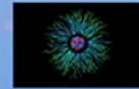


# FATA 2019



Fast Timing Applications  
for Nuclear Physics and Medical Imaging  
Acireale 3-5 September 2019

*Accademia degli Zelanti e dei Dafnici*  
*Conferences Room "Cristoforo Cosentini"*  
Via Marchese di Sangiuliano 17, Acireale, Catania

**September 03**

**8:30 Registration** - Files/download at the Conference PC (Info/management: Franco Mallamo-Acc. Degli Zelanti e dei Dafnici)

**9:30-10:00 Welcome Section**

*Open address*

*Angelo Pagano - INFN - Sezione di Catania-Accademia degli Zelanti e dei Dafnici*

*Welcome address*

*Giuseppe Contarino – President Accademia degli Zelanti e dei Dafnici*

*Francesco Priolo – Director Department of Physics "Ettore Majorana" – Elected: Rector of Catania University (TBC)*

*Stefano Ali - Mayor of Acireale*

*Eugenio Nappi - INFN Management board*

*Rosario Nania (INFN BO) - Presidents Scientific INFN comm. III*

*Walter Bonvicini (INFN TS) - Presidents Scientific INFN comm. V(TBC)*

*Alessia Tricomi - Director of INFN- Sezione di Catania CT*

*Santo Gammino – Director of INFN-Laboratori Nazionali del Sud*

**10:00-13:20 Technologies**

*Chair : Giacomo Cuttone - (INFN-LNS)*

10:00 - 10:45- Paul Lecoq (CERN-FR) "Ultrafast Meta-scintillators for a new generation of HEP detectors and Time-of-Flight PET"

10:45-11:10 - Stefaan Tavernier (PETsys electronics ) "Electronics for fast timing in Medical imaging"

*11:10 -11:40 Coffee break*

**11:40-13:20 Readout**

*Chair: Francesca Rizzo (University of Catania and INFN-LNS)*

11:40-12:05- Johan Nuyts (KU Leuven), "Using time-of-flight information for PET reconstruction in PET, PET/CT and PET/MRI"

12:05-12:30- Giacomo Borghi, Alberto Gola (Fondazione Bruno Kessler, Trento) "Photodetectors for fast timing"

12:30-12:55- Salleh Ahmad(Weeroc SAS) "Recent developments in fast timing ASICs for particle physics and medical imaging"

12:55-13:20- Antonio J. Gonzalez (Institute for Instrumentation in Molecular Imaging-Valencia) "MEDAMI 2019"

*13:20 – 15:30 - Lunch break (visit the seaside-on request)*

## **15:30- 17:00 Nuclear Physics and Medical Imaging and software**

*Chair: Emanuel Pollacco (IRFU/DPhN CEA Saclay)*

15:30-15:55- Maria Grazia Pellegriti (INFN- Sezione di Catania) “ A Time of flight application for nuclear reactions at Coulomb energy “

15:55-16:30- Dominique Breton (CNRS LAL ORSAY) ”Fast electronics for TOF in Nuclear Physics”

*16:30 – 17:00 Coffee break*

## **17:00-18:15- Applications**

*Chair: Elena Geraci (University of Catania and INFN-Sezione di Catania)*

17:00 -17:25- Paul Schotanus (Scionix-Holland, Bunnik) ” Fast timing with scintillation detectors”

17:25 - 17:50- Yuri Venturini(CAEN SpA, Viareggio) “New approaches to detector readout in particle physics and medical applications with efficient timing”

17:50 - 18:15 – Maurizio Conti (Siemens Healthcare Molecular Imaging, Knoxville, TN), “Siemens Biograph Vision and the future of TOF-PET”(skype)

18:15-18:45 Welcome Cocktail

**19:00 -24:00 By Night - excursion to Syracuse**

**September 04**

***Accademia degli Zelanti e dei Dafnici***

## **9:00-9:50 Imaging**

*Chair: Franco Garibaldi (INFN-Sezione di Roma1)*

9:00-9:25- Stan Majewski (University of California Davis)“ Imaging is Believing – The Future of Human Total Body Molecular Imaging Starts Now”

9:25-9:50- Stan Majewski (University of California Davis) “The Path to the Ideal Brain PET Imager. The Race Started. The Role for TOF PET”

**9:50-10:30 The Historical Side - conference space: Cathedral Acireale**

**9:55-10:30 -A. Ortolani (Acc. Zelanti e dei Dafnici) ‘ The time measurement by an ancient Meridian in ACIREALE’**

*10:35 – 11:05 Coffee break*

## **11:05-13:05 Nuclear physics from: fundamental and medical**

***Accademia degli Zelanti e dei Dafnici***

*Chair: Paolo Russotto (INFN-LNS)*

11:05-11:30- Franco Garibaldi (INFN-Sezione di Roma1) “A TOF PET MRI US probe project for prostate cancer diagnosis and follow up”

11:30-11:55- Simone Valdre' (INFN – Sezione di Firenze) ‘ ‘Charged particle identification using time of flightwith FAZIA”

11:55-12:20- Matthias Holl (Institut für Kernphysik, Technische Universität Darmstadt) “Fast timing for nuclear reaction studies at R3B”

12:20-12:45- Piotr Pawłowski (Inst. of Nucl. Physics, PAN- Kraków) ”Recent result obtained at CCB”

12:45-13:05- Nicola Belcari (University and INFN Sezione di Pisa) “UTOFPET: design of a highly scalable TOF-PET detector concept”

**13:10 Lunch break**

15:30-15:55 John Prior, (Lausanne University Hospital) "The 10-ps TOF PET: Clinical applications" ([skype](#))

15:55- 16:20 Michael Minot (Incom Inc. Charlton United States) "Large Area Picosecond Photodetector (LAPPD) Offers Fast Timing for HEP, NP and Medical Imaging" ([skype](#))

**16:30 Visit (guided-TBC) to historic city center- free open space**

**18:15 Leaving for Etna (visit of Catania Astrophysical Observatory. The "M. G. Fracastoro" Mountain Station Serra La Nave (Mt. Etna) Altitude: 1735m and social dinner -21:30 @ Antico orto dei limoni- Nicolosi)**

**September 05**

**Accademia degli Zelanti e dei Dafnici**

**9:00-11:05 Nuclear physics and application**

**Chair : Raffaele de Leo (INFN-Sezione di Bari)**

9:00-9:25- Ole Brandt (DESY) and Yonathan Munwes (Ins- for Experimental Phys. University of Hamburg) "Comissioning of the EndoTOFPET-US detector an Asymmetric Time of Flight Positron Emission Tomograph"

9:25- 9:50- Emanuele V.Pagano (INFN-LNS) "Narcos project for nuclear physics and applications"

9:50 -10:15- Dimos Sampsonidis (Aristotle University of Thessaloniki) " Precise timing with the PICOSEC-Microme gas Detector"

10:15-10:40 – Sara Pirrone (INFN Sezione di Catania) "TOF in Heavy Ion Reactions: CHIMERA detector & ISODEC experiment"

**11:05 – 11:35 Coffee break**

**11:35- 13:15 Nuclear Physics and Radiotherapy applications**

**Chair: Aurora Tumino ( University Enna-Kore and LNS)**

11:35-12:00- Marco Pinto (LMU Munich) "Positron emission tomography in radiation therapy planning, delivery, and monitoring"

12:00 -12:25- Marco Pinto (LMU Munich) "Direct time-of-flight for quantitative, real-time in-beam PET"

12:25-12:50- Pablo Cirrone ( INFN-LNS) " Generation, control and application of "flash" radiation beams from laser-matter interaction: the ELIMED beam line:"

12:50 – 13:15- Nicolò Jacazio (INFN-BO) " Ten years of operation of the MRPC TOF detector of ALICE: results and perspectives. "

**13:15- 15:30 Lunch break**

**15:30-16:45 Nuclear Physics and applications**

**Chair: Giuseppe Cardella (INFN - Sezione di Catania)**

15:30-15:55- Giacomo Traini (INFN – Sezione di Roma1) "Performance of the Time of Flight detectors in the FOOT experiment"

15:55-16:20- Riccardo Mirabelli (Sapienza, Università di Roma) " TOPS Project: Development of New Fast Timing Plastic Scintillators:"

16:20-16:45- Rok Pestotnik (Jozef Stefan Institute (SI) ) "Using Cherenkov light in TOF-PET"

**16:45-17:15 Closing Section**

**Chair: Enrico De Filippo (INFN- Sezione di Catania)**

16:45 -17: 15 Stan Majewski (University of California Davis ) "Summary and Conclusions"

