



The Institute of Nanoelectronic Modeling (iNEMO), led by Prof. Gerhard Klimeck at Purdue University, is a leader in the theory and modeling of nanoscale solid-state physics. iNEMO is looking for highly motivated and team-oriented students wishing to pursue a PhD. The group consists of over 30 members with backgrounds in the fields of Electrical Engineering, Computer Engineering, Physics, and Computer Science.

Students in iNEMO have the opportunity to collaborate with leaders in academia and industry working on cutting edge problems in engineering, physics, and computational sciences impact on challenging real world problems.

Research areas encompass electronic device designs and concepts such as ultra-scaled transistors, quantum dots, optoelectronics, quantum computing, and new materials. Physical phenomena involve quantum mechanics, particle interactions, carrier transport, phonon

or electron bandstructure or transport calculations, and material properties calculations (e.g. strain or piezo effects).

To simulate state of the art devices, iNEMO develops the NEMO5 software, which is used by leaders in the semiconductor industry to design next-generation devices. NEMO5 runs on some of the most powerful computer systems in the world and we are looking for students interested in high performance computing, parallel programming, numerical algorithms, and exploiting many-core architectures.

If this excites you, find more about the group and our research here:

<https://engineering.purdue.edu/gekcogrp/>