



Dr. Vaikunth “Bucky” Khalap

Director of Programs
Space Systems

Dr. Vaikunth “Bucky” Khalap is the Director of Programs for Space Systems. In this enterprise leadership role, he provides strategic direction, mentorship, and operational oversight to the site’s program management team—strengthening execution and driving successful outcomes across a diverse portfolio of critical missions.

Dr. Khalap brings broad, end-to-end experience across the business, including technical development, program management, and organizational leadership. His portfolio spans component-level technologies through fully integrated mission payloads, including visible-to-infrared focal plane arrays for next-generation space-based weather sensing and payloads supporting national security space applications. This blend of technical credibility and program discipline enables him to guide complex development efforts from concept through delivery.

Before assuming program leadership responsibilities, Dr. Khalap served as a Chief Engineer and technical lead on a range of detector and focal plane array programs supporting commercial, civil, and defense space applications. His technical accomplishments include leading the development of high-operating-temperature silicon gallium bismuth (Si:Ga BIB) detectors for airborne long-wave infrared hyperspectral imaging applications.

Dr. Khalap earned his undergraduate degree in Atomic and Molecular Physics from the University of Denver in 2004. He later completed his graduate studies at the University of California, Irvine, earning an M.S. in 2008 and a Ph.D. in Chemical and Materials Physics in 2010. His doctoral research focused on electrochemical modification of single-walled carbon nanotubes. He was a Graduate Assistance in Areas of National Need (GAANN) Fellow and has authored more than 30 publications, including work published in Science.

Outside of work, Dr. Khalap is an avid ice hockey player and powerlifter. He has coached hockey training events serving underprivileged communities and volunteers with Hugh O’Brian Youth Leadership, where he facilitates groups of aspiring high school leaders.