Lightning Introductions

Cyber Social Learning Systems Workshop 2

November 2-3, 2016

CCC

Computing Community Consortium

Catalyst

Mark Ackerman / University of Michigan

Computer-Supported Cooperative Work/Social Computing (HCI)

Expertise sharing, socio-technical design, crowd-sourcing, health

Can we create new forms of informal expertise and knowledge sharing?

SCHOOL OF INFORMATION
UNIVERSITY OF MICHIGAN

CSE COMPUTER SCIENCE AND ENGINEERING
UNIVERSITY OF MICHIGAN

CCC
Computing Community Consortium
Catalyst

Rahul C. Basole / Georgia Institute of Technology

Visualization + Analytics
for Complex Enterprise System
Intelligence

Georgia Tech School of Interactive Computing
College of Computing

http://entsci.gatech.edu

CCC
Computing Community Consortium
Catalyst

Britte Cheng / SRI International

Modeling and analysis of socio-technical systems in education to support:

- aggregation of theory and research,
- stakeholder interaction, and
- policy making.

SRI International®

SRI Education™

systemsineducation.org

CCC
Computing Community Consortium
Catalyst

Jennifer Clark / Georgia Tech

How do we equitably design, development, and deploy of an emerging class of cross-platform, service-integrated, technology products to enhance access and opportunity and/or create a platform for economic development in CITIES and COMMUNITIES.

Georgia Tech Center for Urban Innovation
Ivan Allen College of Liberal Arts

http://urbaninnovation.gatech.edu/people/person/3bb1699b-f85f-5617-b42a-cb42fe54005f

CCC
Computing Community Consortium
Catalyst

Lori Clarke / University of Massachusetts Amherst

Modeling and analysis of complex human-intensive systems, such as healthcare processes, in order to reduce errors and provide on-line, context-aware guidance.

http://laser.cs.umass.edu/people/clarke.html

LASER
Laboratory for Advanced Software Engineering Research

UMASSCS
SCHOOL OF COMPUTER SCIENCE

CCC
Computing Community Consortium
Catalyst

Mary Czerwinski / Microsoft Research

Affective computing, technology for behavior change
How do we design intelligent systems ethically, morally and empathically?

Microsoft Research/UW iSchool

http://www.microsoft.com/en-us/research/people/marycz/

Khari Douglas / CCC

CCC
Computing Community Consortium
Catalyst

How can we expand and grow the community interested in CSLS?

CCC
Computing Community Consortium
Catalyst

Ann Drobnis / CCC

How can we place CSLS research within national priorities?

CCC
Computing Community Consortium
Catalyst

http://cra.org/ccc/about/ccc-council-members/ann-drobnis/

CCC
Computing Community Consortium
Catalyst

Charles Friedman / University of Michigan

- Cyber-social Learning Systems (CSLS) as a goal to improve human society
- The extension of the CSLS concept to improve individual and population health: the *Learning Health System*
- The interdisciplinary science underlying achievement of high-functioning, stable and sustainable CSLS
- Establishing an academic department dedicated to this science
- Educating a new generation of “health infrastructuralists” who practice this interdisciplinary science

http://lhs.medicine.umich.edu/people/charles-p-friedman

CCC
Computing Community Consortium
Catalyst

William Griswold / University of California, San Diego

Ubiquitous Computing, Software Engineering, and Educational Technology

UCSD

http://cseweb.ucsd.edu/~wgg/

CCC
Computing Community Consortium
Catalyst

Peter Harsha / CRA

Understanding the intersection of CSLS and policy

http://cra.org/blog

CRA
Computing Research Association

CRA
Government Affairs
For America!

(Unofficial logo)

CCC
Computing Community Consortium
Catalyst

Brad Hesse / NIH

Two Wicked Problems:

1. **Connected Health: How do we use CSLS to create adaptive, supportive health systems to nudge healthy behaviors, close gaps, and prevent error?**
2. **Cancer Moonshot: How do we use CSLS to integrate knowledge and double our pace against a complex set of diseases?**

NIH

NATIONAL CANCER INSTITUTE

CCC
Computing Community Consortium
Catalyst

Deborah Johnson / University of Virginia

UNIVERSITY of VIRGINIA

Since the hope is that CSLS can be developed in a way that is "consistent with the values of our open, modern, democratic society", it seems important to consider what capacities individuals need to be effective citizens. My question is how CSLS can be developed in a way that enhances rather than diminishes human capacities for democratic citizenship?

Beth Linas / AAAS Fellow @ NSF

1. Epidemiology/public health
2. Personalized, smart, connected, valid and scalable technologies for health
3. Health data science

https://www.nsf.gov/od/oia/activities/aaasfellows/bios/linas.pdf

CCC
Computing Community Consortium
Catalyst

Gary Marchionini / UNC

UNC
SCHOOL OF INFORMATION
AND LIBRARY SCIENCE

What distinguishes individual human learning from social or systemic learning? How do technologies influence salient factors such as:
State (e.g., genetic/epigenetic, social/cultural)
Acquisition (e.g., rate, form)
Practice (e.g., feedback quality and rate)
Retention (e.g., knowledge management)
Transfer (e.g., policy, technical)
https://ils.unc.edu/~march/

CCC
Computing Community Consortium
Catalyst

John Mattison / Kaiser Permanente

KAISER PERMANENTE®

Beth Mynatt / CCC and Georgia Tech

CCC
Computing Community Consortium
Catalyst

How can cities collect, curate and provide useful data to support positive emergent behavior and continuous improvement by a **loosely coordinated set of actors**?

IPAT.GaTech.edu

Georgia Tech Institute for People and Technology

CCC
Computing Community Consortium
Catalyst

Lee Osterweil / University of Massachusetts

Definition and analysis of complex processes in critical domains such as healthcare to assure correctness, robustness, security

Focusing on process language design and implementation

UMASSCS
SCHOOL OF COMPUTER SCIENCE

LASER
Laboratory for Advanced Software Engineering Research

laser.cs.umass.edu/people/ljo.html

CCC
Computing Community Consortium
Catalyst

Sarun Paisarnsrisomsuk / University of Virginia

- Software Testing and Verification
  - How to perform testing and verification on a system that is learning/evolving over time
- Human-Machine Teaming
  - Machine-Machine Teaming

UNIVERSITY of VIRGINIA
SCHOOL OF ENGINEERING

http://www.cs.virginia.edu/~sp4et/

CCC
Computing Community Consortium
Catalyst

Kara Pepe / Stevens Institute of Technology

What are key tradeoffs that the resolution of which will lead to tipping points to enable dramatic change in the healthcare enterprise?

STEVENS
INSTITUTE of TECHNOLOGY
School of Systems & Enterprises

CENTER FOR
COMPLEX SYSTEMS
& ENTERPRISES

CCC
Computing Community Consortium
Catalyst

Don Peurach/ University of Michigan

UNIVERSITY OF MICHIGAN

Have can principles of CSLS be leveraged as a resource for the large scale improvement of public education?

Carolyn Rose / CMU

Carnegie Mellon

How can we use technology to model interaction processes to enable assessment and support leading to human impact across domains?

William Rouse / Stevens Institute of Technology

Research Interests:
Human decision making and problem solving
Strategy formation, evaluation & implementation
Analysis, design & evaluation of information systems
Fundamental change of organizational systems

STEVENS
INSTITUTE of TECHNOLOGY
THE INNOVATION UNIVERSITY®

www.stevens.edu/ccse

www.BillRouse.com

CCC
Computing Community Consortium
Catalyst

Josh Rubin / University of Michigan

How do we synergistically bring together diverse stakeholders and seemingly divergent disciplines to invent and grow a novel science of CSLS that will reshape our future as a foundation for innovatively and collaboratively addressing society's greatest challenges?

DEPARTMENT OF LEARNING HEALTH SCIENCES
UNIVERSITY OF MICHIGAN

http://lhs.medicine.umich.edu/people/joshua-c-rubin

Samuel V. Scarpino / University of Vermont

How do intrinsic limits to predictability affect our ability to learn from and forecast sociobiological systems?

scarpino.github.io

Ben Shneiderman / University of Maryland

Governance:

* resolve differences,
* motivate contributions,
* reward collaboration,
* encourage leaders,
* cope with malicious behavior

Univ of Maryland/HCIL

www.cs.umd.edu/~ben

George Siemens / UT Arlington

Interlab

What does it mean to be human in a digital age?

In terms of:

1. Work
2. Learning
3. Our knowledge systems
4. Equity and fairness in society

http://linkresearchlab.org/
http://interlab.me/

CCC
Computing Community Consortium
Catalyst

Jonathan C. Silverstein / Kanter Health Foundation

Large scale collection of human phenotypic data across virtual organizations and its innovative use to improve human health

Kanter Health

ComputationDoc.com

CCC
Computing Community Consortium
Catalyst

David Socha / UW

Wide-field ethnography:
How to enable contextually rich study of collaboration in complex naturalistic physical, social, economic, cyber systems (PSECs)?

UNIVERSITY of WASHINGTON | BOTHELL

https://faculty.washington.edu/socha/

John Stamper / CMU

Human-Computer Interaction Institute

Carnegie Mellon

How do collect CSLS data in ways that are useful for research and validation of methods?

http://dev.stamper.org

CCC
Computing Community Consortium
Catalyst

Bill Stead / Vanderbilt University Medical Center

Aspirations:

- **To understand the molecular basis of health & well-being and shift equilibrium toward repair & resilience**
- **To model the individual as a complex adaptive system and help them achieve their potential**
- **To understand why populations differ and improve health equity**

CLCS Question:

- **How do we achieve an 18 month doubling rate for health outcomes or health care quality?**

VANDERBILT UNIVERSITY MEDICAL CENTER

https://medschool.vanderbilt.edu/dbmi/person/william-w-stead-md

Kevin Sullivan / University of Virginia

UNIVERSITY of VIRGINIA

- How might we drive emergence of advanced computing for ultra-large-scale societal systems?
- How should we integrate computing with the human and social elements of complex systems?
- How can we foster, predict, analyze, and constrain emergent behavior in such systems?

KevinJSullivan.com

CCC
Computing Community Consortium
Catalyst

Stephanie Teasley / University of Michigan

Learning Analytics: How can we personalize learning so that every student can be successful?

SCHOOL OF INFORMATION
UNIVERSITY OF MICHIGAN

https://www.si.umich.edu/node/9898

CCC
Computing Community Consortium
Catalyst

Doug Van Houweling / University of Michigan

SCHOOL OF INFORMATION
UNIVERSITY OF MICHIGAN

Cyber-social infrastructure for building scalable learning systems incorporating data flows.

https://www.si.umich.edu/node/9972

CCC
Computing Community Consortium
Catalyst

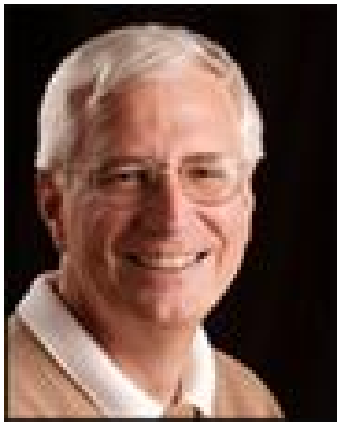
Howard Wactlar / Carnegie Mellon University

- Cyber-human systems for augmented cognition and cognitive prosthetics
- Will reliance on machine decision making ultimately diminish human problem-solving capability for the general population?

Carnegie Mellon University

Personal Url

Skip Walter / CoPresence Inc



Visual Analytics:
How does collaboration lead to learning and productivity in Physical Social Economic Cyber Systems (PSECs)?

CoPresence

https://skipwalter.net/

Alyssa Wise / NYU

Interest: Creating and supporting the use of discourse and interaction analytics that improve individual and collective activity in social learning contexts

Question: How do we balance increasingly personalized online environments with opportunities for meaningful collective engagement?

NYU | STEINHARDT

steinhardt.nyu.edu/faculty/Alyssa_Wise

CCC
Computing Community Consortium
Catalyst

Helen Wright / CCC

How can we expand and grow the community interested in CSLS?

CCC
Computing Community Consortium
Catalyst

http://cra.org/about/staff/#helen

CCC
Computing Community Consortium
Catalyst