacy of the Internet of Things** – David S.H. Rosenthal, *Stanford University Libraries*, Session Chair

- Embedded Device Insecurity  
Jim Gettys, *Google, Inc.*
- Protecting Disk Firmware From Attacks  
Dave Anderson, *Seagate Technology LLC*
- Late Secure Launch  
Andy Glew, *MIPS Technologies*

**5:00pm Reception and Dinner**

**7:30pm Open Discussion: A *Rich* Asilomar Tradition** – Mary Eisenhart,  
*Mary Eisenhart Editorial Services, RAT Patrol*

*Ten-minute presentations on any subject you choose. Contact Mary Eisenhart immediately upon registration to request a time slot, first-come, first-served. Warning: Some time-slot shrinkage may occur as the witching hour draws nigh.*

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## Friday, April 17

**5:30am Pre-dawn tax filing marathon** (Self-organizing; bring your own stamps and excuses)

**8:15am Requests for Change: The Future of Security** – Dan Kaminsky, *White Ops, Inc.*,  
Session Chair

- Why Can't I Email My Doctor? How No DNSSEC Means No SEC  
Dan Kaminsky, *White Ops, Inc.*
- When Are We Going to Fix This Mess?  
Adam Cecchetti, *Deja Vu Security, LLC*

**9:30am Break**

**10:00am Looking Forward: Lessons Learned** – Bill Cheswick, *University of Pennsylvania*,  
Panel Moderator.

*Opening remarks followed by group discussion.*

- Internet and Computer Security: I Think We Are Going to Win  
Bill Cheswick, *University of Pennsylvania*
- The Future of Imagination: How Can We Ensure Creativity in an Increasingly  
Digital World? – Charlotte Lowe, *Writer and Poet*
- Rethinking Photovoltaic Energy Production  
Dave Newman, *Industry Gadfly*
- *Additional panel members may be announced*

**11:45am Closing Remarks** – Marianne Mueller, *Asilomar Microcomputer Workshop*, General Chair

**12:15pm Outdoor Barbecue Lunch** (weather permitting). Convene by the fire pit.

**2:30pm AMW41 Workshop Adjourns**

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### Program Committee



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

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

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

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† *Dialog from Criminal Minds, Season 8/Episode 22, aired May 15, 2013.*

*Mark your calendars for AMW42, May 4-6, 2016.*

*("May the Fourth? Be with us!")*

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