

2022 International Meeting Controlled Environment Technology and Use
 organized by NCERA-101 in collaboration with UK-CEUG and ACEWG
 September 11th – 14th, 2022
 Tucson Marriott University Park Hotel, Tucson, Arizona

SUNDAY, 11 th September 2022	
14:00 – 17:00	Registration at <i>Marriott University Park Hotel Foyer</i>
17:30 – 20:00	Welcome Reception at Marriott University Park Hotel A special Ceremony: Event Blessing by a Native American Community Member
MONDAY, 12 th September 2022 (<i>Marriott University Park Hotel</i>)	
08:30 – 08:45	Opening and Welcome
Session 1: Sabino-Pima Room	
08:45 – 09:15	Keynote Speaker: Leo Marcelis, Wageningen University, The Netherlands <i>The colorful physiology of plants in controlled environments</i>
09:15 – 09:45	Marc Van Iersel, University of Georgia <i>Optimizing light use efficiency in controlled environments: from physiology to engineering</i>
09:45 – 10:15	Fei “Jeff” Jia, Heliospectra <i>Using light for crop production – from science to commercial application</i>
10:15 – 10:45	Coffee Break (Madera Room) and Poster Presentations (Sabino-Pima Room)
Session 2: Sabino-Pima Room	
10:45 – 11:15	Erik Runkle, Michigan State University <i>Sole-source lighting of leafy greens and ornamental seedlings</i>
11:15 – 11:45	Bruce Bugbee, Utah State University <i>The McCree curve revisited: Evidence for photosynthetic photons below 400 and above 700 nm</i>
11:45 – 12:15	Mark Lefsrud, McGill University <i>The novel factors that drive photosynthesis based on a refined analysis of the PAR curve</i>
12:15 – 12:45	Panel 1: Indoor Agriculture Economic Viability,
12:45 – 13:45	Lunch (Canyons Room)
Session 3: Sabino-Pima Room	
13:45 – 14:15	Efren Fitz-Rodriguez, Chapingo Autonomous University, Mexico <i>Smart Controlled Environments: from greenhouses to indoor farming</i>
14:15 – 14:45	Jan Westra, Priva <i>With great power comes great responsibility: in indoor more relying on control, more opportunities to do it wrong</i>
14:45 – 15:15	Nadia Sabeh, Dr. Greenhouse <i>HVAC: Energy Efficiency, Sustainability, and the Cost of Climate Control</i>
15:15 – 15:45	Speaker TBD <i>Emerging sensing techniques for controlled environment plant production</i>
15:45 – 16:15	Student Lightning Talks
16:15 – 16:30	Coffee Break (Madera Room) and Poster Presentations (Sabino-Pima Room)
16:30 – 18:00	NCERA 101 Business Meeting
19:00	Gala and Award Dinner (Sabino-Pima Room, Marriott University Park Hotel) Guest Presentation: NASA OSIRIS Rex Asteroid Sample Return Mission, Lunar and Planetary Laboratory, University of Arizona

TUESDAY, 13th September 2022 (Marriott University Park Hotel)	
Session 4: Sabino-Pima Room	Energy, Economics and Sustainability in Controlled Environments
08:45 – 09:15	Keynote Speaker: Nate Storey, Plenty <i>The economics of indoor ag: a rapidly evolving landscape</i>
09:15 – 09:45	Neil Mattson, Cornell University <i>The economic & environmental footprint of urban and peri-urban production of lettuce in greenhouses and plant factories.</i>
09:45 – 10:15	Jenn Frymark, Gotham Greens <i>Standardized reporting and benchmarking: Metrics to evaluate yields, economic viability and sustainability of food production in controlled environments</i>
10:15 – 10:45	Coffee Break (Madera Room) and Poster Presentations (Sabino-Pima Room)
Session 5: Sabino-Pima Room	Controlled Environments: Novel Applications
10:45 – 11:15	Gioia Massa, NASA-Kennedy Space Center <i>Space Crop Production Controlled Environments</i>
11:15 – 11:45	Graeme Smith, Graeme Smith Consulting-Australia <i>Future gazing for modern controlled production systems</i>
11:45 – 12:15	Julian Franklin, Rothamsted Research, United Kingdom <i>Controlled Environments for Containment</i>
12:15 – 12:45	Panel 2: Indoor Agriculture Sustainability
12:45 – 13:45	Lunch (Canyons Room)
Session 6: Sabino-Pima Room	Controlled Environments: Physiology, Breeding, Food Nutrition
13:45 – 14:15	Royal Heins, Professor Emeritus, Michigan State University <i>Cultural and flowering physiology of Hemp</i>
14:15 – 14:45	James Faust, Clemson University <i>Pinpointing the PPF threshold for photoperiod perception in plants</i>
14:45 – 15:15	Richard Poiré-Lassus, Australian Plant Phenomics Facility/Australian National University <i>Advanced controlled environments and phenotyping techniques to overcome the challenges of Australian Plants.</i>
15:15 – 15:45	Alexis Moschopoulos, Grobotic Systems, United Kingdom <i>Smart crop monitoring and an open source plant growth protocol for plant science research</i>
15:45 – 16:30	Coffee Break (Madera Room) and Poster Presentations (Sabino-Pima Room)
16:30 – 17:00	Panel 3: Production Quality in Indoor Agriculture,
WEDNESDAY, 14th September 2022	
08:30 – 10:30	Commercial Greenhouse Tour
11:30 – 12:30	Lunch at Controlled Environment Agriculture Center (1951 E. Roger Rd., Tucson, AZ 85719)
12:30 – 15:00	Controlled Environment Agriculture Center Facility Tour

Murat Kacira, Gene Giacomelli, Joel Cuello
The Local Organizing Committee
Controlled Environment Agriculture Center
The University of Arizona