# Agenda

## Tactile Graphics in Education and CareersOctober 11–12, 2018National Federation of the Blind Jernigan Institute

**Thursday, October 11, 2018**

8:15–8:20 AM **Welcome and Introductions**

Lou Ann Blake, deputy executive director, National Federation of the Blind Jernigan Institute

8:20–8:45 AM **Theme Keynote**

Mark Riccobono, President, National Federation of the Blind

8:45–10:00 AM **Teaching and Learning Tactile Literacy**

Presenters: Kathleen Michaelson, TVI, Braille specialist, Florida School for the Deaf and Blind; Jenoise Callahan, art instructor, Colorado Center for the Blind

10:00–10:15 AM **Break**

10:15–11:15 AM **Making the Universe Accessible: Tools to Make Astronomy and Astrophysics More Accessible to People Who Are Blind or Visually Impaired**

Presenter: Henry Winter, astrophysicist, Smithsonian Astrophysical Observatory

11:15–11:30 AM **Break**

11:30 AM–12:30 PM **Using Robots to Create Tactile Learning Experiences**

Presenters: Shaun Kane, associate professor; Darren Guiness, PhD student; and Annika Muehlbradt, PhD student—University of Colorado Boulder

12:30–1:45 PM **Lunch and Keynote**

Craig Meador, President, American Printing House

1:45–2:45 PM **Breakout Session I**

1. **Tactile Representation and Production Methods Part 1**

Location: Fourth Floor Conference Room

Presenters: Naomi Rosenberg, senior designer; BJ Epstein, project manager; Frank Welte, accessible media specialist; and Caitlin O’Malior, alternate media specialist—San Francisco Lighthouse for the Blind and Visually Impaired; Ann Cunningham, artist and tactile art teacher, Colorado Center for the Blind; Abigale Stangl, PhD candidate, University of Colorado Boulder

1. **Touching the Future: Graphiti**

Location: Pimlico Conference Room, 4th Floor

Presenters: Ken Perry, software engineer, American Printing House for the Blind; Venkatesh Chari, president and CTO, Orbit Research; Jeanette Wicker, core curriculum project leader, American Printing House for the Blind

1. **Sensables: 3D Printed Models for Visually Impaired Students**

Location: Round Conference Room, 4th Floor

Presenter: Lei Shi, PhD candidate, Cornell Tech

1. **Addressing Diverse Learner Needs through Multimodal Access**

Location: Zaborowski Conference Room, 4th Floor

Presenters: Sue-Ann Ma, project director, DIAGRAM Center at Benetech; Nicole Johnson, PhD student, University of Colorado Boulder

2:45–3:00 PM **Break**

3:00–4:00 PM **Breakout Session II**

1. **Tactile Representation and Production Methods Part 2**

Location: Fourth Floor Conference Room

Presenters: Naomi Rosenberg, senior designer; BJ Epstein, project manager; Frank Welte, accessible media specialist; and Caitlin O’Malior, alternate media Specialist—San Francisco Lighthouse for the Blind and Visually Impaired; Ann Cunningham, artist and tactile art teacher, Colorado Center for the Blind; Abigale Stangl, PhD candidate, University of Colorado Boulder

1. **Tactile Images for Concept Building and Spatial Awareness**

Location: Newell Perry Conference Room, 3rd Floor

Presenter: Dorine In 't Veld, Dedicon, the Netherlands

1. **Bringing Digital Graphics to Life: The Promise of Multimodal Touchscreens—Progress and Future Work**

Location: Zaborowski Conference Room, 4th Floor

Presenters: Jenna Gorlewicz, assistant professor, Saint Louis University; Corrine Mueller, co-founder, Vital; Hayden Dahmm, sustainable development data analyst, United Nations Sustainable Development Solutions Network

1. **Interactive Tactile Graphics in Pre-K–12 Education**

Location: Pimlico Conference Room, 4th Floor

Presenters: Michael Coleman, vice president; Michael Rosen, vice president; and Joshua Coffee, president and CEO—E.A.S.Y. Tactile Graphics

1. **State of the Art Technologies for Producing Tactile Materials: A Hands-On Experience**

Location: Round Conference Room, 4th Floor

Presenter: Robert Jaquiss, sales engineer, American Thermoform Corporation

4:00–4:15 PM **Break**

4:15–5:15 PM **Breakout Session III**

1. **The Read Read—Literacy for All—Equality by Design**

Location: Zaborowski Conference Room, 4th Floor

Presenter: Alex Tavares, inventor, Harvard Innovation Lab/T-Var EdTech

1. **Innovation in Tactile Graphics Production: UV Printing Could Replace Vacuum Forming**

Location: Fourth Floor Conference Room

Presenter: Steve Landau, president and director of research, Touch Graphics, Inc.

1. **Music Touch from Dancing Dots**

Location: Pimlico Conference Room, 4th Floor

Presenter: William McCann, founder and president, Dancing Dots Braille Music Technology, L.P.

1. **Tactile Outline Drawings: Examples, Theories, and the Limits of Our Understanding**

Location: NFB of Utah Auditorium, 4th Floor

Presenter: John M. Kennedy, University Professor Emeritus, University of Toronto

**Friday, October 12, 2018**

8:30–9:30 AM **Breakout Session IV**

1. **3D Printing for Blind and Low Vision Students: How to Do It**

Location: Zaborowski Conference Room, 4th Floor

Presenters: Michael Cheverie, educational specialist, visual impairments, Los Angeles Unified School District; Neal McKenzie, assistive technology specialist, Sonoma County Office of Education

1. **Tactile Maps Automated Production**

Location: Fourth Floor Conference Room

Presenters: Naomi Rosenberg, senior designer; and Frank Welte, accessible media specialist—San Francisco Lighthouse for the Blind and Visually Impaired

1. **Making Tactile Templates Talk: Let Me Count the Ways**

Location: Pimlico Conference Room, 4th Floor

Presenter: Michael Kolitsky, PhD, nextgenEmedia, LLC

1. **National Federation of the Blind Tactile Art and Tactile Graphics Symposia Report**

Location: Newell Perry Conference Room, 3rd Floor

Presenters: Abigale Stangl, PhD candidate, University of Colorado Boulder; Ann Cunningham, artist and tactile art teacher, Colorado Center for the Blind

9:30–9:45 AM **Break**

9:45–10:45 AM **Breakout Session V**

1. **A Review of Tactile Graphics Repositories**

Location: Round Conference Room, 4th Floor

Presenter: Robert Jaquiss, sales engineer, American Thermoform Corporation

1. **Tactile Graphics on a Shoestring. . ., and Possibly Using One**

Location: Newell Perry Conference Room, 3rd Floor

Presenter: Amy Mason, access technology specialist, San Francisco Lighthouse for the Blind and Visually Impaired

1. **Supporting Pre-Algebra Students with Visual Impairments to Increase Their Proficiency Obtaining Information from Graphics**

Location: Fourth Floor Conference Room

Presenter: L. Penny Rosenblum, research professor, University of Arizona

1. **The Right Touch: The Importance of Good Design**

Location: Zaborowski Conference Room, 4th Floor

Presenter: Aquinas Pather, transcription/tactile graphics design specialist, T-Base Communications

1. **The Role of Tactile Feedback from a Programmable Tactile Display in Orientation and Mobility**

Location: Pimlico Conference Room, 4th Floor

Presenter: Luca Brayda, researcher, Istituto Italiano Di Tecnologia

10:45–11:00 AM **Break**

11:00 AM–12:00 PM **Breakout Session VI**

1. **Tactile Graphs for Teaching the Principles of Scientific Literacy in Introductory Psychology Courses**

Location: Zaborowski Conference Room, 4th Floor

Presenters: Raechel Soicher, graduate student, Oregon State University; Arielle Silverman, disabilities research and training consultant, Disability Wisdom Consulting

1. **Tactile Graphics the Easy Way**

Location: Fourth Floor Conference Room

Presenters: John Gardner, PhD, co-founder and president; and Carolyn Gardner, co-founder and corporate secretary—ViewPlus

1. **Designing an Accessible Traveling Exhibit: A Case Study Using 3D Printed Replicas of Stone Tools from Archaeological Sites**

Location: Newell Perry Conference Room, 3rd Floor

Presenters: Cheryl Fogle-Hatch, archaeologist and independent museum professional; Donald Winiecki, professor, Boise State University; Joe Nicoli, cultural heritage specialist, Direct Dimensions, Inc.

1. **Agenda for Inclusive Media Production**

Location: Pimlico Conference Room, Fourth Floor

Presenters: Abigale Stangl, PhD candidate, University of Colorado Boulder; Ann Cunningham, artist and tactile art teacher, Colorado Center for the Blind; Tom Yeh, assistant professor, University of Colorado Boulder

**5.** **Achieving Quantity, Variety, and Responsiveness, as well as, Quality**

Location: Round Conference Room, 4th Floor

Presenters: Dianne Pawluk, professor, Virginia Commonwealth University; Tyler Ferro, PhD student, Virginia Commonwealth University

12:00–1:15 PM **Lunch and Keynote**

Alexy Karenowska, Director of Technology, The Institute for Digital Archaeology

1:15–2:30 PM **The Creation and Use of 3D Printed Materials in the Educational Setting**

Presenters: Michael Cheverie, educational specialist, visual impairments, Los Angeles Unified School District; Neal McKenzie, assistive technology specialist, Sonoma County Office of Education

2:30–2:45 PM **Break**

2:45–3:45 PM **Updates on Developing a Braille Graphic Tablet for the Blind**

Presenter: Brian MacDonald, president, National Braille Press

3:45–4:00 PM **Break**

4:00–5:00 PM **Literacy of Tactile Graphics for Students with Visual Impairments in High School Mathematics Courses: What, Why, and How?**

Presenter: Ashley Nashleanas, PhD, Iowa State University

5:00–5:30 PM **Closing Remarks and Networking**

# Directions to Workshop Locations:

**Betsy Zaborowski and Pimlico Conference Rooms**: Turn left when exiting Members Hall. Take first hall on left and proceed to end of hall where NFB staff will direct you.

**Fourth Floor Conference**: Turn left when exiting Members Hall. Proceed through lunchroom to hallway where NFB staff will direct you.

**NFB of Utah Auditorium**: Turn left when exiting Members Hall and proceed down hallway to auditorium on your right.

**Round Conference Room**: Turn left when exiting Members Hall. Take first hall on left and proceed to end of hall. Make a left and proceed to end of hall, where NFB staff will direct you.

**Newell Perry Conference Room**: Exit Members Hall and return to fourth floor elevators. Take elevator to third floor and proceed through library doors, where NFB staff will direct you.