

Lightning Introductions

**Promoting Strategic Research on Inclusive Access
to Rich Online Content and Services**

September 24- 25, 2016



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Catalyst

Holly Anderson / Dept. of Education



Standardization of alt text



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@SinaBahram / Prime Access Consulting + NCSU



How can we use universal design to weave physical and digital technologies into strategies for effortless inclusion?

Areas of interest: multimodal approaches for eyes-free exploration of spatial information, creating immersive environments that are accessible and maintain the original aesthetic of the experience, crafting accessibility as a natural outcome of thoughtful design

PRIME ACCESS
CONSULTING, INC.



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Robert Baker / Social Security Administration



How can we encourage the design of inclusive customer experiences that enable disabled users to fully access content and services across multiple devices from start-to-finish .



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Antranig Basman / Fluid Project



Academia or
Industry Logo

I believe that the needs of disabled users, other minorities, or indeed any individuals at all can never be met whilst software is still in existence
- so I would like to build plans for it to be abolished



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@jeffbigham / CMU



Research is published as PDFs:

- almost always inaccessible
- incredibly painful to make accessible
- incredibly difficult to make good tools for



And, crowdsourcing accessibility, cloud-based access technologies, text simplification, real-time captioning, ...
jeffreybigham.com

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Human-
Computer
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Language
Technologies
Institute



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Robert Bohn / NIST



How can cloud computing be used to develop new and creative solutions in accessibility?



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Ruth Brannon / HHS



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Colin Clark / OCAD University



How can we design software that engages our users' own creativity, allowing them to adapt, modify, and even redesign it?



Henry Claypool / ex AAPD

Getting the disability/accessibility community engaged in dialogue about data-driven innovation



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Scott Cory / Administration for Community Living



How can we bring people who need and use accessible technology with the people who develop tools to create and present content and services -- and to ensure that accessible content and services are just as rich for people using assistive technology as for unassisted users?



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Jill Crisman / IARPA, Incisive Analysis Office



Program Manager of the Aladdin Video and Finder Programs

- <http://www.iarpa.gov/index.php/research-programs/aladdin-video>
- <http://www.iarpa.gov/index.php/research-programs/finder>



Office of the Director of National Intelligence

I A R P A
BE THE FUTURE



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Khari Douglas / CCC



How do we enable the computer science research community to provide online access for all consumers?



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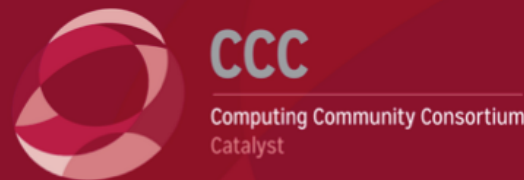
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Ann Drobnis / CCC

What are the ways to educate CS students in techniques to include all



Boris Goldowsky / CAST



CAST

Until learning has no limits

How can we intelligently combine information in different modalities, so that users can flexibly choose how to access and interact with it?



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Mark Hakkinen / Educational Testing Service



Moving beyond the GUI as the *non-visual visualization* model for Screen Readers:
Can we present rich interactions and simulations in language natural to the task, rather than viewing everything through the lens of a limited widget set?



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Peter Harsha / CRA

What does a research agenda in inclusive access look like and how can we convey it to policymakers?



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Computing Research
Association



CRA

Government Affairs
For America!

(Unofficial logo)



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Amy Hurst / UMBC



UMBC
AN HONORS UNIVERSITY IN MARYLAND

How do we balance privacy and data quality in large research datasets that contain personal information?



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Shaun Kane / University of Colorado



How can we develop reliable techniques for converting rich social media and educational content into accessible forms?

shaun.kane@colorado.edu

<http://shaunkane.info>



University of Colorado **Boulder**



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Deborah Kaplan / HHS

I am sceptical as to the accuracy of machine interpretations of the meaning of images, as an example. How can we use technology to better and more readily bring in quick human intelligence interventions to provide context and meaning?



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Stephen Kell / University of Cambridge



What kinds of infrastructure, tools or processes might help make software more configurable "by default"?



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Raja Kushalnagar / Rochester Institute of Technology



R·I·T

NATIONAL TECHNICAL
INSTITUTE FOR THE DEAF

How do we support viewers in seamlessly combining available tools for caption/description generation with a custom representation of the accessible multimedia?



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Richard Ladner / University of Washington



How can the new automatic image description algorithms be evaluated in terms of their accessibility value.

Examples include: Microsoft (Max-Ent), Baidu (RNN), Berkeley (LSTM), Toronto (LSTM), Toronto (Log-Bilinear), Google (LSTM), and Stanford (Recursive NN).



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Clayton Lewis / University of Colorado



Separating presentation from content



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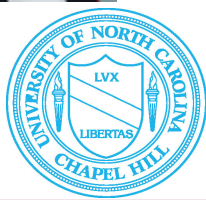
Ming C. Lin / Univ. of North Carolina at Chapel Hill



How can novel technology, including computer generated sound effects, tactile feedback, AR/VR devices, robots/AI algorithms, and visual data analysis, be used to enhance the quality of life for people with impairments and social-economic disadvantages, providing them better physical+digital access and *mobility*?



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL



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Sue-Ann Ma / DIAGRAM Center, Benetech



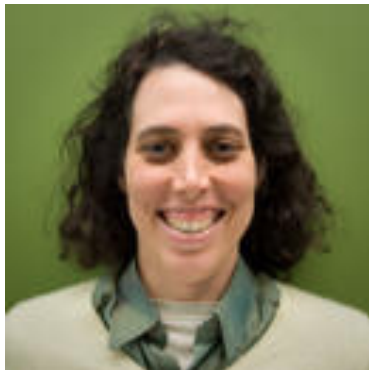
- How can we extract key information embedded in visual content in a more efficient way?
- How do we incorporate and present multiple modalities so that learning and access caters to individual preferences?



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Jennifer Mankoff / CMU



HCII Institute, Carnegie Mellon

Many projects over the last 2 decades

Current emphasis: role of fabrication technology in accessibility

How can we enhance access to digital content through the use of DIY and tangible technologies?

Also head of SIGCHI Accessibility Community

Carnegie Mellon



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Jamal Mazrui / Federal Communications Commission



Federal
Communications
Commission

How can we enable more people with disabilities to become makers, as well as consumers, of interactive, rich content?

How might we advance the development of easy, consistent, verbal syntax for controlling apps and creating content across multiple devices via intelligent agents that respond to voice dictation?



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Margaret Mitchell / MSR



Microsoft
Research

Interested in discussing language generation *beyond* vision-to-language: **data-to-language** can be useful for many more people with different complex communication needs, including:

- Cerebral Palsy
- Autism
- ALS

Contact: memitc@microsoft.com



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Brad Myers / CMU



How can we apply the principles we are developing to improve universal access (to make it better for everyone)?

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Beth Mynatt / Georgia Tech

How to balance
making information accessible and
making information usable for collaboration.



Gary O'Brien / IARPA

SETA Contractor for the Finder Program

- <http://www.iarpa.gov/index.php/research-programs/finder>



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Bill Peterson / Dept. of Homeland Security



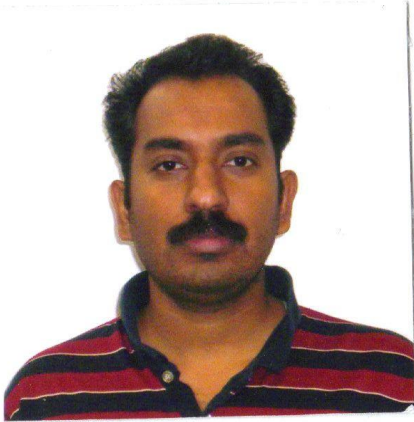
Developing strategic solutions that will bring a shared understanding and inclusive experiences for people with disabilities across the Federal landscape and those customers we serve.



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Ram Ramachandran / IBM



Academia or
Industry Logo

Mobile technologies and IoT help create more
accessible environment



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James Rehg / Georgia Tech

How can automatic analysis of video and other multimedia content enable content-adaptive rendering which facilitates improved access



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Bill Schutz / HHS



Importance of Interface Design that is both accessible and usable by people with all types and severity of disability



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Luz Rello / CMU



How to bring research outcomes on specific learning disorders (early detection and intervention) to schools and institutions.

<http://www.luzrelo.com/>

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Mike Shebanek / Yahoo



How do we encourage a worldwide scientific study of online users with disabilities to better understand how mainstream and Assistive Technologies are being used.

YAHOO!



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Ben Shneiderman / U Maryland



How to encourage our faculty colleagues and students to pursue research on these issues.



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Sylvia Spengler / NSF

How do we assess understanding of textual content by language and learning challenged individuals and use that feedback in design and development?



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Ed Summers / SAS



How can we create technology that allows content developers to deliver rich content that automatically adapts to the needs of each individual and leverages the capabilities of their device?



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John Tschida / HHS



U.S Department
of Health and
Human Services



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Gregg Vanderheiden / University of Wisconsin



TRACE CENTER
UNIVERSITY OF WISCONSIN-MADISON

Are we looking at Accessibility and Inclusion
with 20th Century eyes.

Should we be looking at access
in an entirely new way going forward?

Better, more effective,
and less expensive?



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Christian Vogler / Gallaudet University



How can we make real-time communications inclusive and accessible on the web for all pages and content?



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Bruce Walker / Georgia Institute of Technology



How can we make (electronic)
games and entertainment activities
that are accessible and fun, for a
universal audience?



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Jason White / Educational Testing Service



How can we design software architectures that take best advantage of the semantics of information and interaction to improve accessibility, while fostering software reliability?



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Helen Wright / CCC



How do we enable the
computer science research
community to provide
online access for all
consumers?



Mohammed Yousuf / DOT



U.S. Department of Transportation
Federal Highway Administration

Extracting of text and context for
indoor/outdoor wayfinding and navigation
and
development of accessible communication
formats and user interfaces
for inclusive and accessible transportation
next-generation applications



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Changxi Zheng / Columbia University



- Beyond text, audio and video, what other types of online contents are important?
- Can we personalize the access interfaces?
- How can we bring people in other fields such as mechanical engineering and material science to develop new interfaces for access online content?



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