### **Electronic Properties Group**

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# STRuctural and Electronic (STREL)

- Windows application
- Modular
- .NET Framework of Microsoft
- Build in visualization tools

# STRuctural and Electronic (STREL)

- Build atomistic models of nanostructures or supercells for defects
- Find the lowest energy structure
- Calculate strains and stresses
- Obtain the electronic states
- The strength of the optical transitions

#### Nanostructures systems

- Quantum Dots
- Quantum wires
- Surfaces
- Voids

# Systems

- Si/Ge
- GaN/AIN
- Alloys
- Surfaces
- NEMS

# Methods

- Ab-initio
- Semiempirical
- Finite Elements

## Properties

- Mechanical Properties
- Electronic states
- Optical transition strength
- Optical properties
- Conductance

# ICT in Education Assistive Technologies

- Of the students with disabilities
- Materials education
- Clickers
- Real and/or remote experiments with the computer

# Thank you

