



Dr. Daniel López

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Dr. Daniel López is the Group Leader of the Nanofabrication and Devices group at the Center for Nanoscale Materials at Argonne National Laboratory.

He received his Ph.D. in Physics from the Instituto Balseiro in Argentina in 1995. He has worked as a Postdoctoral Fellow at IBM T. J. Watson Research Center (Yorktown Heights, NY) and at the Materials Science Division in Argonne National Laboratories. In 1998 he joined Bell Laboratories, Lucent Technologies (Murray Hill, NJ) as a full-time Research Staff where he worked until the summer of 2008. Since August 2008, he has been working at the Center for Nanoscale Materials at Argonne National Laboratory.

Dr. López is pursuing research and development of novel Micro and Nano Electro Mechanical Systems (MEMS/NEMS) with applications in science and technology.

Specific R&D Interest

- Nano and Micro Electro Mechanical Systems (NEMS/MEMS):
 - Integration of NEMS devices with plasmonic nanostructures and novel materials
 - Manipulation of near field interactions in nanoscale systems
 - Non-linear dynamics of nanoscale devices and synchronization
 - Nano electro mechanical systems for energy harvesting
 - Spatial Light Modulators (SLM) for x-ray manipulation, nano-manufacturing and optical communications
- Sub-wavelength photonics
- Ultra-sensitive nano-mechanical sensors: study of quantum forces in mechanical structures and corrections to Newtonian gravitation at short length scales
- Development of processes to integrate arrays of NEMS/MEMS devices into standard CMOS technology.
- Subsystem and system research and development