

## C. Cosmelli papers (2005- 2007)

2007

- **Potential Characterization of a Double Squid Device for Quantum Computing Experiments**, F. Chiarello, P. Carelli, M.G. Castellano, M. Cirillo, C. Cosmelli, G. Frossati, N. Grønbech-Jensen, F. Mattioli, S. Poletto, G. Torrioli, A. de Waard, *IEEE Tr. Electronics*, in press (2007).
- **Catastrophe Observation in a Josephson Junction System**  
M. G. Castellano, F. Chiarello, R. Leoni, F. Mattioli, G. Torrioli, P. Carelli, M. Cirillo, C. Cosmelli, A. de Waard, G. Frossati, N. Grønbech-Jensen, and S. Poletto, *Phys. Rev. Lett.*, in press (2007).

2006

- **Investigation of Josephson interferometer potentials by ac excitations**  
M. Cirillo, P. Carelli, M.G. Castellano, F. Chiarello, C. Cosmelli, N. Grønbech-Jensen, R. Leoni, J.E. Marchese, F. Mattioli, D. Simeone and G. Torrioli, *Physica C: Superconductivity, Volumes 437-438*, 15 May 2006, Pages 46-51
- **Characterization of a fabrication process for the integration of superconducting qubits and rapid-single-flux-quantum circuits**  
Maria Gabriella Castellano, Leif Grönberg, Pasquale Carelli, Fabio Chiarello, Carlo Cosmelli, Roberto Leoni, Stefano Poletto, Guido Torrioli, Juha Hassel and Panu Helistö  
*Supercond. Sci. Technol.* **19** No 8 (August 2006) 860-864
- **New CUORICINO results on the way to CUORE**  
*P Gorla, F Alessandria, R Ardito, C Arnaboldi, D R Artusa, F T Avignone III, M Balata, I Bandac, M Barucci, J W Beeman, F Bellini, C Brofferio, C Bucci, S Capelli, L Carbone, S Cebrian, M Clemenza, C Cosmelli, O Cremonesi, R J Creswick, I Dafinei, S Di Domizio, M Diemoz, M J Dolinski, H A Farach, F Ferroni, E Fiorini, S J Freedman, C Gargiulo, A Giachero, E Guardincerri, A Giuliani, T D Gutierrez, E E Haller, K Heeger, I G Irastorza, E Longo, G Maier, R Maruyama, S Morganti, S Nisi, C Nones, E B Norman, A Nucciotti, P Ottonello, M Pallavicini, V Palmieri, M Pavan, M Pedretti, G Pessina, S Pirro, E Previtali, L Risegari, C Rosenfeld, S Sangiorgio, M Sisti, A R Smith, L Torres, G Ventura, M Vignati, N Xu and L Zanotti*  
*Phys. Scr.* **2006** No T127 (October 2006) 49-51
- **The 2003 run of the EXPLORER-NAUTILUS gravitational wave experiment**  
P. Astone, D. Babusci, R. Ballantini, M. Bassan, P. Carelli, G. Cavallari, F. Cavanna, A. Chincarini, E. Coccia, C. Cosmelli, S. D'Antonio, F. Dubath, V. Fafone, S. Foffa, S. Frasca, G. Gemme, G. Giordano, M. Maggiore, A. Marini, Y. Minenkov, I. Modena, G. Modestino, A. Moleti, G. P. Murtas, A. Pai, O. Palamara, G. V. Pallottino, R. Parodi, G. Piano Mortari, G. Pizzella, L. Quintieri, A. Rocchi, F. Ronga, R. Sturani, R. Terenzi, G. Torrioli, R. Vaccarone, G. Vandoni, M. Visco, *Class. Quantum Grav.* **23**, S169-S178 (2006).
- **Status report on the EXPLORER and NAUTILUS detectors and the present science run P.**  
Astone, D. Babusci, R. Ballantini, M. Bassan, P. Carelli, G. Cavallari, F. Cavanna, A. Chincarini, E. Coccia, C. Cosmelli, S. D'Antonio, F. Dubath, V. Fafone, S. Foffa, S. Frasca, G. Gemme, G. Giordano, M. Maggiore, A. Marini, Y. Minenkov, I. Modena, G. Modestino, A. Moleti, G. P. Murtas, A. Pai, O. Palamara, G. V. Pallottino, R. Parodi, G. Piano Mortari, G. Pizzella, L.

Quintieri, A. Rocchi, F. Ronga, R. Sturani, R. Terenzi, G. Torrioli, R. Vaccarone, G. Vandoni, M. Visco, *Class. Quantum Grav.* **23**, S57-S62 (2006) .

2005

- **Superconducting tunable flux qubit with direct readout scheme**  
F. Chiarello, P. Carelli, M. G. Castellano, C. Cosmelli, L. Gangemi, R. Leoni, S. Poletto, D. Simeone, G. Torrioli  
*Superconductor Science and Technology* **18**, 1370-1373 (2005)
- **Low field magnetotransport in strained Si/SiGe cavities**  
G. Scappucci, L. Di Gaspare, F. Evangelisti, E. Giovine, A. Notargiacomo, R. Leoni, V. Piazza, P. Pingue, and F. Beltram  
*Phys. Rev.* **B 71**, 245311 (2005)
- **A new flux/phase qubit with integrated read-out**  
C. Cosmelli, M. Di Bucchianico, S. Poletto, M.G. Castellano, F. Chiarello, R. Leoni, D. Simeone, G. Torrioli, P. Carelli  
*IEEE Trans. Appl. Superc.* **15**, 849-851 (2005)
- **Cumulative analysis of the association between the data of the gravitational wave detectors NAUTILUS and EXPLORER and the gamma ray bursts detected by BATSE and BeppoSAX**  
P. Astone, D. Babusci, M. Bassan, P. Carelli, E. Coccia, C. Cosmelli, S. D'Antonio, V. Fafone, F. Frontera, G. Giordano, C. Guidorzi, A. Marini, Y. Minenkov, I. Modena, G. Modestino, A. Moleti, E. Montanari, G. V. Pallottino, G. Pizzella, L. Quintieri, A. Rocchi, F. Ronga, L. Sperandio, R. Terenzi, G. Torrioli, M. Visco  
*Phys. Rev. D* **71**, 042001 (2005)
- **Variable transformer for controllable flux coupling**  
M. G. Castellano, F. Chiarello, R. Leoni, D. Simeone, G. Torrioli, C. Cosmelli and P. Carelli  
*Applied Physics Letters* **86**, 152504 (2005)

Comm. to Int. Conferences

- **Fabrication and test of superconducting single photon detectors**  
R. Leoni, F. Mattioli, M.G. Castellano, S. Cibella, P. Carelli, S. Pagano, D. Perez de Lara, M. Eijrnaes, M.P. Lisitski, E. Esposito, R. Cristiano, C. Nappi  
*11th Workshop on Low Temperature Detectors, 31 July- 5 August 2005, Tokyo, Japan*
- **Manipulation and Readout of a Tunable Flux Qubit with Integrated Readout: Preliminary Results**  
C. Cosmelli, P. Carelli, M. G. Castellano, F. Chiarello, R. Leoni, S. Poletto, D. Simeone, G. Torrioli  
*24th International Conference on Low Temperature Physics, 10 - 17 August 2005, Orlando, Florida, USA*
- **Experimental characterization of the two flux states in a flux qubit with direct readout.**

M. G. Castellano, P. Carelli, F. Chiarello, C. Cosmelli, R. Leoni, F. Mattioli, D. Simeone, S. Poletto, G. Torrioli  
*10th International Superconductive Electronics Conference ISEC 2005, 5-9 september 2005, Noordwijkerhout, the Netherlands*

- **Tunable flux qubits controlled by Rapid Single Flux Quantum logic: considerations and perspectives**  
F. Chiarello, P. Carelli, M. G. Castellano, C. Cosmelli, M. Khabipov, R. Leoni, G. Torrioli, A. Zorin  
*10th International Superconductive Electronics Conference ISEC 2005, 5-9 september 2005, Noordwijkerhout, the Netherlands*
- **Anomalous escape distribution in Josephson devices of intermediate size.**  
P. Carelli, M.G. Castellano, F. Chiarello, C. Cosmelli, R. Leoni, F. Mattioli, S. Poletto, D. Simeone, G. Torrioli  
*7th European Conference on Applied Superconductivity EUCAS '05, 11-15 September 2005, Vienna*
- **Breaking the limits for low energy high angular resolution neutral atom detection by means of micro-shuttering techniques.**  
A. M. Di Lellis, S. Orsini, S. Selci, G. Castellano, R. Leoni, A. Mura, F. Mattioli, I. Dandouras, E. De Angelis, A. Milillo, S. Livi, K. Torkar, S. Barabash, P. Wurz  
*AOGS 2005, the Asia Oceania Geosciences Society's 2nd Annual Meeting, Singapore, 20 to 24 June 2005*

#### Comm. to National Conferences

- **Development of superconducting qubits**  
M.G. Castellano, C. Cosmelli, P. Carelli  
*Meccanica Quantistica e Computazione Quantistica, IIASS "E.R. Caianiello", Vietri sul Mare, Friday 18 - Sunday 20 March 2005*