

Biography

Rafael Gonzalez received his B.S and M.S degrees in Electrical Engineering from The University of Texas at El Paso in 2001 and 2003 respectively. His thesis was focused in Semiconductor & VLSI design applied to novel methods for characterizing high-k materials and in practical semiconductor applications for the biomedical and space industry.

From 2004 to 2015 he worked for Intel Corporation where he held multiple staff and management positions in the areas of Lithography, Dry Etch, Defect Reduction and Silicon Photonics for the Technology and Manufacturing Group (TMG). Rafael was part of the team that developed and transferred both 45nm and 32nm process technologies for the largest manufacturing run in Intel's history. He also was the Inclusion and Diversity Leadership Team chair for the Intel New Mexico site and he managed the 12 Employee Resource Groups (ERGs) onsite including their yearly budget. Rafael also served as the Intel Latino Network (ILN) president at the NM site from 2012 to 2015. Rafael was selected as the Intel Hispanic Leadership Council chair where he had the opportunity to work directly with the CEO and VPs across the company to set the vision and strategy to reach representation of Hispanics by 2020. Rafael received the Intel Technology and Manufacturing Excellence Award in 3 different occasions for providing cybersecurity to Intel factories, reducing overall wafer cost by 40% with over \$50M in savings per year, and eliminating customer returns due to wafer scratching costing Intel over \$250M per year.

Rafael joined Sandia National Laboratories in 2015 as a Research & Development Science and Engineering Manager. In this role, Rafael was a factory manager for the Microsystems & Engineering Science Applications (MESA) Silicon and III-V semiconductor microfabrication Fabs. He was responsible for the R&D and operations of several areas for both semiconductors Fabs to develop and fabricate leading edge trusted and radiation hardened microsystems technologies to enable new and increasingly powerful macro-system capability and functionality for critical national security programs, nuclear weapons stockpile and nuclear deterrence. Rafael was responsible for the Silicon Fabrication facility (SiFab) infrastructure \$100M multi-year project to upgrade to 8-inch processing to maintain the only source for the Nation for trusted and strategic radiation hardened microelectronics until 2040. In 2019, Rafael was promoted to Senior Manager of Performance Assurance and Engineered Safety where he leads an ES&H organization of 100 employees and contractors. His organization is responsible for performance assurance, safety basis and ES&H system integration across the laboratory to enable all missions with operational excellence ensuring the health, safety of employees and protecting the environment.

Rafael is a very active member of the community serving on several external boards and committees locally and nationally. Rafael currently serves on the board of directors for the New Mexico Mathematics, Engineering and Science Achievement (MESA) and the New Mexico museum of Natural History and Science foundation.

Rafael received the **"40 under Forty"** award by Albuquerque Business First in 2016 which honors the state's top young professionals based on leadership, professional achievement and community involvement. In 2019, Rafael received the **Great Mind in STEM (GMiS) Luminary award** for his professional achievements and contributions to the Hispanic community as role model in the Nation. In 2018, Rafael completed the Essential Topics for Nuclear Weapons Management program at the Nuclear Security Enterprise. In 2020, Rafael completed the Senior Executives in National and International Security program through the Harvard Kennedy School. Rafael actively mentors upcoming technical scientists, engineers and leaders across Sandia National Laboratories, the Department of Energy and the Nation.

