Personal Statement: Christopher A. Saski

Dr. Christopher Saski is an Associate Professor of Systems Genetics at Clemson University in South Carolina. Dr. Saski's research program is focused on understanding the linkages between genome structure and function to improve agriculturally relevant crop and weed species. Dr. Saski has spent the last decade as part of an international team focused on developing whole genome physical maps and reference-grade genome sequences of domesticated and wild species of allopolyploid cottons, and various diploid species. Dr. Saski's lab investigates mechanisms of durable genetic resistance/tolerance to devasting cotton pathogens, such as fungi, nematodes, and insects. This work has led to the development of an in vitro co-culture platform and genetic/genomic tools for breeding efficiency. More recently, Dr. Saski has established a robust cotton transformation system and is using this tool to understand the genetic architecture of somatic embryogenesis in upland cotton, with a focus on developing elite lines that are able to undergo gene-editing and subsequent regeneration. This work is performed on an international scale and is soon destined for the International Space Station (ISS lab) – one of the firsts for cotton. Dr. Saski's research also uses gene editing techniques to understand gene function underlying agronomically useful traits such as in fiber, disease resistance, and stress response and signaling pathways. As co-chair of the functional genomics workgroup, I will contribute to ICGI by organizing communication, collaboration, and educational tools around functional genomics in cotton with allied scientists across the globe. I will aggressively coordinate, pursue, and promote cutting-edge research, technology, and translational endeavors with allied scientists across the global cotton communities to use these tools to deeply understand cotton at the genetic level and develop strategies to preserve and improve the species.