



Maria Isabel ROCHA GASO

Home Country
Mexico

Degree
PhD in Bioelectronics Engineering

Expertise
Electronics Engineering

Research Focus
**Surface Acoustic Wave
Microsensors for
Biosensing**

Host University
**Polytechnic University
of Valencia, Spain**

Fellowship Awarded
2007

Maria Isabel Rocha Gaso comes from a family of scientists. Her mother has a PhD in biology, her father is a nuclear physicist, and her younger brother is pursuing a PhD in cosmology at the University of California in the United States. Maribel, as everyone calls her, says her family influence is probably the reason why she is extremely interested in science and research.

Maribel is currently pursuing a PhD in electronics engineering, more specifically in bioelectronics, at the Polytechnic University of Valencia (UPV) in Spain. She is working on the application of surface acoustic wave (SAW) devices as biosensors.

SAW devices work with the perturbation of an acoustic wave as the detection mechanism. Biosensors are a subgroup of chemical sensors in which a biological base mechanism is used for detection of a specific analyte. Thus, biosensors require multidisciplinary knowledge in a diverse range of subjects such as physics, biochemistry, materials science and electronics.

These days, biosensors are generating a great deal of attention because they are specific, fast, reliable, easy to use and sensitive when it comes to measuring environmental values. It is expected that in the future the demand for this kind of device will increase, mostly in the medical and health industries.

Maribel obtained her Diplome d'Etudes Approfondies (DEA) in June 2009 at UPV and she is currently working in her PhD thesis at the same university. When she finishes her studies, she plans to be a teacher at the National Autonomous University of Mexico.