CURRICULUM VITÆ — Andrea E. G. Giuliani

Personal information

Surname, First names	**Giuliani, Andrea Ernesto Guido**
Nationality	Italian
Date and place of birth	March 12th, 1961, Milano (Italy)
Gender	Male
Current positions	(i) Associate professor (at "tempo definito") at Dipartimento di Scienza e Alta Tecnologia of the University of Insubria, Como, Italy (ii) Research Director (1st Class) at CNRS/IN2P3 - Centre de Sciences Nucléaires et de Science de la Matière (CSNSM) - Bâtiment 108 - 91405 Campus d'Orsay (France)

Positions held and education

1985	Diploma in Physics ("Laurea"), University of Milano, Italy
1986-1989	Ph.D. in Physics, University of Milano, Italy
1989-1991	Post Doc, INFN (Istituto Nazionale di Fisica Nucleare), Milano section, Italy
1991	Researcher at the University of Milano, Italy
1997	Senior Researcher (Primo Ricercatore) at INFN, Milano section, Italy
1999	Ass. Professor at the University of Insubria, Como, Italy (from 2011 at "tempo definito")
2011	Directeur de Recherches (Première Classe), CSNSM, Orsay Campus, France

Scientific achievements

Andrea Giuliani is and was involved, in prominent positions, in frontier experiments in astroparticle physics at Gran Sasso Underground Laboratory, at Modane Underground Laboratory, at Milano (INFN), Como (Insubria University) and Orsay (CSNSM) cryogenics laboratories.

He has given crucial contributions to the development of a new class of particle detectors (low temperature bolometers as single particle detectors), and to their applications to neutrino physics (in particular the search for neutrinoless double beta decay and the direct measurement of the neutrino mass) and other rare-event searches (dark-matter direct detection).

He has been leading a research group involved in low temperature detector development for neutrino physics at the University of Insubria (Como, Italy) for several years and he is now leading a research group active on the development of innovative detectors for astroparticle physics at CSNSM-Orsay in France.

Main collaborations and experiments

- **Cuoricino [1999-2004]** (double beta decay): founding member. Cuoricino has been for several years among the experiments leading the field of neutrinoless double-beta decay, with the search for this rare process in the isotope ^{130}Te.
- **CUORE [2004-now]** (double beta decay): EB member (2005-2010), leader of the two key working group "Single Module Development" and "CUORE-0" (concerning the construction and the operation of the first CUORE tower). CUORE, the natural expansion of Cuoricino, is now under commissioning and data taking is foreseen in beginning of 2017. CUORE will be one of the most sensitive current double-beta-decay experiments.
- **MIBETA/MARE [2006-2009]** (neutrino mass): Italian PI. This search explored the possibility of a bolometric experiment for the direct measurement of the neutrino mass via the study of the beta decay of ^{187}Re.
- **LUCIFER [2010-2016]** (double beta decay): co-PI (ERC Advanced Grant in FP7, European Commission) – LUCIFER is now evolved in the CUPID-R&D project with the accomplishment of the original LUCIFER program, consisting in the construction and operation of an array of ZnSe scintillating bolometers to search for neutrinoless double-beta decay of ^{82}Se.
- **ISOTTA [2012-2014]** (pure isotopes for double beta decay): PI (ASPERA Common Call, funded by the European Commission).
- **EURECA [2012-now]** (dark matter): member of the Institution Board.

- **LUMINEU [2012-now]** (double beta decay): PI (Agence Nationale de la Recherche, France). LUMINEU has demonstrated that $ZnMoO_4$ and Li_2MoO_4 are excellent material for double-beta-decay search of ^{100}Mo with scintillating bolometers. A mid-scale demonstrator is now under construction in the framework of the CUPID program.
- **CUPID [2014-now]** (double beta decay) Member of the steering committee – preparation of the follow-up to the CUORE experiment.
- **EDELWEISS [2015-now]** (direct search for dark matter) – He is involved in the R&D activity to achieve low thresholds and sensitivity to low-mass WIMPs. EDELWEISS is a WIMP-searching experiment with a French leadership.

Publication, talks, coordination and science-evaluation roles

He is author of about **190 publications** in international physics journals, with an **h index** of **28**.

He has given **more than 30 invited review talks** about low temperature detectors, double beta decay, neutrino mass, dark matter and astroparticle physics at international conferences.

Coordination roles:

- Coordinator of IDEA (2004-2009), Joint Research Activity on double beta decay in ILIAS (Integrating Activity in FP7, European Commission): coordination of double beta decay search in Europe
- Member of the Peer Review and Science Advisory Committees of ApPEC (2008-now): co-author of the European Roadmap for Astroparticle Physics
- Member of the Committee for IRFU-IN2P3 prospect in France (2012)
- Working group coordinator in Groupe de Recherche Neutrino in France (2012-now)
- Member of the Scientific Committee of the IRFU/SPP (France) (2013-2016)
- Member of the Scientific Committee of the Canfranc Underground Laboratory (2013-now)

Science evaluation

- 2005 Reviewer of a project for the Scientific Committee of IN2P3
- 2009 Reviewer of a project for ANR, France
- 2009 Reviewer of a project for ASPERA R&D Common Call
- 2010 Reviewer of a project for SPP, CEA-Saclay, France
- 2010 – 2016 Reviewer of five projects for NSERC, Canada
- 2011 Reviewer of a project for the Scientific Committee of IN2P3
- 2014 Reviewer of a project for Gačr, Czech Republic
- 2015 Reviewer of a project for Ministerio de Economía y Competitividad, Spain

Teaching and students

- University courses (University of Insubria) on nuclear and elementary particle physics, astroparticle physics, radioactivity (1999-now)
- Courses and seminars in seven international doctorate schools
- Tutor of about 20 master students
- Tutor of 10 PhD students