



Margarita VARON

Home Country

Colombia

Degree

**PhD in
Optoelectronics**

Expertise

**Electronics and
Electrical Engineering**

Research Focus

**Hyperfrequency Signal
Generation
by Optoelectronic
Oscillators**

Host University

**SUPAERO Institute of
Aeronautics and
Space
Technology, France**

Fellowship Awarded

2005

Margarita Varón Durán was born in Cartagena, Colombia. After living for most of her life with her parents and sister, she obtained her undergraduate degree in electronics engineering at Javeriana University in Bogota, where she married her husband, an electrical engineer, in 2006.

Following her undergraduate degree, she travelled to Turin, Italy to obtain her master's degree in optoelectronics. Subsequently she returned to Colombia to work at the university and also in a telecommunications company.

In 2005 Margarita began studying for a PhD in optoelectronics at the SUPAERO Institute of Aeronautics and Space Technology in Toulouse, France, where she obtained her doctorate in 2008. Margarita's research focus at SUPAERO was on optoelectronic oscillators, which are used in telecommunication systems to synchronize the transmission and reception of data.

Optoelectronic oscillators are the focus of a great deal of research around the world. The oscillator that Margarita proposed in her doctoral thesis was particularly interesting for its onboard systems components, and because it is small and lightweight it has numerous applications in airplanes, satellites, spacecraft and other vehicles.

Constructed with mostly optical components, these oscillators offer many advantages in addition to light weight and small size. For example, they are not expensive to build, and they have few problems with electronic interference.

Upon completion of her studies at SUPAERO Margarita returned to Columbia, where she intends to work in a university setting.