

# NSF HSI National STEM Resource Hub Professional Skills Workshops

## *Integrating plant model systems into the curriculum:*

The workshop will focus on modern genomics and genetic approaches to studying biological processes in plants. We will bring examples from Arabidopsis, rice and maize that can easily be incorporated into the classroom or for outreach activities.

**Session: 6/24/2021-6/25/2021** (2-day workshop/ 9 a.m. – 1 p.m. PDT)

**Early admission apply by date : May 21**

### **APPLICATION:**

<https://www.surveymonkey.com/r/hsihub-2021STEMwkshops>

### **STEM EDUCATION WORKSHOP SERIES:**

<https://hsistemhub.org/2021-summer-stemed-workshops/>

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*Adán Colón-Carmona, University  
of Massachusetts Boston*

Dr. Colón-Carmona is a plant cell and developmental biologist studying growth control in response to internal and external environmental cues, such as hormones and exposure to the petroleum-based pollutants polycyclic aromatic hydrocarbons. His lab studies how cell cycle checkpoints are influenced by these cues. Using Arabidopsis, the lab also studies root development and how the root microbiome is established both in normal and stressful growth conditions.



*Alejandra Huerta, North Carolina  
State University, Raleigh*

Dr. Huerta studies the biology underlining bacteria-plant and bacteria-microbiome interactions with the long-term goal of better understanding how plant pathogens infect their host and translating these findings into sustainable crop management strategies. The lab seeks to provide a systems-level understanding of plant phytobiomes to develop tools and host/microbiome models that enable plant breeders and microbial ecologists to predict beneficial interactions to achieve improved yields and plant resilience in changing environments.



*Rubén Rellán-Álvarez, North  
Carolina State University, Raleigh*

Dr. Rellán-Álvarez is a plant biologist studying plant local adaptation. In particular, his lab studies the physiological, metabolomic and genetic mechanisms that have allowed maize to adapt to different environments across the Americas since it was domesticated in México. One of the most active areas of research involved the study of evolutionary genetic processes that lead to changes in phospholipid metabolism during maize adaptation to highland environments.