

Federico Mecarini is a *Electron and Ion Beam Specialist*, member of technical and application support team of Assing company since 2011. His activity is mainly focused on Scanning Electron Microscopy, taking care of technical and application issues for the company customers. He is also *Electron Beam Lithography specialist*.

Previously he took part in several research projects in different Italian institutes:

- In 1999 he approached the scientific research, working as electronics technician at Physics Department of University of Pisa (Italy).
- On April 2000 he began his long experience in clean room environment, working at IESS-CNR (Institute of Solide State Electronics-National Council of Research, today named IFN) in Rome; here he was involved in TFT's group, where microfabrication processes for development of Thin Film Transistor were studied, acquiring large experience in physical and chemical processes (wet and dry etching, metallization, optical lithography, thin film deposition) and also in maintenance of various scientific instruments (mostly plasma technology facilities as PECVD and ECR) and of various clean room systems.
- On June 2004 he moved to University of Tuscia (Viterbo-Italy), working in the Biophysics Laboratories as Support Technician, performing informatics, mechanics and electronics assistance and operating shortly in AFM/STM analysis. At the same time he cooperated with Department of Physics - University of Perugia (Italy), for electronics planning (CAD) and realization of electronics boards for scientific experiments.
- On March 2006 he started his significant experience at University of Catanzaro (Italy) in the BioNEM Laboratory (Centre of Bio-Nanotechnology and Engineering for Medicine), holding the role of Lab manager, taking care of maintenance and managing of the whole clean room facilities including the instruments. Here he has got large experience in nanofabrication, with electron beam lithography as first topic, managing and servicing the EBL system. He was also involved in many research project, cooperating with researchers for developing new ideas to fabricate nano-devices for bio-engineering applications.
- From December 2009 to March 2011 he worked at Italian Institute of Technology (Genova-Italy) as Senior Technician at the Clean Room facility of Nanofabrication Department, managing the technical staff and several instruments, mainly EBL system and Plasma's facilities (ICP-RIE, PECVD, SPUTTERING). He also cooperate with researchers connecting their research activity to the development of the projects/devices.
He mainly was involved in developing and realization of plasmonic nano-structures and nano-devices for interaction with microfluidics and optics activities.