

## Scientific Curriculum of Luciano Scaltrito

**Luciano Scaltrito** is Full Professor at Department of Applied Science and Technology – DISAT of Politecnico of Torino. L. Scaltrito leads the research activities managing a research team as senior and young researchers operating at Chilab - Interfacing Technologies for Edge Microsystems (ITEM) of Politecnico of Torino. He is coordinator of several funded projects (European and National) and he is deeply involved in Technological Transfer managing many industrial projects. His experience can count on over 20 years of career dedicated to:

- (i) Optoelectronic Devices in Wide Band Gap Materials.
- (ii) Integration of Nanostructures into Microsensors or Nanomaterials into polymeric composites.
- (iii) Study and optimization of 3D additive printing for integration into industrial manufacturing processes.
- (iv) Study and integration of MEMS devices in industrial application contexts.

L. Scaltrito is scientific Responsible for the Politecnico (Partner) of the European project (2020-23) - "CMOS compatible and ultrabroad-band on-chip SiC frequency comb - SiComb", funded by the European community under the Call: H2020-FETOPEN-2018-2020 - Topic: FETOPEN-01-2018-2019-2020: FET-Open Challenging Current Thinking.

He is coordinator, for the Politecnico (Partner) of the Piedmont Region project with the Regional Operational Program F.E.S.R. 2014/2020, of more than 5 projects dedicated to the technological transfer.

He is leading away several industries to pursue great benefits from the research, and he is coordinating 15 private funded projects.

He deposited two patents:

1. "PIPELINE INSPECTION APPARATUS FOR THE INTERNAL INSPECTION OF PIPELINES", L. Scaltrito; A. G. Di Lullo; M. PIROLA; Jean Marc Tulliani, Patent number: ITMI20112239 (A1), publication date: 06/16/2013. The patent was transferred to the company ENI SpA as part of a framework agreement. The patent obtained the PCT and was also extended to the US and Worldwide (US2015 / 0059498A1 (filed December 6th, 2012, "Pipeline inspection apparatus for the internal inspection of pipelines") and associated WO2013 / 102807A2, Assignee Eni S.p.A.)
2. "CONDUCTIVE MULTI-LAYER PANEL FOR THE CASSETTE OF VEHICLES, IN PARTICULAR VEHICLES", L. Scaltrito; Üstünberk Can. Patent number: P4631IT00, publication date: 23/08/2021. The patent was transferred to Martur Italy Srl as part of a contractual agreement. The patent was submitted for PCT extension with filing application No. PCT / IB2020 / 058458.

L. Scaltrito promotes the signing of a Framework Agreement rep.357 / 2019, with the University of Messina, in the Memorandum of Understanding they undertake to collaborate in the conduct of the research project of common interest entitled "Innovative technologies for environmental monitoring ". In particular, a first project was signed that will allow the two universities to test their scientific skills in the field: the Politecnico will perform sampling and analysis tests of heavy metals in marine waters and the University of Messina will study and produce territorial maps of the state of backdrops, through the use of Self-Guided Submarine Vehicles - AUV devices, on board of which the Politecnico di Torino has installed innovative MEMS devices for spectrophotometric analysis.

The Professor is a member of the management committee of funding calls (Working Group 4) of the Italian Competence Center Industry Manufacturing 4.0.

He is member of the Steering Committee and Directive Council of the Interdepartmental Laboratory of the Polytechnic of Turin, "Power Electronics Innovation Center - PEIC".

The Professor since 2019 is head of Technology Transfer for the Department of Applied Science and Technology of the Politecnico di Torino. Since 2020 he has been a member of the Steering Committee of the Interdepartmental Laboratory for Technology Transfer (LabTT) of the Politecnico di Torino.

The Professor has been a member of the Italian Association of Science and Technology AIV since 2013. Since 2015 he has been a member of the Board of Directors of the association, from 2016 to 2018 he was the Vice President of the Board of Directors and from 2018 to 2020 he chairs the Board of Directors.

L. Scaltrito from 2019 was invited to participate in two working groups of the Italian Association for Industrial Research - AIRI: Technology and its transfer; Networking, associative marketing and communication.

From 2016 to 2019 he represented Italy at the International Union for Vacuum Science, Technique and Applications - IUVSTA, in the Electronic Materials and Processes Division. The candidate has carried out scientific dissemination activities in Europe.

From 2011 to 2015 he participated as an active member of the European Commission for the "Set Plan European Energy Education and Training Initiative" program for the RENEWABLE ENERGY sector, subsector of concentrated solar energy. Activity carried out under the framework agreement between the Polytechnic of Turin and ENEA.

L. Scaltrito, on 8 April 2009 (Prot. Int. N. 0006485 / VII.7 / SPP), was appointed by the Rector, Francesco Profumo, as Laser Safety Technician and he receives the task for the implementation of Legislative Decree 81/2008, Chapter V - Protection of workers from the risks of exposure to artificial optical radiation.

Author of more 100 research papers, 3 Book chapter and 2 patents in the fields of microsensors and 3D additive polymeric processes.

Guest Editor of Special Issue "Multifunctional Nanocomposites in 3D Printing Technologies" Nanomaterials (ISSN 2079-4991), MDPI.

He is referee for the *Elsevier Journals in Physics* and, *Transactions on Electron Devices*.

L. Scaltrito is project reviewer and scientific expert for the Ministry of Education, University and Research.

Invited lecturer to several National and International Workshops and Conferences (MNE, ASI Workshop, Nanoforum, SiC Workshop, DIAMOND, ICMAT, NanotechItaly, VASSCAA-6,...), 2<sup>nd</sup> and 3<sup>rd</sup> Level Master Programs (Univ. del Piemonte Orientale, IIT, Università di Modena, Università di Genova, CNR Faenza, Università di Padova, CNR Legnaro, ...) and private Companies formation and education programs (Varian Inc, Agilent Vacuum Technologies, Media Lario, ENEL, ...).

The Researcher, in the years 2000 – 2005, coordinated a team to acquire significant scientific and technological skills in the design of optics for laser beam reshaping. This knowledge promoted collaboration with companies in the surface treatment sector and participating in the Start Cup Piemonte Valle d'Aosta 2006 tender. The project idea ranks second and the team decides to found the Spin-Off. The company name's Microla Optoelectronics Srl. The candidate leads the company remaining as president of the Board of Directors until 2015. In these years, the researcher offers his young partners and employees of Microla his managerial leadership and the scientific and technological skills related to the field of laser applications for treatment surface of the materials.