<table>
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<th>Time</th>
<th>Strand 1</th>
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<td><strong>SATURDAY</strong></td>
<td><strong>Strand 1</strong> MPW 186</td>
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<td><strong>June 23</strong></td>
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<tr>
<td><strong>Keynote</strong></td>
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<td><strong>Dr. Mitch Resnick</strong></td>
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<td><strong>Opening Session</strong></td>
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<td><strong>LEGO Papert Professor of Learning Research - MIT Media Lab</strong></td>
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<td>12:30 pm - 1:30 pm</td>
<td>Ellie Goldberg: Center for STEM Education at UT Austin - <em>WeTeach_CS and You Can Too!</em></td>
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<td>Vipul Gupta: Unity3D Education - <em>Workflows ... Embedding CS Skills in Creative Projects with Unity</em></td>
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Opening Session and Keynote
12:30 PM – 1:30 PM  MPW 186

Dr. Mitch Resnick - *Kids, Coding, and Creativity*

Mitchel Resnick, LEGO Papert Professor of Learning Research at the MIT Media Lab, develops new technologies and activities to engage people (particularly children) in creative learning experiences.

His Lifelong Kindergarten research group develops the Scratch programming software and online community (scratch.mit.edu), used by millions of young people around the world. The group also collaborates with the LEGO Company on the development of new educational ideas and products, including LEGO Mindstorms and WeDo robotics kits. Resnick co-founded the Computer Clubhouse project, an international network of 100 after-school learning centers where youth from low-income communities learn to express themselves creatively with new technologies.


In today’s fast-changing world, the ability to think and act creatively is more important than ever before. Mitch Resnick discusses strategies for engaging kids in creative thinking and creative expression, drawing on examples and experiences with the Scratch programming language and online community.
Our very special thanks to all our friends at Microsoft (ISTE Year-Round Mission Sponsor), Google for Education (ISTE 2018 Gold Sponsor), and Unity (ISTE 2018 Silver Sponsor) for their generous support of the CS Firehose!

Session 1
1:30 PM – 2:20 PM

Strand I
MPW 186
Ellie Goldberg: Center for STEM Education (The University of Texas at Austin) – WeTeach_CS and You Can Too!

Is your district looking to build a K-12 CS program? Is your state adopting the new CS Praxis test for teacher certification? If you answered "yes" to either of these questions, we can help you! UT Austin’s WeTeach_CS program has supported over 400 teachers to add a HS computer science certification. This session will highlight online courses available nationwide designed specifically to build CS content knowledge for classroom teachers K-12 and broaden participation in computing courses. WeTeach_CS resources that support first year computer science teachers will also be shared. BYOD – Bring Your Own Device – and door prizes included!

Strand II
MPW 183C
Douglas Kiang, Mary Kiang, and Hal Speed: Microsoft - Intro to CS with MakeCode for the micro:bit

Come join us to learn about Microsoft MakeCode – a new approach to computing education that combines the magic of making with the power of code, in a way that engages every student in computational thinking. The maker education movement has proven to engage and interest girls and other nontraditional CS student populations through creative, personally meaningful projects. Learn how combining the maker mindset with computational thinking can result in transformative learning experiences for all students. In this workshop, attendees can expect to get hands-on creating MakeCode projects with the micro:bit, and get access to curriculum and resources they can use in the classroom. No prior experience required.

Strand III
MPW 187C
Vipul Gupta: Unity3D Education – Workflows: Embedding CS skills in Creative Projects with Unity

As coding and scripting skills start to become more prevalent in schools and education programs more broadly, there is a growing need for deep and meaningful applications of those skills. In this session we’ll go through workflows that any student and educator can engage in that bring together Art, Design, and Coding in 2D, 3D, VR/AR stories and games.
**Session 2**

2:25 PM – 3:15 PM

**Strand I**

**MPW 186**

Jannie Fernandez, Jamila Nassar, Ammi Ludwick, Chicago Aspirations in Computer High School Award Winner, Chicago AspireIT Program Leader and Partner: National Center for Women and Information Technology (NCWIT) - *Igniting the CS Journey*

Learn how encouragement and a supportive community of technical role models can help you navigate your computer science journey. Join a growing community of over 10K technical women, educators and allies who share a vision for equal access and representation of women in tech.

**Strand II**

**MPW 183C**

Douglas King and Mary Kiang: Microsoft - *Intro to CS with MakeCode for Minecraft*

Come join us to learn about Microsoft MakeCode for Minecraft. Spawn bouncing pigs, automate construction projects with an Agent robot, and build mini-games… learning computer science has never been so much fun! In this workshop, attendees can expect to get hands-on creating simple mods in Minecraft using Microsoft MakeCode, and get access to curriculum and resources they can use in the classroom. No prior experience required.

**Strand III**

**MPW 187C**

Katie Henry: BirdBrain Technologies - *Tiny Town: Making Robot Memories | Hummingbird with micro:bit*

Join us for a hands on programming workshop using Hummingbird with micro:bit. Recreate a favorite childhood memory in a tiny home that you will design, build and program with LEDs, sensors, motors, and craft supplies. All skill levels welcome, including absolute beginners. Bring your laptop. All other materials provided. Session 1.

**Matt Chilbert: BirdBrain Technologies - Tiny Town: Robot Parade | Hummingbird with micro:bit (2:25 – 6:00 PM)**

Join us to design, build, and program an autonomous parade float using Hummingbird with micro:bit and craft supplies. We will teach you how to program LEDs, motors, and light sensors so that your parade float can avoid obstacles and follow lines. All skill levels welcome, including absolute beginners.
Session 3
3:20 PM – 4:10 PM

Strand I

MPW 186

Mitch Resnick, Champika Fernando, and Andrew Sliwinski: MIT Media Lab - *Introducing Scratch 3.0: The New Standard for Creating With Code*

Leaders from the MIT Scratch Team will introduce Scratch 3.0, the next generation of the world's largest coding platform for kids. Learn how new Scratch collaborations with Google, LEGO, micro:bit and others are opening new possibilities for all students to express themselves creatively through coding.

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Strand II

MPW 183C

Jacqueline Russell: Microsoft - *MakeCode Arcade Beta Feedback Session*

The MakeCode team is looking for your feedback! Come join us for a sneak peek of Microsoft MakeCode Arcade Beta – a brand new retro 1980’s game development platform. We’ll get hands-on developing simple 2D sprite-based games in both blocks and JavaScript. Then we’ll spend time discussing the experience, capabilities, and API’s of the platform. Come join the discussion and provide your input and expertise to help us design this new MakeCode solution.

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Strand III

MPW 187C

Katie Henry: BirdBrain Technologies - *Tiny Town: Making Robot Memories | Hummingbird with micro:bit*

Join us for a hands on programming workshop using Hummingbird with micro:bit. Recreate a favorite childhood memory in a tiny home that you will design, build and program with LEDs, sensors, motors, and craft supplies. All skill levels welcome, including absolute beginners. Bring your laptop. All other materials provided. Repeat of Session 1.
Session 4
4:15 PM – 5:05 PM

Strand I
MPW 186
Emmanuel Shanzer: Bootstrap - Integrating CS and Mathematics to Strengthen Both Subjects: Evidence from the Field

Today, in 34 states, a CS course counts as a math credit. Many people think "Programming is like Math", so this makes sense. Unfortunately, this assumption is far from accurate. In a world of high-stakes testing, we can no longer pretend the word "function" means the same thing to algebra teachers and programmers. If we truly wish to help students in algebra, we need to re-think the foundations of what programming we teach. In this talk, Emmanuel will explore the literature and current research in the field of algebra education and programming, while discussing the highly-popular Bootstrap program now in use in schools across the country.

Strand II
MPW 183C
Olga Garcia: Google for Education - Introducing Computer Science and Block-based Programming through CS First

Join Google’s CS Education team to learn how to use CS First to introduce students (4th-8th grade) to computer science and the block-based programming language, Scratch. CS First engages students of varying backgrounds and interests through themed activities. All CS First materials are free and include lesson plans and solution sheets for teachers, as well as fun passports and stickers for the students. Bring your laptop.

Strand III
MPW 187C
Katie Henry: BirdBrain Technologies - Tiny Town: Making Robot Memories | Hummingbird with micro:bit

Join us for a hands on programming workshop using Hummingbird with micro:bit. Recreate a favorite childhood memory in a tiny home that you will design, build and program with LEDs, sensors, motors, and craft supplies. All skill levels welcome, including absolute beginners. Bring your laptop. All other materials provided. Repeat of Session 1.
Session 5
5:10 PM – 6:00 PM

Strand I

MPW 186
Heidi Williams: Marquette University - *No Fear Coding: Computational Thinking Across the K-5 Curriculum*

This session will provide you with a framework to create an integrated lesson that infuses computer science into something you are already teaching! You will need a laptop or tablet, as well as access to your standards. By the end of the session, you should not only have a lesson plan, but a rubric for assessing the lesson either formatively, summatively, or both.

Strand II

MPW 183C
Tina Ornduff: Google for Education - *Machine Learning in the Classroom*

Come join Microsoft Educators to learn about Microsoft MakeCode – a new approach to computing education that combines the magic of making with the power of code, in a way that engages every student in computational thinking. Bring your laptop. Level: Beginner

Strand III

MPW 187C
Katie Henry: BirdBrain Technologies - *Tiny Town: Making Robot Memories* | *Hummingbird with micro:bit*

Join us for a hands on programming workshop using Hummingbird with micro:bit. Recreate a favorite childhood memory in a tiny home that you will design, build and program with LEDs, sensors, motors, and craft supplies. All skill levels welcome, including absolute beginners. Bring your laptop. All other materials provided. Repeat of Session 1.