

COMMAND LINES

SOFTWARE, POWER & PERFORMANCE



march 18 - 19, 2017
computer history museum
mountain view, ca

LETTER from the organizers

Dear Command Lines Participants,

Command Lines marks the first time the Special Interest Group for Computing and Information in Society (SIGCIS) has held a meeting separate from the annual Society for the History of Technology conference (SHOT). It is also the first separate meeting of any SHOT SIG.

Command Lines was designed to engage new audiences and to include multiple disciplines. Our hope is to increase and enhance the membership of the SIGCIS, while continuing to move the organization into a more interdisciplinary future. While the SIGCIS will continue to have conferences in connection with SHOT's annual meeting, we hope that independent events like this will also become the norm, and we look forward to the help of SIGCIS membership in making this happen.

As SIGCIS membership grows, we have an opportunity and a civic responsibility to engage with historical questions in a way that engages wider publics and that speaks to present-day concerns. We hope that the Command Lines program reflects this, and that this event will be the start of a new and exciting chapter in SIGCIS history.

We are very glad you are here, and want to thank current members for their continued contributions while extending an enthusiastic welcome to our new members, featured speakers, and attendees. We hope that we will continue to have fruitful conversations across multiple fields after this conference is over.

In the meantime, thank you for coming to Command Lines, #SIGCIS2017. If you need anything or have questions, please feel free to ask or tweet to one of us (our names and handles are on page 3)!

Cordially,

The SIGCIS 2017 Organizing Committee

INFO

[organizers]

co-organizers

david c. brock, @dcbrock
marie hicks, @histoftech
laine nooney, @sierra_offline
andrew l. russell, @russellprof

conference assistant

kera allen

program and website design

laine nooney

and special thanks to CHM staff...

The organizers of Command Lines would like to thank the entire staff of the Computer History Museum for their invaluable assistance in making this meeting possible, most especially Poppy Haralson. Our particular thanks as well to Kirsten Tashev, John Hollar, George Holmes, Carina Sweet, Paula Jabloner, Jon Plutte, Marc Weber, Karen Kroslowitz, Dag Spicer, and Hansen Hsu.

[inclusivity and anti-harassment policy]

SIGCIS welcomes everyone, inclusive of gender identity and expression, sexual orientation, ability, age, appearance, race, nationality or religion. We are committed to fostering a positive, productive space for all participants, and are committed to listening more than speaking.

The event organizers will not tolerate harassment of conference participants in any form, in person or over social media. Conference participants violating these rules may be sanctioned or expelled from the conference without a refund at the discretion of the conference organizers.

For more resources on conference inclusivity policies, please visit the Ada Initiative's page at <http://bit.ly/confpolicy>.

[all-gender restroom]

The restroom closest to Boole and Lovelace has been set aside as an all gender restroom for the duration of Command Lines. Separate men's and women's restrooms can be found off the grand lobby by the Hahn Auditorium.

INFO

[wifi]

All guests are welcome to use the Museum's open wifi networks on the 1st and 2nd floors.

[social media]

We encourage participation on Twitter throughout the conference via our conference hashtag **#SIGCIS2017**. The SIGCIS Twitter handle is **@SIGCIS** and the Computer History Museum is **@ComputerHistory**. A list of all participant Twitter handles is available on page 23.

[overflow streaming and video recording]

Due to seating limitations in Boole, Command Lines' four single stream sessions (Sessions A, B, H and I) will be streamed to Lovelace so all attendees can watch the panels.

We do ask all presenters to sign a waiver permitting CHM to videotape their presentation, for posting on the CHM's Youtube channel. If you do not wish your presentation to be recorded, please let someone on the organizing committee know.

[food and coffee]

Command Lines offers light breakfast fare and lunch both Saturday and Sunday, and a reception Saturday night. **Attendees looking for food options within walking distance may reference our food map on page 20.** Local dinner options can be found on Castro Street, 2 miles away.

[trip to CHM archives]

Sunday morning, all attendees are welcome to rise early for a special tour of the Computer History Museum's off-site archives facility, the Shustek Center. Buses leave CHM promptly at 8:30AM and will return at 10:45AM, in time for the 11AM panels.

WEEKEND at a glance

saturday

	Boole	Lovelace
Session A 9:15 - 10:15AM	Why Software? A Keynote Conversation*	*overflow streaming
Session B 10:30 - 11:45AM	Power, Affect and Identity in Networked Interactions*	*overflow streaming
11:45 - 12:30PM	LUNCH	LUNCH
Session C 12:30 - 2:15PM	The Fiction of Neutral Tools	Digital Labor and its Discontents
Session D 2:30 - 4:15PM	The Social Construction of Software	Technologies of Centralization and Conformity
Session E 4:30 - 5:45PM	Margaret Hamilton and the Core Memory Weavers	Oral History in Software History

sunday

	Boole	Lovelace
Session F 11:00 - 12:45AM	Performing Identity and Embedding Bias	Visualization, Simulation and Presentation
12:45 - 1:30PM	LUNCH	LUNCH
Session G 1:30 - 3:15PM	"Better" Connections, "Best" Designs	Material Culture and Archival Practice
Session H 3:30 - 4:45PM	Maginalization, Opportunity and Prestige in Tech Work*	*overflow streaming
Session I 5:00 - 6:15PM	Internet History Panel*	*overflow streaming

SCHEDULE saturday [march 18]

REGISTRATION // 8:30 - 9:00AM

[Coffee and snacks provided]

WELCOME ADDRESS // 9:00 - 9:15AM // BOOLE

David C. Brock

Director, Center for Software History // Computer History Museum

John C. Hollar

President & Chief Executive Officer // Computer History Museum

Andrew L. Russell

SIGCIS Chair // Dean of the College of Arts and Sciences // SUNY Polytechnic Institute

SESSION A // 9:15 - 10:15AM // BOOLE

WHY SOFTWARE? a keynote conversation

Kavita Philip

Associate Professor, Department of History // University of California, Irvine

Tom Mullaney

Associate Professor, Department of History // Stanford University

Moderated by Patrick McCray

Professor, Department of History // University of California, Santa Barbara

SCHEDULE saturday [march 18]

SESSION B // 10:30 - 11:45AM // BOOLE

Power, Affect and Identity in Networked Interactions

Inauthentically Speaking: Speech Technology, Accent Bias and Digital Imperialism

Halcyon Lawrence

Marion L. Brittain Postdoctoral Fellow, School of Literature, Media, and Communication // Georgia Institute of Technology

Digital Apprehensions: Forensic Craft and the Policing of Child Exploitation Images

Mitali Thakor

Postdoctoral Fellow in the Sexualities Project // Northwestern University

Speaking Black, Speaking Back: Counternarrating the Erasure of African American 'Technigrationists'

Safiya Noble

Assistant Professor, Department of Information Studies // University of California, Los Angeles

Chaired by Marie Hicks

Assistant Professor of History, Lewis Department of the Humanities // Illinois Institute of Technology

BUFFET LUNCH // 11:45 - 12:30PM

SCHEDULE saturday [march 18]

SESSION C // 12:30 - 2:15PM

C1 // LOVELACE

Digital Labor and Its Discontents

Seeing Like an Algorithm: Machine Learning and the New Division of Apperceptive Labor

Thomas Krendl Gilbert

Ph.D. Student, Program in Machine Ethics and Epistemology // University of California, Berkeley

PEBDAC Error: Problem Exists Between Desk and Chair

Shari Wolk

Ph.D. Candidate, Department of Media, Culture, and Communication // New York University

Algorithm Maintainers' Dilemmas Resolved: When Trending Algorithm, Hidden Labor, and External Audits Caused a Great Search Portal Not to Fail

Yoehan Oh

Master's Student, History and Philosophy of Science // Seoul National University

'Digital Taylorism': Working with Process Management Systems in Comparison to Management Practices in Taylor's Scientific Management

Eva-Maria Raffetseder

Ph.D. Candidate, Post/Doc Lab Digital Media // Technical University Munich

Chaired by Nathan Ensmenger

Associate Professor, School of Informatics and Computing // Indiana University

C2 // BOOLE

The Fiction of Neutral Tools

git blame

Dylan Lederle-Ensign

Ph.D. Student, Computer Science // University of California, Santa Cruz

Performing Technological Utopianism with Constructionist Software, from LOGO to Scratch

Morgan G. Ames

Postdoctoral Researcher, Center for Science, Technology, Medicine and Society // University of California, Berkeley

Wireless Infrastructures and the Politics of Connectivity

Rory Solomon

Ph.D. Student, Department of Media, Culture, and Communication // New York University

Roomba in Revolt: Sociability and Securitization in the Internet of Things

Jeffrey Moro

Ph.D. Student, Department of English // University of Maryland, College Park

Chaired by Bill Aspray

Bill and Lewis Suit Professor of Information Technologies, School of Information // University of Texas at Austin

COFFEE BREAK // 2:15 - 2:30PM

SCHEDULE saturday [march 18]

SESSION D // 2:30 - 4:15PM

D1 // LOVELACE

Technologies of Centralization and Conformity

Programs of Control: Bureaucratic Hierarchies, Software Implementation, and Agendas of Policy and Power in the U.S. Federal Government, 1963-1983

Andrew Meade McGee

Visiting Assistant Professor of History, Department of History // Carnegie Mellon University

Hacking the System: Transgender Britons Confront the Ministry of Pensions, 1950-1970

Marie Hicks

Assistant Professor of History, Lewis Department of the Humanities // Illinois Institute of Technology

Scraping Glitches: Social Media and Marginalization

Madisson Whitman

Ph.D. Student, Department of Anthropology // Purdue University

Brokers, Queues, and Flows: Techniques of Financialization and Consolidation, 1985-2005

Michael Castelle

Ph.D. Candidate, Department of Sociology // University of Chicago

Chaired by David Alan Grier

Associate Professor, Elliott School of International Affairs // The George Washington University

D2 // BOOLE

The Social Construction of Software

Trouble in Cyborg Paradise: Johns Hopkins' First National Search for Applications of Personal Computing to Aid the Handicapped

Nabeel A. Siddiqui

Ph.D. Candidate, American Studies Program // College of William and Mary

Micro-serveurs and Micro-communities: Alternative Networks on the Margins of Minitel

Julien P. Mailland

Assistant Professor, The Media School // Indiana University

Kevin Driscoll

Assistant Professor, Department of Media Studies // University of Virginia

Excavating (Anti-)Piracy: Materiality of Intellectual Property Struggles in 1980s Commodore Software

James A. Hodges

Ph.D. Student, School of Communication and Information // Rutgers University, New Brunswick

Homebrew Game Development: On Illegitimacy in Software Production

Melaine Swalwell

Associate Professor, Screen and Media Department // Flinders University

Chaired by Jeffrey R. Yost

Associate Director, Charles Babbage Institute // University of Minnesota

COFFEE BREAK // 4:15 - 4:30PM

SCHEDULE saturday [march 18]

SESSION E // 4:30 - 5:45PM

E1 // LOVELACE

Margaret Hamilton & the Core Memory Weavers: The Women Who Put Man on the Moon

The software code for the Apollo rockets was stored in woven memory, handmade by operators who NASA engineers nicknamed LOLs—short for “Little Old Ladies.” Workshop participants will weave core memory and collaboratively build an electronic quilt that tells the story of women’s contribution to computing innovation

Daniela K. Rosner

Assistant Professor, Department of Human Centered Design and Engineering // University of Washington

Samantha Shorey

Ph.D. Candidate, Department of Communication // University of Washington

Rose Paquet Kinsley

Ph.D. Candidate, Information School // University of Washington

E2 // BOOLE

Tools, Techniques and Communities: Oral History in Software History

Laine Nooney

Assistant Professor, School of Literature, Media and Communication // Georgia Tech

Brian McCullough

Writer and Entrepreneur // Internet History Podcast // 2016 TED Resident

Melaine Swalwell

Associate Professor, Screen and Media Department // Flinders University

David C. Brock

Director, Center for Software History // Computer History Museum

Moderated by Deanna Day

Research Fellow // Chemical Heritage Foundation

RECEPTION // 6:00 - 8:00PM

[Revolution and Make Software Exhibitions Open]

CYBERSPACE HISTORY DINNER (AND TIMELINE DISCUSSION) // 7:30PM

[For Pre-registered Guests Only]

SCHEDULE sunday [march 19]

TRIP TO CHM ARCHIVES // 8:30 - 10:45AM

[Sunday morning, all attendees are welcome to rise early for a special tour of the Computer History Museum's off-site archives facility, the Shustek Center. Buses leave CHM promptly at 8:30AM and will return at 10:45AM, in time for the 11AM panels.]

SESSION F // 11:00AM - 12:45PM

F1 // LOVELACE

Visualization, Simulation, and Presentation

Graphics, Semiotics, and Governance: Jacques Bertin and Early Data Visualization

Alexander M. Campolo

Ph.D. Candidate, Department of Media, Culture, and Communication //
New York University

Touching You, Touching Me: Getting the Physics Right in EA FIFA

Carlin Wing

Assistant Professor, Media Studies // Scripps College

Command Performance: Slideware, Power, and Presentation Culture

Erica Robles-Anderson

Associate Professor, Department of Media, Culture, and Communication
// New York University

Visualizing data and augmenting cognition from John Tukey to ggplot2

Matthew L. Jones

James R. Barker Professor of Contemporary Civilization //
Columbia University

Chaired by Kera Allen

Ph.D. Student, School of History and Sociology // Georgia Tech

F2 // BOOLE

Performing Identity and Embedding Bias

Performing Gender on PLATO

Joy Marie Lisi Rankin

Assistant Professor, History, Philosophy, and Sociology of Science, Lyman Briggs College, and Social Relations and Policy at James Madison College
// Michigan State University

Programe su Futuro: Printed Media and Translation in Spanish and Latin American Computing Histories during the 1980s

Fabian Mauricio Prieto-Nanez

Ph.D. Candidate, Media and Communication // University of Illinois at Urbana- Champaign

Ignasi Meda-Calvet

Ph.D. Student, Centre for the History of Science (CEHIC) // Autonomous University of Barcelona

My Hello Barbie: Friendship is Scripted

Sarah A. Bell

Assistant Professor of Digital Media, Department of Humanities // Michigan Technological University

قلب: لغة برمجة and the Cultural Baggage of Computer Science

Ramsey Nasser

Independent Computer Scientist

Chaired by Sarah T. Roberts

Assistant Professor, Department of Information Studies // University of California, Los Angeles

BUFFET LUNCH // 12:45 - 1:30PM

SCHEDULE sunday [march 19]

SESSION G // 1:30PM - 3:15PM

G1 // LOVELACE

“Better” Connections, “Best” Designs

Social Relations and Routing Architectures: Historicizing the End-to-End Principle

Bradley R. Fidler

Researcher Track (Asst. III), Computer Science Department // University of California, Los Angeles

Light Industry, Soft Power

Ingrid Burrington

Freelance Writer and Coder // Data and Society

Constructing Performance: Territories of Optimization in Willis and Associates' CARLA Platform

Meredith Sattler

Ph.D. Student, Washington Alexandria Architecture Center // Virginia Tech

Raceways and Keyboard Trays: The Messy Integration of Personal Computers in American Office Design

Jennifer Kaufmann-Buhler

Assistant Professor of Design History, Department of Art and Design // Purdue University

Chaired by Andrew L. Russell

Dean of the College of Arts and Sciences // SUNY Polytechnic Institute

G2 // BOOLE

Material Culture and Archival Practice

Echos of Power: Collecting and Exhibiting Software at the Smithsonian Institution

Petrina Foti

Research Fellow, Center for Public History // Nazareth College of Rochester

Software Comes to Matter: An Episode in the Material History of Computational Design

Daniel Cardoso Llach

Assistant Professor, Computational Design School of Architecture // Carnegie Mellon University

Data Culture: Historical Methods for the Digital Age

Hallam Stevens

Associate Professor, History Programme and School of Biological Sciences // Nanyang Technological University

The IBM 1401's Place in History of Computing

Guy C. Fedorkow

System Architect // Juniper Networks

Chaired by David C. Brock

Director, Center for Software History // Computer History Museum

COFFEE BREAK // 3:15 - 3:30PM

SCHEDULE sunday [march 19]

SESSION H // 3:30PM - 4:45PM // BOOLE

Marginalization, Opportunity, and Prestige in Tech Work

Latinas On Line: Intersectional Identities at AT&T

Melissa Villa-Nicholas

Lecturer, Graduate School of Library & Information Sciences // University of Rhode Island

Away from the Doorsteps of the ICT Center: Youth, Technology, and Development in Global India

Sreela Sarkar

Assistant Professor, Department of Communication // Santa Clara University

Sekiko Yoshida: Abacus 'Software' in the Early U.S. Space Program

Eileen Clancy

MA Student, Liberal Studies and Digital Humanities // CUNY Graduate Center // Project Coordinator of Beyond Citation

Chaired by Laine Nooney

Assistant Professor, School of Literature, Media and Communication // Georgia Tech

COFFEE BREAK // 4:45 - 5:00PM

SESSION I // 5:00PM - 6:15PM // BOOLE

Networking History Roundtable: The Net is Eating Software

Kilnam Chon

Professor // KAIST and Keio University // Member of the Internet Hall of Fame // Chief Editor of internethistory.asia

Chen Yu

President & Cofounder, Yeepay.com // Interviewer for 10-part China Central Television documentary "The Internet Age" // Bestselling Author in China

Camille Paloque-Berges

Research Engineer // HT2S Lab // Conservatoire national des arts et métiers / National Conservatory of Arts and Crafts [Cnam] Paris, France

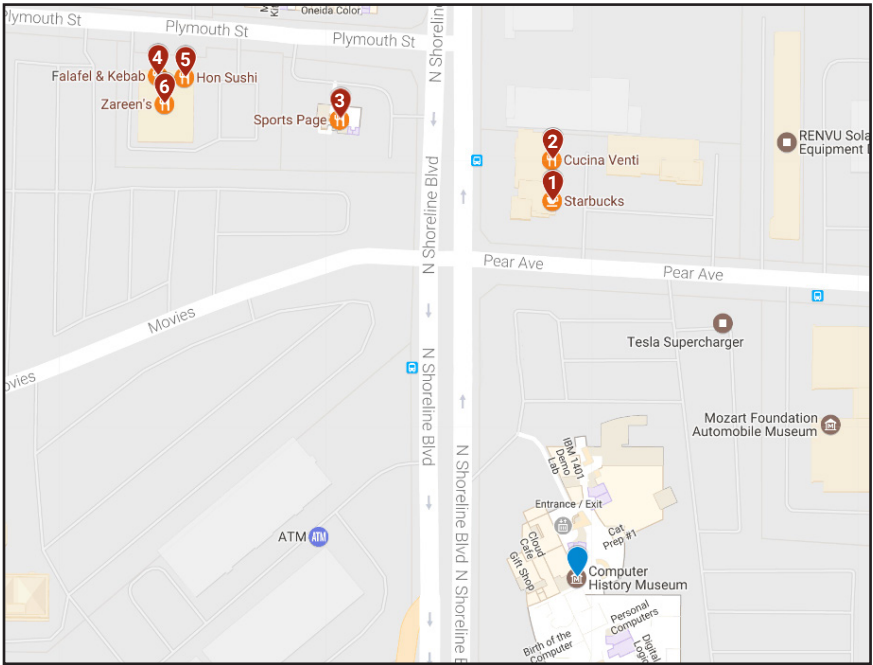
Moderated by Marc Weber

Curatorial Director // Computer History Museum's Internet History Program

IEEE MILESTONE PLAQUE UNVEILING AND MUSEUM EXHIBITIONS OPEN // 6:15 - 8:00PM

[A special event follows the conclusion of Command Lines, honoring Douglas Engelbart and the "Mother of All Demos." Computing legend Alan Kay and others from IEEE, CHM, and SRI will herald this achievement and talk about the importance of the pioneering software and practices presented at the Demo. The IEEE Milestone plaque unveiling will be in the downstairs area of the Museum, 6:45 - 7:45PM]

FOOD



1. Starbucks
 1380 Pear Ave
 Price: \$
 Coffee, snacks, light fare

2. Cucina Venti
 1390 Pear Ave
 Price: \$\$
 Pizza and pasta

3. Sports Page
 1431 Plymouth St
 Price: \$
 Burgers, beer, bar food

4. Falafel and Kebab
 1477 Plymouth St
 Price: \$
 Mediterranean

5. Hon Sushi
 1477 Plymouth St
 Price: \$
 Japanese

6. Zareen's
 1477 Plymouth
 Price: \$
 Pakistani and Indian

TWITTER roll call

Kera Allen @kejojo

Morgan G. Ames @morgangames

David C. Brock @dcbrock

Ingrid Burrington @lifewinning

Alex Campolo @AlexCampolo

Michael Castelle @mccastelle

Kilnam Chon @chonkn

Eileen Clancy @clancynewyork

Deanna Day @deannaday

Kevin Driscoll @kevindriscoll

Nathan Ensmenger @NEnsmenger

Guy C. Fedorkow @GFedorkow

Bradley R. Fidler @brfidler

Petrina Foti @PetrinaFoti

Marie Hicks @histoftech

James Hodges @jameshodges_

Matthew L. Jones @nescioquid

Halcyon M. Lawrence @Halcyon_L

Dylan Lederle-Ensign @dlederle

Daniel Cardoso Llach @dcardo

Julien Mailland @minitelresearch

Brian McCollough @brianmcc

Jeffrey Moro @jeffreymoro

Tom Mullaney @tsmullaney

Ramsey Nasser @ra

Safiya Umoja Noble @safiyanoble

Laine Nooney @Sierra_OffLine

Yoehan Oh @yoehanee

Joy Marie Lisi Rankin @JoyMLRankin

Sarah T. Roberts @ubiquity75

Andrew Russell @russellprof

Samantha Shorey @SamShorey

Nabeel A. Siddiqui @nabsiddiqui

Rory Solomon @rorys

Hallam Stevens @hallam_stevens

Melanie Swalwell @melswal

Mitali Thakor @mitalithakor

Madisson Whitman @madanthro



Command Lines brings together scholars, technologists and other independent practitioners invested in the critical analysis of software. Command Lines is the first SIGCIS conference hosted outside the annual meeting of the Society for the History of Technology, and is generously supported by the Computer History Museum's Center for Software History.

meetings.sigcis.org
www.sigcis.org
www.computerhistory.org

@SIGCIS
@ComputerHistory
#SIGCIS2017