MEASURE, MODEL, MIX

COMPUTER AS INSTRUMENT

october 29, 2017
9th annual sigcis conference
sheraton philadelphia society hill hotel
philadelphia, pa

LETTER from the organizers

Dear SIGCIS 2017 participants,

In 2009, the Special Interest Group for Computing, Information and Society (SIGCIS) had its first Sunday gathering at the end of the annual meeting of the Society for the History of Technology (SHOT). We continue that tradition today, but with one significant change: for the first time we've declared our SIGCIS gathering a "conference" rather than a "workshop." This change reflects the remarkable growth of the SIGCIS meeting as the historical study of computing grows increasingly relevant to disciplines beyond the history of technology. It was the committee's aim to signal to SIGCIS non-members that our annual event is open to all and functions as a traditional academic conference.

With growth comes change. Given the outstanding success of SIGCIS's recent *Command Lines* conference, organized in collaboration with the Computer History Museum, the Philadelphia organizing committee endeavored to carry forward as many lessons as possible from the *Command Lines* experience. To set obtainable goals for the Philadelphia meeting, we focused on three priorities: (1) leveraging our increased visibility to sustain the disciplinary breadth amongst conference participants; (2) refining communications with presenters, so as to deliver a more professionally organized conference experience; and (3) overhauling our "Works-in-Progress" sessions to provide more focused and rigorous feedback to our participants. While we believe we have succeeded in these areas, we are aware much remains to be done. Outreach, mentorship, diversity and inclusion remain continued priorities for future conferences, and we hope this can be an ongoing conversation with the SIGCIS membership.

We owe a debt of gratitude to our longstanding membership, for the time, devotion and service that have nurtured SIGCIS into its current form. And to those among you who are new, we hope you feel welcome today, and will consider participating in future events. If you need anything or have questions, please feel free to ask or tweet to one of the organizers!

Cordially,

The SIGCIS 2017 Organizing Committee

INFO

[organizers]

co-organizers
laine nooney, vice-chair of meetings
con díaz
stephanie dick
joy rankin
andrew l. russell, chair of sigcis

conference assistants
kera allen
nabeel siddiqui

program and website design
laine nooney

and special thanks to SHOT staff...
The organizers of SIGCIS 2017 would like to thank SHOT staff members Jan Korsten and Sonja Beekers for making our annual SIGCIS meeting possible. Additionally, we would extend our warm thanks to Eileen Clancy for her invaluable assistance in proofreading the program.

[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.

[social media]

We encourage participation on Twitter throughout the conference via our conference hashtag **#SIGCIS17**. The SIGCIS Twitter handle is **@SIGCIS**. A list of participant Twitter handles is available on page 19.

[gender-neutral restroom]

A single occupancy restroom is located on the third floor by the ice machine.

SUNDAY panels at a glance

	Ballroom B	Shippen	Reynolds
8:00AM - 9:00AM	Registration, Welcome, Awards		
9:00AM - 10:15AM	Keynote: Joanna Radin 'Digital Natives': Why Indigenous and Medical Histories Matter for the History of Computing Ballroom B		
Session A 10:30AM - 12:30PM	Remodeling Democracy: Codes and Software as Sites of Political Reimagining	Digital/Analog Dilemmas	Works-in-Progress (closed session)
12:30PM - 2:00PM	Lunch Break (Hamilton Room)		
Session B 2:00PM - 3:45PM	The Body Computational	Evidence, Archives, Equipment	Computational Inequalities
3:45PM - 4:00PM	Break		
Session C 4:00PM - 5:45PM	Tabula Plena: Tabular Thinking and Computational Reasoning for Life, Death, Finance, and Bureaucracy	Simulation, Automation, Communication	Computing as Conceptual and Material Practice

SCHEDULE

REGISTRATION // 8:15 - 8:45AM // Lobby Level

WELCOME + AWARDS // 8:45 - 9:00AM // Ballroom B

Laine Nooney
Vice-Chair of Meetings // Assistant Professor // New York University

Andrew L. Russell
SIGCIS Chair // Dean of the College of Arts and Sciences // SUNY Polytechnic Institute

2017 SIGCIS AWARDS + PRIZES

MIT Press Travel Award
Kera Allen, Nabeel Siddiqui

Michael S. Mahoney Travel Award
Jillian Foley, Evangelos Kotsioris, Andrew Lea, William Lockett, Kate Sim, Gili Vidan

Computer History Museum Travel Award
Elizabeth Petrick, Quinn DuPont

Mahoney Prize
Erica Robles-Anderson and Patrik Svensson
"'One Damn Slide After Another': PowerPoint at Every Occasion for Speech." *Computational Culture* (January 15, 2016).

Computer History Museum Prize
Elizabeth Petrick
Making Computers Accessible: Disability Rights and Digital Technology (Johns Hopkins University Press, 2015)

SCHEDULE

KEYNOTE // 9:00 - 10:15AM // Ballroom B

'DIGITAL NATIVES'
Why Indigenous and Medical Histories Matter for the History of Computing

Joanna Radin
Assistant Professor, Department of History // Yale University

Introduced by Stephanie Dick
Assistant Professor, History and Sociology of Science // University of Pennsylvania

EDITH/WITH Lightning Sessions // 11AM - 1PM

*Fellow SHOT Special Interest Groups EDITH [Exploring Diversity in Technology's History] and WITH [Women in Technological History] will be hosting Lightning Sessions in **Ballroom A1** from 11:00 AM to 1:00 PM.*

SIGCIS participants are welcome to join EDITH and WITH for informal, practical, helpful and fast discussions of in-the-works research projects that integrate the study of race, ethnicity, gender, sexuality, class, and disability –and the intersectionality of such categories–into the scholarship of the history of technology.

SESSION A // 10:30AM - 12:30PM

A1 // Ballroom B
Remodeling Democracy: Codes and Software as Sites of Political Reimagining

The Politics of Spreadsheets: Bringing VisiCalc to Tunisia
Kera Allen // Doctoral Candidate // Georgia Institute of Technology

Engineering a Platform: Constructing Interfaces, Users, Organizational Roles, and the Division of Labor
Shreeharsh Kelkar // Lecturer // University of California, Berkeley

Embedded Dangers: The History of the Year 2000 Problem
Dylan Mulvin // Postdoctoral Researcher // Microsoft Research New England

'Nothing in the Middle': Escrowed Encryption, Crypto Anarchy, and the Colonization of the Future, 1988-2001
Gili Vidan // Doctoral Candidate // Harvard University

Chaired by Janet Abbate
Associate Professor of Science and Technology in Society // Virginia Tech

SCHEDULE

Digital/Analog Dilemmas

Edges: Thinking Through the Digital from Inside Your Laser Printer
Matthew Kirschenbaum // Professor of English // University of Maryland

Thinking Carbon Through Silicon: The Digital Revolution as a Conceptual Model for Bright Green Futures
Anne Pasek // Doctoral Candidate // New York University

Instruments as Computer: A Dialogue with Handmade Algorithmic Sound
Ezra Teboul // Doctoral Candidate // Rensselaer Polytechnic Institute

Algorithms in the Age of the Color Laser Printer
Mingyi Yu // Doctoral Student // Harvard University

Chaired by Nathan Ensmenger
Associate Professor, School of Informatics and Computing // Indiana University

Works-in-Progress

Works-in-Progress is a closed session for SIGCIS participants receiving feedback on pre-circulated written work from conference organizers and SIGCIS volunteers.

Participants
Race in the Cybernetic Fold
William Lockett // Doctoral Candidate // New York University

Touching Safety: Anti-Rape Technologies and the Politics of Safety in US Higher Education
Kate Sim // Doctoral Candidate // Oxford Internet Institute

Technologies of Creativity: Psychology of Thinking and Computer-Based Education in the US and Soviet Union
Ekaterina Babintseva // Doctoral Candidate // University of Pennsylvania

Honey Trapped: Gender, Virtual Agents, and Information Gathering
Miriam Sweeney // Assistant Professor // University of Alabama

From Conveyor Lines to Robotic Systems: Flows, Linesickness, and Disruption in Laptop Production
Ling-Fei Lin // Postdoctoral Fellow // Nanyang Technological University

Jack and the Machine
David Schmüdde // Adjunct Professor // Stevens Institute of Technology

From Electronic Throats to Automatic Mouths: The Development of Software for Speech Synthesis
Sarah Bell // Assistant Professor // Michigan Tech University

Works-in-Progress is facilitated by:

Con Díaz
Assistant Professor, Department of Science and Technology Studies // University of California, Davis

Joy Marie Lisi Rankin
Assistant Professor, History, Philosophy, and Sociology of Science, and Social Relations and Policy // Michigan State University

SCHEDULE

LUNCH BREAK // 12:30 - 2:00PM

Lunch will be provided for SIGCIS participants in the Hamilton Room.

For those interested, the IEEE History Committee invites members of SIGCIS to join them for a free buffet lunch at 12:30 PM. This lunch meeting will be a discussion of what historians of technology and engineers can do together to make history of technology/engineering relevant amidst curricular changes in engineering.

SESSION B // 2:00 - 3:45PM

B1 // Ballroom B
The Body Computational

Z: Depth, Distance, and the Limits of Perception in Graphical Simulation
Jacob Gaboury // Assistant Professor // University of California, Berkeley

"The Total Patient": Keeve Brodman and the Medical Data Screen
Andrew Lea // Doctoral Candidate // University of Oxford

Curb Cuts and Computers: Arguing for Accessibility in the 1980s
Elizabeth Petrick // Assistant Professor // New Jersey Institute of Technology

Theorizing the Body Model for Histories of Computer Graphics
Alana Staiti // Doctoral Candidate // Cornell University

Chaired by Patrick McCray
Professor, Department of History // University of California, Santa Barbara

B2 // Shippen
Evidence, Archives, Equipment

Punch Cards and Communities: Evidence from Surviving Objects
Peggy Aldrich Kidwell // Curator of Mathematics // National Museum of American History, Smithsonian Institution

Exploring Software on Time-Sharing Vintage Computers at Living Computers: Museum and Labs
Cynde Moya // Collections Manager // Living Computers: Museum + Labs

Appraisal Talk in Web Archives
Ed Summers // Lead Developer and Doctoral Student // University of Maryland

Engineering a Research Agenda for the Study of a Computing Community: The ACM/IEEE Supercomputer Conference 1988-2018
Kevin Walsh // Systems Integration Engineer // University of California, San Diego

Chaired by Janet Toland
Senior Lecturer, School of Information Management // Victoria University of Wellington

SCHEDULE

B3 // Reynolds
Computational Inequalities

The Problem with Bias: Allocative Versus Representational Harms in Machine Learning
Solon Barocas (presenting author) // Assistant Professor // Cornell University
Co-authors: Kate Crawford (Microsoft Research), Aaron Shapiro (University of Pennsylvania), and Hanna Wallach (Microsoft Research)

Pokéquality and Public Space
Daisy Charles // MA Candidate // School of the Art Institute of Chicago

Encryption for Everyone?
Jillian Foley // Doctoral Student // University of Chicago

Digital Surveillance in the Hypermasculine Workplace
Karen Levy // Assistant Professor // Cornell University

Chaired by Sharon Lee Irish
Project Coordinator at the School of Information Sciences // University of Illinois in Urbana-Champaign

BREAK // 3:45 - 4:00PM

SESSION C // 4:00 - 5:45PM

C1 // Ballroom B
Tabula Plena: Tabular Thinking and Computational Reasoning for Life, Death, Finance, and Bureaucracy

We Don't Do Body Counts, But We Use Tables to Count Our Dead
Jacqueline Wernimont // Assistant Professor // Arizona State University

Ranks and Files: Secretarial Labor, Tabular Thinking, and the Bureaucratic Production of an International Mathematical Elite
Michael Barany // Postdoctoral Fellow // Dartmouth College

Probability Tables and Bombsight Optics in Building the Destruction Data Economy, 1942-1945
Theodora J. Dryer // CHSTM Dissertation Fellow // University of California, San Diego

Michael Milken's Spreedsheet: Finance, Computing, and Supra-Rationality in the Go-Go '80s
William Deringer // Assistant Professor // Massachusetts Institute of Technology

Moderated by David Brock
Director of the Center for Software History // Computer History Museum

SCHEDULE

C2 // Shippen
Simulation, Automation, Communication

Creative Inequality: Seymour Papert and the Thinking Machine
Morgan Ames // Research Fellow // University of California, Berkeley
Nabeel Siddiqui // Doctoral Candidate // College of William and Mary

"The Computer that Printed Our W*O*L*F"?: Representations of Computer Simulation and Modeling in the 1970s
Kevin T. Baker // Doctoral Candidate // Northwestern University

Computerized Delphi: From Rationality to Anonymity
Patrick Davison // Doctoral Candidate // New York University

Moderated by Bradley Fidler
Assistant Professor, Science and Technology Studies // Stevens Institute of Technology

C3 // Reynolds
Computing as Conceptual and Material Practice

Alice and Bob: A History of Cryptography's Most Famous Couple
Quinn DuPont (presenting author) // Assistant Professor // University of Washington
Co-author: Alana Cattapan (University of Saskatchewan)

"Only the Initiates Will Have the Secrets Revealed": Computational Chemists and the Openness of Scientific Software
Alexandre Hocquet // Professor // Université de Lorraine
Frederic Wieber // Assistant Professor // Université de Lorraine

Computerizing the Garage Workshop: CNC Machines as Consumer Goods
Katherine McFadden // Doctoral Candidate // University of South Carolina

Automating Soviet Design: The Case of ASPOS
Evangelos Kotsioris // Doctoral Candidate // Princeton University

Moderated by Jeffrey Yost
Associate Director, Charles Babbage Institute // University of Minnesota

Conference Afterparty // 6:00 - 9:00PM
818 S. 3rd Street, #3

Conference presenter Theodora J. Dryer (Panel C.1) generously invites local and visiting historians for autumnal hors d'oeuvres and drinks from 6:00 - 9:00PM just south of the conference venue. After 9:00PM there is a bar downstairs where guests can continue to convene. RSVPs appreciated: tdryer@ucsd.edu.

NOTES

NOTES

TWITTER roll call

Janet Abbate	**@JanetAbbateVT**	Patrick McCray	**@LeapingRobot**
Kera Allen	**@kejojo**	Cnyde Moya	**@cyndemoya**
Morgan Ames	**@morganames**	Laine Nooney	**@sierra_offline**
Kevin Baker	**@kevinbaker**	Anne Pasek	**@aepasek**
Michael Barany	**@mbarany**	Elizabeth Petrick	**@liz_petrick**
David Brock	**@dcbrock**	Joanna Radin	**@JoannaRadin**
Alana Cattapan	**@arcattapan**	Joy Rankin	**@JoyMLRankin**
Patrick Davison	**@patrickdavison**	Erica Robles-Anderson	
Stephanie Dick	**@mysdick**		**@fstflofscholars**
Theodora Dryer	**@jewell657**	Andrew Russell	**@RussellProf**
Quinn DuPont	**@quinndupont**	David Schmüdde	**@dschmudde**
Nathan Ensmenger	**@NEnsmenger**	Nabeel Siddiqui	**@nabsiddiqui**
Bradley Fidler	**@brfidler**	Kate Sim	**@katejsim**
Jillian Foley	**@j3foley**	Ed Summers	**@edsu**
Jacob Gaboury	**@jacobgaboury**	Patrik Svensson	**@patriksv**
Alexandre Hocquet	**@osvaldopiazzoll**	Miriam Sweeney	**@Miriam_Sweeney**
Sharon Irish	**@zumpang**	Ezra Teboul	**@redthunderaudio**
Matthew Kirschenbaum		Gili Vidan	**@gvidan**
	@mkirschenbaum	Jacqueline Wernimont	
Karen Levy	**@karen_ec_levy**		**@profwernimont**

SIGCIS

SIGCIS is the leading international group for historians with an interest in the history of information technology and its applications. Our primary activities include meetings held in connection with our parent society, the Society for the History of Technology, and a range of online resources hosted from our website.

meetings.sigcis.org
www.sigcis.org

@SIGCIS
#SIGCIS17