

## SCHEDULE OF EVENTS

Talks will be held in the Grand Ballroom.

Posters will be displayed in the Midway.

Thursday, March 31, 2022

9:00 AM – 6:00 PM	<b>OPTIONAL PRE-CONFERENCE WORKSHOPS</b>	
	<i>All workshops will be located on the 1st floor in the Midway Suites 1-4</i>	
9:00 AM – 4:00 PM	<b>Maize Development Genetics Workshop</b> Pre-registration is required.	Midway Suites 1-4
3:00 PM – 9:30 PM	<b>REGISTRATION</b> (Depot Registration Office)	
3:00 PM – 6:00 PM	<b>POSTER HANGING</b> (Midway)	
5:00 PM – 5:45 PM	<b>MaGNET Awardees and Mentors Introductions</b>	Midway Suites 1-4
6:00 PM – 7:00 PM	<b>DINNER</b> (Midway)	
7:00 PM – 9:00 PM	<b>SESSION 1 – WELCOME / THE GENES THAT MAKE MAIZE</b> Chair: Erin Sparks	Talks 1-4.
7:00 PM	<b>WELCOME AND ANNOUNCEMENTS</b>	(Grand Ballroom)
7:15 PM	<b>Maruti Nandan Rai, University of Illinois Urbana-Champaign</b> [T1] <i>Glossy15 overexpression alters Carbon partitioning and Nitrogen remobilization in maize stem</i>	
7:35 PM	<b>Singha Dhungana, University of Missouri-Columbia</b> [T2] <i>A novel DNAJ-thioredoxin-like protein is required for carbohydrate partitioning in maize</i>	
7:55 PM	<b>Rajdeep Khangura, Purdue University</b> [T3] <i>The maize semi-dominant lesion mutant Bella fleck1 provides resistance to common rust and Physoderma brown spot</i>	
8:15 PM	<b>Jiahn-Chou Guan, University of Florida</b> [T4] <i>Strigolactones regulate domestication phenotypes of cupule architecture, kernel size, and their coordination via Tga1-dependent and -independent networks.</i>	
8:35 PM	<b>Poster Lightning Talks</b>	
9:00 PM – 1:00 AM	<b>INFORMAL POSTER VIEWING &amp; HOSPITALITY</b>	(Midway)

## **Friday, April 1, 2022**

7:00 AM – 8:00 AM **BREAKFAST** (Midway)  
7:30 AM – 12:30 PM **REGISTRATION** (Depot Registration Office)

8:00 AM – 10:10 AM **SESSION 2 – GENOME BIOLOGY**  
Chair: Joe Gage Talks 5-9.

8:00 AM **ANNOUNCEMENTS** (Grand Ballroom)

8:15 AM **Mila Tost, University of Goettingen** [T5]  
*Experimental evolution in maize with replicated divergent selection identifies plant-height associated SNPs*

8:35 AM **Jonathan Cahn, Cold Spring Harbor Laboratory** [T6]  
*Maizecode: DNA regulatory elements in maize and teosinte inbreds provide insight into maize domestication*

8:55 AM **Andrea Eveland, Donald Danforth Plant Science Center** [T7]  
*Gene networks underlying architectural pleiotropy guide genome-wide association studies to highly connected regulators of tassel and leaf development*

9:15 AM **Mateus Mondin, CYNGELA** [T8]  
*A knob variant sequence and its relatedness with maize evolutionary history*

9:35 AM **Shujun Ou, Iowa State University** [T9]  
*Differences in activity and stability drive transposable element variation in tropical and temperate maize*

9:55 AM **Poster Lightning Talks**

10:10 AM – 10:40 AM **BREAK** **Foyer A**

10:40 AM – 12:30 PM **SESSION 3 – INVITED SPEAKERS**  
Chair: Marna Yandea-Nelson

10:40 AM Introduction

10:50 AM **Kirsten Bomblies, ETH Zürich** [IS1]  
*Learning to tango with four - problems and solutions to autopolyploid meiosis*

11:40 AM **José Dinneny, Stanford University** [IS2]  
*The divining root: exploring adaptive responses to water using the grass root system*

## **Friday, April 1, 2022 (continued)**

12:30 PM – 1:30 PM **LUNCH** (Midway)  
PUI Networking Lunch (Midway Suites 1&2)  
MGC BoD and MGAC Lunch (Midway Suites 3&4)

1:30 PM – 4:30 PM **POSTER SESSION 1** (Midway)

1:30 PM – 3:00 PM *Presenters should be at odd numbered posters.*

3:00 PM – 4:30 PM *Presenters should be at even numbered posters.*

Beverages will be available from 2:30 to 4:00 PM in Midway

**4:40 PM – 6:00 PM SESSION 4 – REGULATING GENES & GENOMES**  
Chair: Sam Snodgrass Talks 10-12.

4:40 PM **Amanpreet Kaur, Purdue University** [T10]  
*Hypothesis-driven identification of alleles affecting known pathways using a transcript accumulation index*

5:00 PM **Bridget Hua Bai, UC San Diego** [T11]  
*Unbiased RNA and protein co-expression networks highlight important regulatory role of coordinated organelle protein homeostasis in maize heterosis*

5:20 PM **Benjamin Oakes, The Ohio State University** [T12]  
*Heritable regulatory states dependent on parental RNA polymerase IV contribute to hybrid vigor*

5:40 PM **Poster Lightning Talks**

6:00 PM – 7:00 PM **DINNER** (Midway)

**7:00 PM – 9:00 PM SESSION 5 – AWARDS & Mc CLINTOCK PRIZE PRESENTATION**

7:00 PM **Hank Bass, Florida State University**  
*Presenting: Leadership and Cooperator Awards*

7:15 PM **Paula McSteen, University of Missouri**  
*Presenting: M. Rhoades Early-Career, L. Stadler Mid-Career*

7:30 PM **Candice Hirsch, University of Minnesota**  
*Presenting: R. Emerson Lifetime Awards*

8:00 PM **Candice Hirsch, University of Minnesota**  
*McClintock Prize Presentation Introduction*

8:10 PM **Robin Buell, University of Georgia**  
*Plant natural product biosynthesis: An enigma no longer*

9:00 PM – 1:00 AM **INFORMAL POSTER VIEWING & HOSPITALITY** (Midway)

## Saturday, April 2, 2022

7:00 AM – 8:00 AM **BREAKFAST** (Midway)  
8:00 AM – 12:00 PM **REGISTRATION** (Depot Registration Office)

### 8:00 AM – 10:00 AM **SESSION 6 – EMERGING TOOLS & APPLIED RESEARCH** Chair: Rubén Rellán-Álvarez Talks 13-18.

- 8:00 AM **Minjeong Kang, Iowa State University** [T13]  
*A rapid and simplified transformation and genome editing method for maize inbred B104 using Agrobacterium ternary vector system and immature embryos*
- 8:20 AM **Baoxing Song, Cornell University** [T14]  
*AnchorWave: sensitive alignment of genomes with high diversity, structural polymorphism and whole-genome duplication variation*
- 8:40 AM **Hannes Claeys, Inari Agriculture** [T15]  
*Coordinated gene upregulation in maize through CRISPR/Cas-mediated enhancer insertion to improve nitrogen use efficiency*
- 9:00 AM **Michael Tross, University of Nebraska-Lincoln** [T16]  
*Data driven trait quantification across a maize diversity panel using hyperspectral leaf reflectance*
- 9:20 AM **Devin O'Connor, Pairwise** [T17]  
*A tunable increase in maize kernel row number using DNA base editing*
- 9:40 AM **Marc Albertsen, Corteva Agriscience Retired** [T18]  
*From discovery to smallholder farmers: Ms44 and its 45-year journey to Africa*

10:00 AM – 10:40 AM **BREAK** **Foyer A**

### 10:40 AM – 12:30 PM **SESSION 7 – INVITED SPEAKERS** Chair: Petra Wolters

- 10:40 AM Introduction
- 10:50 AM **Cranos Williams, North Carolina State University** [IS3]  
*Harnessing the Ag data revolution for modeling plan and agronomic systems across scale*
- 11:40 AM **Neelima Sinha, University of California Davis** [IS4]  
*Interactions between the parasitic plants and their hosts*

**Saturday, April 2, 2022 (continued)**

12:30 PM – 1:30 PM	<b>LUNCH</b> (Midway) MGMSC Meeting MaGNET Lunch	(Midway Suites 3&4) (Midway Suites 1&2)
1:30 PM – 5:00 PM	<b>POSTER SESSION 2</b> (Midway)	
1:30 PM – 3:00 PM	<i>Presenters should be at even numbered posters.</i>	
3:00 PM – 4:30 PM	<i>Presenters should be at odd numbered posters.</i>	
	Beverages will be available from 2:30 to 4:00 PM in Midway	
5:00 PM – 6:00 PM	<b>COMMUNITY SESSION - Maize Genetics Cooperative</b> MGAC Chair: Ruth Wagner	(Grand Ballroom)
6:00 PM – 7:00 PM	<b>DINNER</b> (Midway)	
7:00 PM – 8:20 PM	<b>SESSION 8 – CELLULAR PROCESSES</b> Chair: Todd Jones	Talks 19-22.
7:00 PM	<b>Aimee Uyehara, University of California, Riverside</b> <i>Cell cortex microtubules contribute to division plane positioning during telophase in maize</i>	[T19]
7:20 PM	<b>Le Liu, UMass, Amherst</b> <i>A Receptor-Like Proteins PAN2 is required for ABA and dark-mediated grass stomatal closure</i>	[T20]
7:40 PM	<b>Xiaosa Xu, Cold Spring Harbor Laboratory</b> <i>A comprehensive single-cell atlas of plant shoot meristems facilitates functional analysis</i>	[T21]
8:00 PM	<b>Sanzhen Liu, Kansas State University</b> <i>Revealing Gene Regulation of Cuticular Wax Biosynthesis Using Artificial Transcription Factors</i>	[T22]
8:20 PM – 8:40 PM	<b>BREAK</b>	<b>Foyer A</b>
8:40 PM – 9:30 PM	<b>SESSION 9 – FOSTERING DIVERSITY IN THE MAIZE COMMUNITY</b> Chair: Madelaine Bartlett	
8:40 PM	<b>Banu Subramaniam, University of Massachusetts Amherst</b> <i>Decolonizing Botany</i>	[IS5]
9:30 PM – 2:00 AM	<b>INFORMAL POSTER VIEWING, &amp; HOSPITALITY</b>	(Midway)
10:00 PM – 11:00 PM	<b>TRIVIA</b>	(Midway)

## Sunday, April 3, 2022

7:00 AM – 8:20 AM      **BREAKFAST** (Midway)

**Posters should be taken down by 9 AM!**

8:20 AM – 10:00 AM      **SESSION 10 – BIOTIC FRIENDS & FOES**  
Chair: Erin Sparks      Talks 23-27.

8:20 AM      **Alonso Favela, University of Illinois Urbana-Champaign**      [T23]  
*Ancient Roots: Disruption and rewilding of the Zea rhizosphere microbiome*

8:40 AM      **Eric Butoto, North Carolina State University**      [T24]  
*A tale of two selection methods for resistance to Fusarium ear rot and fumonisin in maize*

9:00 AM      **Mara Sgroi, University of Cambridge**      [T25]  
*Invisible to Arbuscular Mycorrhizal Fungi: positional cloning and characterisation of the ina arbuscular mycorrhizal mutant in Zea mays*

9:20 AM      **Ann Murithi, CIMMYT**      [T26]  
*Discovery and validation of a recessively inherited major effect QTL conferring resistance to maize lethal necrosis (MLN) disease*

9:40 AM      **Ksenia Krasileva, University of California, Berkeley**      [T27]  
*Evolution of plant immune receptors*

10:00 AM – 10:30 AM      **BREAK**      **Foyer A**

10:30 AM – 11:40 AM      **SESSION 11 – MAIZE & THE ENVIRONMENT**  
Chair: Matt Hufford      Talks 28-30.

10:30 AM      **Jialu Wei, Iowa State University**      [T28]  
*Investigating Dynamic Heat Stress Responses with Diverse Maize Inbreds through Transcriptome Analyses*

10:50 AM      **Parisa Sarzaeim, University of Nebraska-Lincoln**      [T29]  
*Consolidating OMICS and Environmental Database for Maize Yield Predictions in a Changing Climate*

11:10 AM      **Diego Jarquin, University of Florida**      [T30]  
*Unleashing The Potential Of Weather Data For Improving Yield Forecasting In G2F Maize Hybrids*

11:30 AM      **CLOSING REMARKS**

11:40 AM      **ADJOURNMENT**