

FP7 NANOSENS - Twinning Actions 2013 - 2015

(1) SCAMMD

(a) Outgoing:

| NIRDTP Scientist | Period | Main objectives |
|-------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dr. Mihai Ţibu | 19/10 – 07/11/2014 | <ul style="list-style-type: none"> • Characterization and optimization of the variables that affect the energy conversion efficiency in energy harvesting devices. |
| Dr. Mihai Ţibu | 09/03 – 03/04/2015 | <ul style="list-style-type: none"> • Testing of magnetic amorphous and nanocrystalline ribbons with applications in small EM generators (harvesting devices); • Magneto-optical Kerr effect (MOKE) measurements of the magnetic domain wall dynamics in glass-coated magnetic nanowires; • Participation at the IOP Magnetism Conference, Leeds, UK. |
| Dr. Tibor-Adrian Óvári | 29/03 – 03/04/2015 | <ul style="list-style-type: none"> • Collaboration on the topics of magnetic domain walls nucleation and propagation in rapidly solidified amorphous nanowires and their applications, including medical; • Participation at the IOP Magnetism Conference, Leeds, UK. |
| Dr. Mihaela Grigoraş | 17/06 – 30/07/2015 | <ul style="list-style-type: none"> • MOKE investigation of the domain wall dynamics in rapidly solidified amorphous glass-coated nanowires; • Exchange ideas and acquire knowledge on the techniques employed to control the nucleation and propagation of domain walls in nanowires samples. |
| Dr. Mihai Ţibu | 17/06 – 30/07/2015 | <ul style="list-style-type: none"> • MOKE investigation of the domain wall dynamics in rapidly solidified amorphous glass-coated nanowires; • Exchange ideas and acquire knowledge on the techniques employed to control the nucleation and propagation of domain walls in nanowires samples. |

(b) Incoming:

| SCAMMD Scientist | Period | Main objectives |
|--------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prof. Dan Allwood | 27/05 – 29/05/2014 | <ul style="list-style-type: none"> • Participation at the 1st NANOSENS Bilateral Seminar; • Participation at the 1st year Steering Committee meeting. |
| Dr. Nicola Morley | 26/04 – 29/04/2015 | <ul style="list-style-type: none"> • Participation at the 2nd NANOSENS Bilateral Seminar; • Participation at the 2nd year Steering Committee meeting. |
| Prof. Dan Allwood | 20/09 – 25/09/2015 | <ul style="list-style-type: none"> • Participation at the 7th International Workshop on Amorphous and Nanostructured Magnetic Materials – ANMM'2015; • Participation at the NANOSENS project Satellite Meeting within the ANMM'2015 Workshop. |

(2) ICMM-CSIC

(a) Outgoing:

| NIRDTP Scientist | Period | Main objectives |
|-----------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dr. Firuța Borza | 07/04 – 11/04/2014 | <ul style="list-style-type: none">Identify topics of mutual interest and initiate collaboration between NIRDTP and ICMM-CSIC within NANOSENS;Presentation of the main aspects of the NANOSENS project, along with general information about NIRDTP and the opportunities for collaboration. |
| Dr. Tibor-Adrian Óvári | 07/04 – 11/04/2014 | <ul style="list-style-type: none">Identify topics of mutual interest and initiate collaboration between NIRDTP and ICMM-CSIC within NANOSENS;Discussion with Prof. Vázquez and ICMM-CSIC team members of Horizon 2020 calls and topics of joint interest. |
| Dr. Oana-Georgiana Dragoș-Pînzaru | 28/04 – 28/05/2014 | <ul style="list-style-type: none">Training on the preparation and characterization of arrays of multilayer nanowires, nanodots and anti-dots;Improve knowledge of AFM/MFM characterization methods;Present results on the preparation and characterization of nanowire and nanodots arrays obtained at NIRDTP;Investigate the magnetic behavior of single Co and Fe nanodots prepared at NIRDTP Iași. |
| Dr. Cristian Rotărescu | 14/09 – 14/11/2015 | <ul style="list-style-type: none">Training on micromagnetic simulations using the Magpar package;Simulation of hysteresis loops for various nanowire diameters in order to analyze the magnetization reversal process in rapidly solidified amorphous nanowires;Study of the magnetic anisotropy using magnetization torque micromagnetic modeling. |

(b) Incoming:

| ICMM-CSIC Scientist | Period | Main objectives |
|----------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prof. Manuel Vázquez | 14/10 – 16/10/2013 | <ul style="list-style-type: none">Participation at the NANOSENS project kick-off meeting. |
| Prof. Manuel Vázquez | 27/05 – 01/06/2014 | <ul style="list-style-type: none">Participation at the 1st NANOSENS Bilateral Seminar;Participation at the 1st year Steering Committee meeting. |
| Dr. Cristina Bran | 26/04 – 29/04/2015 | <ul style="list-style-type: none">Participation at the 2nd NANOSENS Bilateral Seminar;Participation at the 2nd year Steering Committee meeting. |
| Prof. Manuel Vázquez | 18/09 – 24/09/2015 | <ul style="list-style-type: none">Participation at the 7th International Workshop on Amorphous and Nanostructured Magnetic Materials – ANMM'2015;Participation at the NANOSENS project Satellite Meeting within the ANMM'2015 Workshop. |

(3) INESC MN

(a) Outgoing:

| NIRDTP Scientist | Period | Main objectives |
|------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Andrei Jitariu | 03/03 – 18/04/2014 | <ul style="list-style-type: none">• Training on the preparation of magnetoresistive (MR) thin films for biosensing applications;• Training on the techniques employed (deposition and microfabrication);• Training on the characterization methods for MR samples. |
| Andrei Jitariu | 26/01 – 03/04/2015 | <ul style="list-style-type: none">• Development and improvement of the detection techniques of magnetic nanoparticles by using MR sensors combined with microfluidic channels. |
| Dr. Oana-Georgiana Dragoş-Pînzaru | 16/06 – 17/07/2015 | <ul style="list-style-type: none">• Preparation of micro- and nano-scale structures by electron beam lithography and/or photolithography for sensing applications;• Preparation of “lab-on-chip” (LoC) devices. |
| Dr. Sorin Corodeanu | 16/06 – 17/07/2015 | <ul style="list-style-type: none">• Training on the acquisition and processing of the signals from magnetic sensors for low field detection (e.g., biomagnetic signal detection and biomolecules detection);• Detection of brain waves using magnetic sensors. |
| Costică Hlenschi | 16/06 – 17/07/2015 | <ul style="list-style-type: none">• Training on the design of electronic circuits for processing signals provided by magnetic sensors;• Performing experiments on the detection of biomolecules using magnetic sensors. |
| Andrei Jitariu | 16/06 – 31/07/2015 | <ul style="list-style-type: none">• Fabrication of microfluidic devices for nanoparticle detection;• Microfabrication and characterization of magnetic tunnel junctions (MTJs) with the MgO layer obtained by sputtering or by e-beam evaporation, in order to determine the optimum deposition method of the MgO barrier. |

(b) Incoming:

| INESC MN Scientist | Period | Main objectives |
|--------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dr. Diana Leitao | 14/10 – 16/10/2013 | <ul style="list-style-type: none">• Participation at the NANOSENS project kick-off meeting. |
| Dr. Susana Cardoso de Freitas | 26/04 – 28/04/2015 | <ul style="list-style-type: none">• Participation at the 2nd NANOSENS Bilateral Seminar;• Participation at the 2nd year Steering Committee meeting. |
| Dr. Susana Cardoso de Freitas | 20/09 – 22/09/2015 | <ul style="list-style-type: none">• Participation at the 7th International Workshop on Amorphous and Nanostructured Magnetic Materials – ANMM’2015;• Participation at the NANOSENS project Satellite Meeting within the ANMM’2015 Workshop. |

(4) ICN

(a) Outgoing:

| NIRDTP Scientist | Period | Main objectives |
|------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dr. Dumitru-Daniel Herea | 01/10 – 12/12/2014 | <ul style="list-style-type: none">• Cell culture preparation to test nano and biomaterials;• Electrochemical impedance measurements to detect target biological molecules;• Presentation of results obtained at NIRDTP to the Nano-Bioelectronics & Biosensors Group from ICN. |
| Prof. Horia Chiriac | 26/10 – 29/10/2014 | <ul style="list-style-type: none">• Identify topics of mutual interest and initiate collaboration between NIRDTP and ICN within NANOSENS;• Presentation of the main aspects of the NANOSENS project, along with general information about NIRDTP and the opportunities for collaboration. |
| Dr. Nicoleta Lupu | 26/10 – 29/10/2014 | <ul style="list-style-type: none">• Identify topics of mutual interest and initiate collaboration between NIRDTP and ICN within the NANOSENS project;• Discussions with Prof. Arben Merkoçi and the ICN team members on topics of joint interest, including H2020 calls. |
| Dr. Dumitru-Daniel Herea | 19/01 – 08/04/2015 | <ul style="list-style-type: none">• Electrochemical impedance measurements to detect target biological molecules and to monitor the growth and development of a specific cell culture;• Detection of environmental contaminants through cell cultures. |
| Dr. Oana-Georgiana Dragoş-Pînzaru | 02/03 – 02/04/2015 | <ul style="list-style-type: none">• Study of the preparation of micrometer-sized electrodes by inkjet printing technique in order to prepare electrochemical biosensors;• Study of SCPE electrodes (Screen Printed Carbon Electrodes) in order to use them as electrochemical biosensors;• Preparation of electrodes by the two methods and testing them by electrochemical impedance measurements;• Presentation of new NIRDTP results to the group from ICN. |
| Dr. Dumitru-Daniel Herea | 15/05 – 31/07/2015 | <ul style="list-style-type: none">• Testing the functionality of a previously built cell culture incubator for an inverted fluorescence microscope;• Electrochemical measurements to detect target molecules;• Develop a capacitive biosensor. |

(b) Incoming:

| ICN Scientist | Period | Main objectives |
|----------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prof. Arben Merkoçi | 14/10 – 16/10/2013 | <ul style="list-style-type: none">• Participation at the NANOSENS project kick-off meeting. |
| Prof. Arben Merkoçi | 17/09/2014 | <ul style="list-style-type: none">• Twinning visit to NIRDTP;• Enhance the collaboration between ICN and NIRDTP. |
| Prof. Arben Merkoçi | 27/04 – 29/04/2015 | <ul style="list-style-type: none">• Participation at the 2nd NANOSENS Bilateral Seminar;• Participation at the 2nd year Steering Committee meeting. |
| Prof. Josep Nogués | 21/09 – 25/09/2015 | <ul style="list-style-type: none">• Participation at the 7th International Workshop on Amorphous and Nanostructured Magnetic Materials – ANMM'2015;• Participation at the NANOSENS project Satellite Meeting within the ANMM'2015 Workshop. |

(5) UGLA

(a) Outgoing:

| NIRDTP Scientist | Period | Main objectives |
|--------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dr. Gabriel Ababei | 02/03 – 03/04/2015 | <ul style="list-style-type: none">• Training on the TEM sample preparation methods;• Training on the microstructural and compositional characterization techniques of amorphous and nanocrystalline materials by Lorentz and high resolution TEM. |
| Dr. Gabriel Ababei | 22/06 – 24/07/2015 | <ul style="list-style-type: none">• Training on the structural, morphological and compositional investigation of metal-dielectric interfaces in composite materials using high resolution TEM;• Training on the interpretation of the experimental results obtained by high resolution TEM on the structural, morphological and compositional characteristics of magnetic materials. |

(b) Incoming:

| UGLA Scientist | Period | Main objectives |
|---------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dr. Stephen McVitie | 27/05 – 30/05/2014 | <ul style="list-style-type: none">• Participation at the 1st NANOSENS Bilateral Seminar;• Participation at the 1st year Steering Committee meeting. |
| Dr. Stephen McVitie | 26/04 – 29/04/2015 | <ul style="list-style-type: none">• Participation at the 2nd NANOSENS Bilateral Seminar;• Participation at the 2nd year Steering Committee meeting. |
| Dr. Stephen McVitie | 20/09 – 24/09/2015 | <ul style="list-style-type: none">• Participation at the 7th International Workshop on Amorphous and Nanostructured Magnetic Materials – ANMM'2015;• Participation at the NANOSENS project Satellite Meeting within the ANMM'2015 Workshop. |