
The Thirty-Eighth Asilomar Microcomputer Workshop

April 25-27, 2012

(Motto: The Robots Are Coming! The Robots Are Coming!)

Wednesday, April 25

- 1:30pm** **Opening Remarks** – Marianne Mueller, *Asilomar Microcomputer Workshop*, General Chair
- 1:45pm** **Eponymous Michael Processor Session** – Ken Shoemaker, *Intel Corporation*, Chair
- Mobile Silicon
Michael Perry, *FirmWorks*
 - A Short Perspective on GPU Computing
Michael Shebanow, *nVidia*
 - Extreme Multicore: How Far Have We Really Come?
Pete “St. Michael” Wilson, *Kiva Design*
- 3:00pm** **Break**
- 3:30pm** **New Frontiers in Media and Communications** – Bob Wedig, *Wedig Consulting, Inc.*, Chair
- Paradigms in Digital Animation Education
Michael Z. Huber, *Cogswell College*
 - Deadlines, Self-Entitled Students, and Crazy Directors
Josh Hodges, *Cogswell College*
 - Experimentation and Learning with Software, Wireless Technology, and Amateur Radio: The SDR Ham Sandwich
James Miller, *FCC / Washington College of Law, American University*
- 5:00pm** **Reception and Dinner**
- 7:30pm** **Athematic Short Talks** – Bob Wedig, *Wedig Consulting, Inc.*, Timekeeper
- Will the *America Invents Act* Help or Hurt the Independent Inventor?
Kim Rubin, *Patent Agent*
 - Bring In the Nerds: Fighting SOPA/PIPA on Capitol Hill
Dan Kaminsky, *DKH, Inc.*
 - Growing Grammars: The Application of Bioinformatics and Genetic Programming to Structured Data Analysis
Mikhail Davidov, *Leviathan Security Group*
 - How to Second-Guess Your Oncologist
Allan Schiffman, *CommerceNet* †
 - Building a New Web-Scale Search Engine
Greg Lindahl, *blekko*
 - Morphing Data Acquisition Systems into Tablets: Why Imitation May Not Be the Best Form of Flattery
Ram Dhurjaty, *Dhurjaty Electronics Consulting, LLC.*
 - Is That an iPad in Your Pocket? – Rolling Out a Design for Flexible Displays
Peter C. Salmon, *Sagalio, Inc.*
 - Fun With 3-D Printers!
Sandy Clark, *University of Pennsylvania*

Thursday, April 26

- 8:15am Storage, Today and Beyond** – Brian A. Berg, *Berg Software Design*, Chair
- After the Floods: The Fragility and Potential of the Digital Storage Supply Chain
Tom Coughlin, *Coughlin Associates*
 - Economic Models of Long Term Data Storage
David S.H. Rosenthal, *LOCKSS Program*
 - Solid State Storage and High-Performance Magnetic Drives in the Data Center
Dave Anderson, *Seagate Technology*

9:45am Break

- 10:15am Systems & Security** – Dan Kaminsky, *DKH, Inc.*, Chair
- SOPA, Censorsweeper, and Other Deep-Tech Thoughts
Dan Kaminsky, *DKH, Inc.*
 - High-Frequency Trading Security
Adam Cecchetti, *Déjà Vu Security*
 - Being Devious: Using Uncertainty to Harden ATMs and Other Everyday Things
Michael J.J. Tiffany
 - Why Special Agent Johnny *Still* Can't Encrypt: Vulnerabilities in the Project 25
Radio Standard
Sandy Clark, *University of Pennsylvania*

12:00n Lunch

- 1:30pm It's Not Rocket Science. Oh, Wait, Yes It Is!** – John Wharton, *Applications Research*, Chair
- Tossed in Space: User Interfaces for Extreme Conditions
Bernard "Dov" Adelstein, *NASA Ames Research Center*
 - Infrastructure To Go: Terrestrial Applications of Space Technology
Dennis Wingo, *Greentrail Energy*
 - A Match Made in Heaven: Automotive Technology for Rocketships
Frank Zegler, *United Launch Alliance Corporation*

3:00pm Break

- 3:30pm Sea Changes: Oceangoing Robots and Self-Sailing Boats** –
David S.H. Rosenthal, *LOCKSS Program*, Chair
- Robots and Water and Whales, Oh My! – Building a Fleet of Oceangoing Robots
James Gosling, *Liquid Robotics*
 - The Road to Unmanned Surface Vessels
Ugo Conti, *Marine Advanced Research*
Isabella Conti, *Marine Advanced Research*
 - America's Cup Racing for Dummies: Stan Honey's Latest Video Magic ††
John Wharton, *Applications Research* (introducing *LiveLine* video clips)

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 27

- 5:30am Pre-Dawn MacGuffin Hunt** (*Self-organizing; Follow your own MacGuffin*)
- 8:15am Harnessing Innovation: Remembering John McCarthy, Dennis Ritchie, and Steve Jobs** – Bill Cheswick, *Looking*, Coordinator
(Visionaries are people, too. Friends and associates of John, Dennis, and Steve share personal stories of their work.)
- 8:45am Silicon for Brains: Neuromorphic Systems and Reconfigurable Pipelines** – Brian A. Berg, *Berg Software Design*, Chair
- Addressing the Semantic Gap in Neuromorphic Systems
Atif Hashmi, *University of Wisconsin-Madison*
 - Experiences in Integrating the DySER Hardware Accelerator into OpenSPARC
Karu Sankaralingam, *University of Wisconsin-Madison*
- 9:45am Break**
- 10:15am Inspiration? Necessity? Comfort? Ego? Greed? – What are the Real Mothers of Invention?** – Bill Cheswick, *Looking*, Moderator^{†††}
Opening remarks and group discussion. Panel members to include:
- Al Alcorn – *Pong*
 - Bob Frankston – *VisiCalc*
 - Dave Hampton – *Furby*
 - Stan Mazor – *Intel 4004*
- (Additional panel members to be announced)*
- 11:45am Closing Remarks** – Marianne Mueller, *Asilomar Microcomputer Workshop*, General Chair
- 12:15pm Outdoor Barbecue Lunch** (weather permitting)
- 1:45pm Workshop Adjourns**

Program Committee

Brian A. Berg	Craig Hughes	Tim Pozar
Bill Cheswick	Dan Kaminsky	David S.H. Rosenthal
Fred Clegg	Bruce Koball	Ken Shoemaker
Mary Eisenhart	Stan Mazor	Fred Terman
John Feland	Anne Mitchell	Bob Wedig
Janet Guns	Marianne Mueller	John Wharton
Dewayne Hendricks	Christine Peterson	Pierluigi Zappacosta

Look for an Iridium flare of magnitude -8 at 9:39:15pm Wednesday, 46° above due east.

An ISS overflight may be visible at 8:56pm Thursday, 18° above the northern horizon.

[†] Special kudos to returning AMW veteran Allan Schiffman. In 1984, for AMW #10, Allan stepped in as General Chair and almost single-handedly saved the Workshop.

^{††} Stan Honey sends his regrets; he's in Italy this week preparing for the America's Cup. Congratulations to Stan on his 3-D graphics technology being nominated for an Emmy.

^{†††} 2012 marks the 40th anniversary of both Pong and early production shipments of the 4004, and 15 years since proto-Furby's debut in the demo room at AMW #23. Good work, guys.