

Memories of Francesco Scaramuzzi

Vittorio Violante and Michael McKubre

*"Franco was always a pleasure to work with.
Franco was a fine man and a good scientist."*

David Goodstein – Caltech University

Francesco Scaramuzzi (Franco to friends and family) was born in Bari, Italy in 1928. He achieved his Laureate in Mathematics and Physics at the University of Bari in 1951 and was appointed Joint Professor of General Physics there in 1965. Franco held university teaching positions in physics at the Universities of Bari, Padova and Roma from 1951-1967. He also held a position as Invited Professor at Caltech University in Pasadena in 1983 and again in 1985, where he worked closely with David Goodstein. Goodstein's now famous and fortunately "nuanced" position on "cold fusion" was achieved in part because of his deep respect for Scaramuzzi (see quote above).

Franco Scaramuzzi began his scientific activity at Frascati National Laboratories in 1956, and what was to become a prestigious scientific career continued there until his retirement in 1995. He was one of the founding fathers of cryogenics physics in the emerging Frascati Laboratories, and is held in high regard there as in the scientific community in Italy, Europe and the world. As an indication of the level of respect at Frascati Labs there is a small stand-alone mausoleum on the campus devoted to Franco's career there, containing information and apparatus from his early experiments. Pursuing CMNS activity in my (MM) frequent travels to ENEA Frascati, Franco's stature, "clout" and deep institutional knowledge made my visits easy, enjoyable and highly productive. I (MM) also deeply appreciate Franco's personal company both in the laboratory and in his beautiful home and garden in Grottaferrata (near Frascati), and that of his wonderful wife Teresa who survives him.

Franco Scaramuzzi was head of the Cryogenics Group of the Laboratori Nazionali di Frascati (LNF) of the Comitato Nazionale per l'Energia Nucleare (CNEN) from 1960-1976. He was Director of the Laboratory of Molecular Spectroscopy of the Laser Division of CNEN at Frascati from 1976-1980 and Director of the Laser Division of CNEN at Frascati from 1978-1982. In 1982 Franco was appointed as head of a project on Cryogenic Technologies at ENEA Frascati (formerly CNEN). From December 1994 to July 1995 he was Vice-Director of the Energy Department of ENEA. Franco retired formally in August 1995 but remained as a consultant at ENEA Frascati until 2003 when he transitioned "across the road" to the Laboratori Nazionali di Frascati of the Istituto Nazionale di Fisica Nucleare (INFN) as research associate from 2004-2012.



Photo courtesy of Michael McKubre.

Francesco and Teresa Scaramuzzi

We know ENEA Frascati (and INFN) now to be considerable forces in CMNS research, but it is very unlikely that this effort would have taken root and hold at ENEA had it not been for Franco's strength of character and reputation there. His powerful early cryogenic "cold fusion" experiments demonstrated clear nuclear signal (neutrons) in one of the most ideally situated places on earth or under it in the Gran Sasso deep mine. This experiment, combined with Franco's personal reputation, provided sufficient stimulus and confidence for a conventional "hot fusion" laboratory (ENEA) to pursue seriously the otherwise "radical" concept of "cold fusion." Our field and world have benefited greatly from the home that ENEA Frascati made there for Franco's two notable direct protégés (Vittorio Violante and Antonella De Ninno), for three of the giants of our field who researched there under the stewardship of Carlo Rubbia (Emilio Del Giudice, Giuliano Preparata and Martin Fleischmann) and for a frequent passing stranger (Michael McKubre).

In addition to his other institutional duties, since 1989 Francesco Scaramuzzi led the research activities on Condensed Matter Nuclear Science (CMNS) at ENEA. The extraordinary work performed and supervised by Franco and sustained under his "umbrella" fostered conditions to maintain such research within ENEA until the present day (2017). Franco was a founding and sustaining member of the International Advisory Committee (IAC) of the international cold fusion conference series (from 1990) and was selected as the Chair of the 8th International Conference on Condensed Matter Nuclear Science in Lerici (Italy) in 2000.

In 2009 he was also the Chair of the Scientific Committee of the 15th edition of the same conference in Rome and was one of the editors of the book *Cold Fusion: The History of Research in Italy*. His leadership in ENEA research on CMNS was characterized by the enthusiasm that he was able to transfer to the team and by the friendly communication with all his coworkers. This was due to his personal character and his rigorous approach to address research in the field towards the scientific method.

As a final personal note (MM), ENEA Frascati was in many ways my second home (I visited there more than 30 times since 1990). Franco Scaramuzzi was almost exactly the same age as my father (also now deceased) and shared many attitudes and outlooks with him. So Franco's passing affects me more than scientifically. He was also one of only four remaining active or semi-active members of the original ICCF IAC (the remaining three being Srinivasan, Takahashi and myself) and people of his style and stature do not seem to develop anymore. Of course, this opens the door to a new generation with new style to achieve hopefully similar or greater stature. I look forward to it. With his generous character I am sure that Franco would too.