

# 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 d'áz  
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**

To Be Announced at Conference!

**Computer History Museum Prize**

To Be Announced at Conference!

# 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

---

## **A2 // Shippen 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*



---

## **A3 // Reynolds 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 Spreadsheet: 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**

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](mailto:tdryer@ucsd.edu).









# TWITTER roll call

---

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



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](http://meetings.sigcis.org)  
[www.sigcis.org](http://www.sigcis.org)

@SIGCIS  
#SIGCIS17