

ICGI Overall Chair Candidate

David Fang

Supervisory Research Geneticist

Research Leader

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I am the Research Leader of Cotton Fiber Bioscience Research Unit, USDA-ARS in New Orleans, Louisiana, USA. Prior to the current position, I was the Director of Molecular Cotton Breeding at Delta and Pine Land Company. I have been a strong supporter of ICGI, and served as the co-chair and chair of the Structural Genomics Workgroup between 2013 and 2017. My research focuses on: identification of superior fiber alleles and quantitative trait loci based on the analysis of MAGIC populations, and use them in breeding with assistance of DNA markers; and elucidation of the molecular mechanisms of fiber development through comparative analyses of fiber mutants and their respective wild types. If elected, I will take the opportunity as ICGI chair to foster and strengthen collaborations among researchers from different countries for the benefits of cotton industry. In addition, as high quality genome sequences of many *Gossypium* species are available thanks to the great contributions by the cotton community, I believe that we need pursue in-depth research in following areas: 1) more cooperations between cotton researchers in different countries, 2) utilize the obtained genome information in breeding; 3) conduct pan-genome analysis to identify potential traits and associated information for variety improvement; 4) use the genome information and newly-developed genomic tools to better understand genetics, gene networks, and evolution of *Gossypium* species; and 5) develop improved gene-editing and/or transformation tools to manipulate genes controlling traits of interest. I will try my best to advocate research related to these fields.