



Microsoft Research

Faculty Summit

2019 | The future of work

Conference guide



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Welcome

Dear Colleagues,

Welcome to the 2019 Microsoft Research Faculty Summit! We're excited to celebrate our twentieth annual Faculty Summit with you and are looking forward to the lively exchange of ideas as we dive into broad, open concepts of work in the future. Central to this year's theme—The future of work—the summit will present current insights and research from Microsoft product and research groups during our agenda and Technology Showcase.

This year's Faculty Summit investigates how researchers are understanding, improving, and changing the future of work for individuals and organizations alike. The program is designed to create dialog across a breadth of areas on a wide range of topics from Artificial Emotional Intelligence, Social Systems, and the Future of Collaboration, as well as a panel on Human-AI Collaboration for Decision-Making. We're also delighted to have Bill Gates join us as he and Eric Horvitz share their thoughts on computing advancements and the future of productivity.

The Microsoft Research Faculty Summit is one of those rare opportunities to connect with leading researchers from around the globe. Be sure to see some of our leading-edge research in action during the Technology Showcase. Enjoy the networking lunch: One Table/One Topic as you get to join our senior technical leaders across Microsoft product groups and Distinguished Engineers on a specific technology topic. It's just another way to broaden your network at the event.

Whether this is your first Microsoft Research Faculty Summit, or you've been here before, we're confident you'll be inspired by the wealth of expertise and diversity of perspectives among your fellow attendees.

On behalf of the Microsoft team, we thank you for joining us this year.

Warm regards,

A handwritten signature in blue ink, appearing to read "Sandy Blyth".

Sandy Blyth

Global Managing Director
Microsoft Research

Wednesday, July 17

8:30–9:00 **Welcome and Introduction** KODIAK
Sandy Blyth, Global Managing Director, Microsoft Research

9:00–10:00 **Keynote: An Expansive View of Productivity** KODIAK
Jaime Teevan

Keynote: Understanding Workplace Well-Being and Productivity through Sensor Tracking KODIAK
Gloria Mark

10:00–10:15 **Transition Break**

Breakout Sessions

10:15–11:45 **Microproductivity: Getting Big Things Done Using Smaller Moments** RAINIER
Chair: Shamsi Iqbal

10:15–11:45 **Techniques for ML Model Transparency and Debugging** ST. HELENS
Chair: Steven Drucker

10:15–11:45 **Envisioning Fluid Cross-Device Experiences** KODIAK
Chair: Nathalie Richie

11:45–1:00 **Networking Lunch: One Table / One Topic** MCKINLEY

Breakout Sessions

1:00–2:30 **AI-Driven Image Captioning For Inclusive Productivity** RAINIER
Chair: Ed Cutrell

1:00–2:30 **Recommendation and Learning to Improve Personal Productivity** ST. HELENS
Chair: Paul Bennett

1:00–2:30 **The Future of Communication** KODIAK
Chair: Sean Rintel

2:30–3:00 **Networking Break**

Breakout Sessions

3:00–4:30 **Workforce of the Future** KODIAK
Chair: Ehsan Hoque

3:00–4:30 **Task Intelligence: Doing More with Less** ST. HELENS
Chair: Ryen White

3:00–4:30 **Augmented and Virtual Productivity Experiences** RAINIER
Chair: Mar Gonzalez-Franco

4:30–4:45 **Transition Break**

4:45–5:45 **A Conversation with Bill Gates hosted by Eric Horvitz** KODIAK

5:45–6:30 **Travel to Seattle**

6:30–9:00 **Dinner at Chihuly Garden and Glass**

9:00–10:30 **Surprise Experience (optional)**

Thursday, July 18

8:30–9:00 **Welcome and Technology Showcase Lightning Round** KODIAK

9:00–10:00 **Keynote: Intentional Approaches to Computer-Machine Collaboration** KODIAK
Mira Lane

10:00–12:00 **Technology Showcase | The Future of Work Demos** HOOD/BAKER

12:00–1:00 **Networking Lunch** MCKINLEY

Breakout Sessions

1:00–2:30 **Human-AI Collaboration for Decision-Making** KODIAK
Co-Chairs: Besmira Nushi, Ece Kamar

1:00–2:30 **Using AI to Increase Programmer Productivity** ST. HELENS
Co-Chairs: Sarah Bird and Markus Weimer

1:00–2:30 **Future of Spreadsheets** RAINIER
Co-Chairs: Andy Gordon, Shi Han, and Ben Zorn

2:30–3:00 **Networking Break**

Breakout Sessions

3:00–4:30 **Productivity in Software Development** ST. HELENS
Chair: Neel Sundaresan

3:00–4:30 **Workers of the World, Connect! Tech Innovations and Organizational Change for the Future of Work(ers)** RAINIER
Co-Chairs: Mary Gray and Jacki O'Neill

3:00–4:30

**Artificial Emotional Intelligence, Social Systems,
and the Future of Collaboration**

Chair: Mary Czerwinski

KODIAK

4:30–4:45

Transition Break

4:45–5:45

Keynote: The Future of Work And the Power of Data

Johannes Gehrke

KODIAK

5:45–6:45

Closing Reception

RAINIER

Technology Showcase

Productivity

- 1** Calendar.help: A Virtual Meeting Scheduling Assistant
- 2** Workplace Intelligence
- 3** Spreadsheet Understanding Using Statistics and Deep Learning
- 4** Spreadsheet Intelligence for Ideas of Excel
- 5** AI in PowerPoint
- 6** Chartulator: Interactive Construction of Bespoke Chart Layouts
- 7** Microsoft Teams: Collaborate with Any Researcher Anywhere
- 8** Microsoft Whiteboard: Digital, Freeform Canvas for Creative Collaboration
- 9** Immersive Storytelling with Data in Plain and Mixed Reality

Intelligence & Society

- 10** Computer Aided Diagnosis of Fungal Infections
- 11** Automating Image-Based Biodiversity Surveys
- 12** The Perspective Engine: Making Numbers Easier to Understand
- 13** Error Terrain Analysis for Machine Learning: Tool and Visualizations

Developer Tools

- 14** Surface Hub2S: Surface Device for the Modern Workplace
- 15** FASTER: An Embedded Key-Value Store for State Management
- 16** AI Assisted Software Development and Diagnostics
- 17** Project Conversation Learner: Democratizing AI for Bot Development
- 18** Multi-Objective Interactive Program Synthesis
- 19** Visual Studio IntelliCode
- 20** Quantum Development Kit, Q# and Katas
- 21** Project Alava: Programming Webs of Microcontrollers

Accessibility

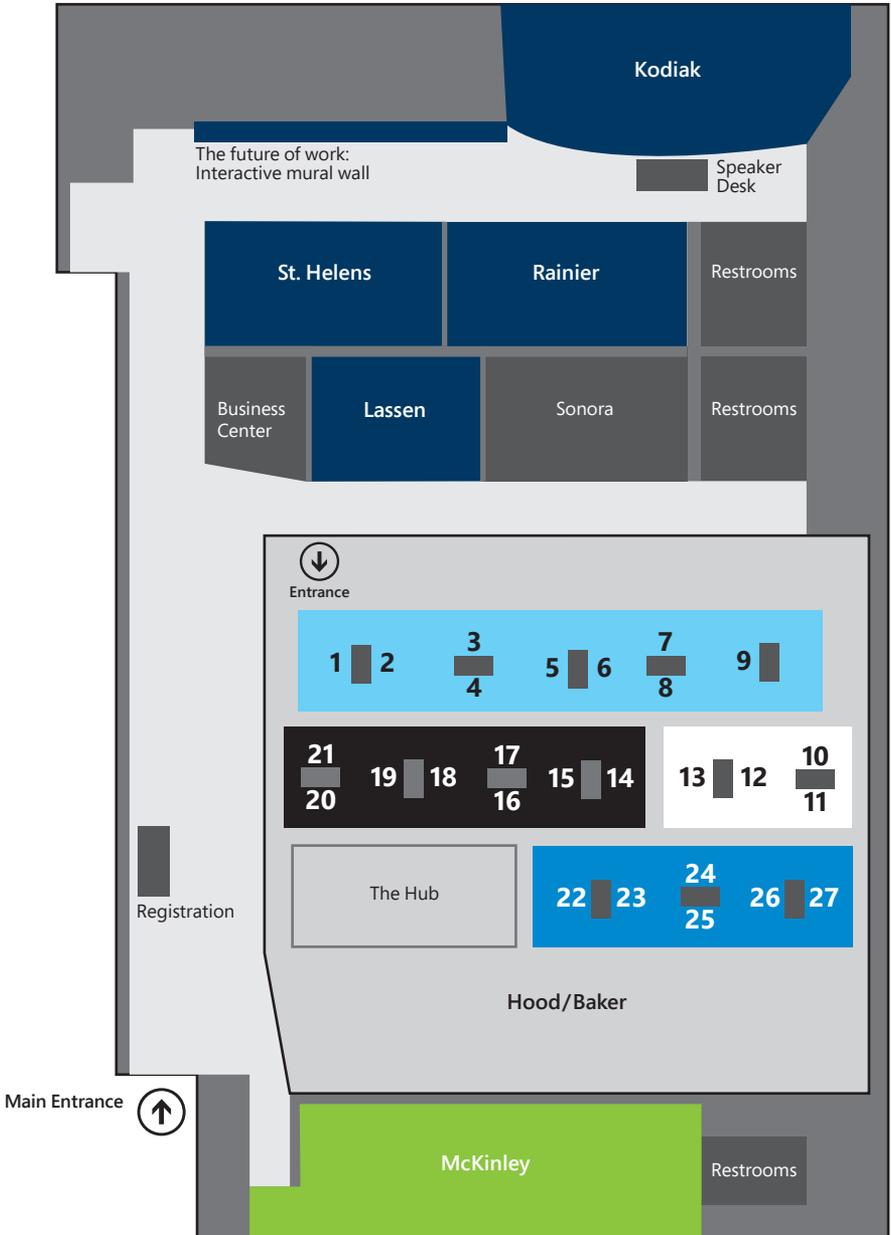
- 22** Drawiz: Making Technical Diagrams Accessible to People with Visual Impairments
- 23** VERSE: Voice. Exploration. Retrieval. Search.
- 24** Multi-Device Experiences (MDX) Toolkit
- 25** Touching the Void
- 26** Sensing Posture-Aware Pen + Touch Interaction
- 27** Accessible Virtual Reality

One Table/One Topic

Enjoy the networking lunch: One Table/One Topic, Wednesday July 17. Join a conversation with our senior technical leaders across Microsoft product groups and Distinguished Engineers on a specific technology topic.

Map

Microsoft Conference Center
Building 33



Microsoft Research

Where leading minds in technology research tackle complex problems to improve lives.



Microsoft Research is where leading scientists and engineers have the freedom and support to propel discovery and innovation. Here, they pursue and publish curiosity-driven research in a range of scientific and technical disciplines that can be translated into products. With access to vast computing power, global multi-disciplinary teams tackle complex problems that drive breakthrough technologies and improve lives.



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