

ICGI Functional Genomics

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My research is focused on efficient utilization of biodiversity using genomic tools and genetic resources for profitable and sustainable cotton production. Connecting phenotypes with genes/genotypes is a prerequisite to bridging plant breeding with genomics for cotton genetic improvement. Towards this goal, my program has been developing numerous genetic resources including diversity panels, nested association mapping populations and genotyping resources in cotton. We have been integrating these genetic resources with genomics and molecular biology for applied breeding and gene discovery for numerous agronomic and disease resistance traits in cotton. Recent advances in phenomics, genotyping, sequencing, and molecular biology techniques can improve the efficiency and scale in functional genomic analyses and their rapid translation to cotton improvement. My vision for the chair of functional genomics include: synergize and advance the cotton functional genomics efforts across the cotton community; facilitate communication of new and pertinent discoveries in functional genomics at the crop genomics conferences, enable collaboration among the scientists, communicate their needs to its broad clientele and contribute to planning and leading new initiatives towards the ICGI mission.