

## Curriculum vitae Dott.ssa Antonella Sciuto

Antonella Sciuto is a permanent researcher of the Institute for Microelectronic and Microsystems of the Italian National Research Council (CNR-IMM) from 31-12-2012.

The CNR is a research organization with the mission to carry out research projects, promote innovation and competitiveness of the national industrial system, internationalize the national research system, and provide technology and solutions to emerging needs in the public and private sectors. The CNR is structured in Institutes operating throughout the country. The IMM was created with the aim of achieving a structure of appropriate dimensions to cover highly competitive sectors such as microelectronics, microsystems and sensors.

A. Sciuto was born in Sicily in 1972, received the degree in Physics at Catania University in 1998 with a thesis on a Fuzzy Logic Based front-end system for particle Silicon Drift Detectors. After the degree, she received a fellowships from the CNR-IMETEM (actual IMM) addressed to the study of materials for microelectronics. In 2000 she was admitted to the PhD Physics School at the Catania University and in 2004 received the PhD title discussing a thesis on Silicon based electro-optical modulators for infrared communication. From 2004 to 2011 she was engaged with collaboration research contracts at CNR-IMM on development, fabrication and characterisation of Si and SiC based active and passive optical devices and sensors. At the end of the 2012 she spent some months as researcher at the CNR-IMM unit of Agrate (MB- Italy) working on fabrication of Si-based nanoscaled devices for quantum computing applications. From December 2012 she is in the permanent researcher staff of IMM and is principally involved on development, fabrication and characterisation of micro and nano-scaled devices Si and SiC based, for applications in the microelectronic and sensors fields.

Her activity involves innovative material and device design, study of materials and processes and of their compatibility in the fabrication flux, prototyping (using optical and electron-beam lithographic processes) and complete (structural, electrical and electro-optical) characterisation (at room or at high temperature) of produced devices (see the facilities of CNR-IMM at web site <http://www.imm.cnr.it>).

A. Sciuto is referent for the IMM-HQ of the “Optoelectronic, Plasmonic and Photonic devices” activity.

She maintains collaboration with research institute, such as INFN, INGV and UNICT. She is actually scientific referent for IMM in the collaboration agreement between the CNR-IMM, the Di3A department of Catania University and the Palermo section of INGV for the development of volcanic and environmental monitoring systems - Protocollo IMM 383.29/01/2019 & 754.13/02/2019.

She is actually involved:

- in the European project Horizon 2020 “ Before-Hand Boosting Performance of Phase Change Devices by Hetero- and Nano-Structure Material Design “ starting date: 01/01/2019, protocollo IMM 4242.08/08/2020.
- in the PON project “4 FRAILTY – Sensoristica intelligente, infrastrutture e modelli gestionali per la sicurezza di soggetti fragili” ARS01\_00345, approved by MUR and under founding.
- in the PON FESR 2014/2020 project “REACTION -first and euRopEAn siC eigTh Inches pilOt liNe” protocollo IMM 4969.11/09/2020

She was responsible, for the 2016 year, of the Catania Unit of the national INFN project “ClasSiC - Cherenkov Light detection with silicon Carbide” for the development of SiC avalanche photodiodes for the detection of Cherenkov Light.

She participated in many research project including:

- PON02\_00355\_3391233 “ENERGETIC-Tecnologie per l’Energia e l’Efficienza Energetica” protocollo IMM 3541.29/04/2013
- PON “Hippocrates- Sviluppo di micro e nano-tecnologie e sistemi avanzati per la salute dell’uomo” protocollo IMM 5702.08/07/2013
- POR “Tecnologie sensoristiche e sistemi automatici intelligenti per l’innalzamento competitivo delle attività produttive” notice 3.15 – period: 01/01/2005-22/09/2008
- POR “Sviluppo ed applicazione di tecnologie biosensoristiche in genomica” notice n. 11/2017 - CUPG67B17000170009, measure n. 35782.

She was referent for many years of research activities in the field of collaboration contracts with the STMicroelectronic s.r.l. Italy for

- “Studio di Materiali per la microelettronica”-Protocollo CNR-IMM n°6342 del 07-12-2017
- “Studio e realizzazione di component elettronici attivi su Power device in SiC” - Protocollo CNR-IMM n°6340 del 07/12/2017
- “Studio di materiali e tecnologie per la microelettronica”- Protocollo CNR-IMM n°2713 del 21/04/2015
- “Studio di materiali e tecnologie per la microelettronica”Protocollo CNR-IMM n°3687 del 06/05/2013

She is reviewer of international scientific journals, she gave oral and poster presentations on international conferences and she is author of several papers in international peer reviewed journals, book chapter and conference proceedings and of several Italian, European and USA industrial patents.