



PhD in Information Technology and Electrical Engineering

Università degli Studi di Napoli Federico II

PhD Student: Salvatore Perna

XXIX Cycle

Training and Research Activities Report – Third Year

Tutor: Prof. Claudio Serpico – co-Tutor: Prof. Massimiliano d’Aquino

Add the following items according to our meeting we have.

Concerning the structure of the document, use the Section number as is. Use the sub-contents indicated with a letter only as a suggestion for your content (a free form text is preferable)

1. Information
 - a. Salvatore Perna, Master degree in electrical engineering – Università di Napoli Federico II
 - b. XXIX Cycle- ITEE – Università di Napoli Federico II
 - c. ICT e Componentistica Elettronica
 - d. Tutor: Prof. Claudio Serpico
 - e. Co-Tutor: Prof. Massimiliano d'Aquino (Università Parthenope)
2. Study and Training activities
 - a. Course: Scientific Writing
 - b. Course: Misure per l'ingegneria dei materiali
 - c. Course: Gestione razionale dell'energia elettrica
 - d. Seminar: Speech technologies at trinity college
 - e. Seminar: Microcontrollori di misura
 - f. Seminar: Challenging real-time measurement systems for immersive life-size augmented environment
 - g. Seminar: The development of a fast pick and place robot with an innovative cylindrical drive
 - h. Seminar: Il monitoraggio della qualità del servizio oltre gli indicatori standard: l'esperienza sulla rete mobile di Telecom Italia
 - i. Seminar: An overview on image forensics with emphasis on physics based scene verification
 - j. Seminar: Embedded software validation
 - k. Seminar: Reti di telecomunicazione in Campania: esperienze ed opportunità
 - l. Seminar: Ddos detection in cloud and campus network
 - m. Seminar: Nanostructured materials based biosensors engineering next generation of biomedical devices
3. Research activity
 - a. Nanomagnetism and Spintronics
 - b. Study
 - c. Research description
 - d. Collaborations
4. Products
 - a. Publications
 - i. Influence of the second order uniaxial anisotropy on the dynamical proprieties of magnetic tunnel junctions, [IEEE Transactions on Magnetics](#) (Volume: PP, [Issue: 99](#))
 - ii. [Large Hysteresis effect in Synchronization of Nanocontact Vortex Oscillators by Microwave Fields](#), Scientific Reports, vol. 6, Nature Publishing group
 - iii. [Signatures of Chaos in Thermal Switching of Nanomagnets](#), [arXiv:1610.03755 \[cond-mat.mes-hall\]](#)
 - iv. Current-Driven Hysteretic Synchronization in Vortex Nanopillar Spin-Transfer Oscillators, [IEEE Magnetics Letters](#) (Volume: PP, [Issue: 99](#))
5. Conferences and Seminars
 - a. Conference: Advances in Magnetics, Bormio 2016, March 14-16. Oral presentation.
 - b. Visit to University of California (Irvine) from April 4 to 8 to disseminate scientific result on chaotic magnetization dynamics driven by alternating fields and spin torques

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C. Conference: Sol-skymag 2016, San Sebastian (SPA) 2016, June 24-30. Oral presentation.