



Luca Malgeri

SENIOR RESEARCH STAFF

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Education

Universty La sapienza

PHD IN PHYSICS

Rome, Italy

1993 - 1996

University of Calabria

DEGREE IN PHYSICS

Cosenza, Italy

1988-1992

- Achieved with *Summa Cum Laude*

Current and Past Roles

CMS experiment

Geneva, Switzerland

2007 - now

- Deputy Spokesperson (2018 - present)
- Deputy Upgrades Coordinator (2016-2018)
- Fermilab LPC distinguished researcher (2016)
- Member of LPC Management Board (2014-2015)
- Physics Coordinator (2014-2015)
- Deputy Physics Coordinator (2012-2013)
- Co-coordinator of the Global Event Description team (2012-2014)
- Deputy Run Coordinator (2010-2011)
- Co-convener of the Physics Validation Team (2011-2012)
- Co-coordinator of the CSA07 alignment and calibration challenge (2007)
- Co-coordinator of the Alignment and Calibration commissioning and offline group (2006-2007)
- Editor of the Physics Analysis notes

CERN organization

Geneva, Switzerland

2004 - now

- CMG group leader and CMS deputy team leader (2016-present)
- Member of the senior staff advisory committee to the Director General (2019-present)
- Member of the Permanent Research Staff committee (2015-2018)
- Member of the Summer Student Program committee devoted to the selection of lecturers and definition of the teaching program (2013-2015)
- Member of several IT and EP/PH applied staff selection board

External committees

- Member of the Fermilab Physics Advisory Committee (2020-)
- Reviewer for the international funding agency
- Reviewer for scientific journals
- Co-chair of the LHCP2015 physics program committee
- Member of several International Conferences Advisory Committees

2004 - now

L3 experiment

- Coordinator of the W physics analysis group
- Member of the publication committee
- Responsible for the L1-Energy and L1- and L2-Tracker triggers

Geneva, Switzerland

1992 - 2004

FAST experiment

- Designer and responsible for DAQ/Event Builder/Run control/online analysis code

PSI, Switzerland

1998 - 2006

Positions

Post-doc Fellow

INFN, UNIVERSITY "LA SAPIENZA"

in prof. Dionisi's L3 group

Rome, Italy

1996 - 1997

Research Fellow

CERN, EP DEPARTMENT

in Dr. Kirkby's L3 group

Geneva, Switzerland

1997 - 1999

"Maître Assistant"

UNIVERSITY OF GENEVA, PHYS. DEPARTMENT

in Prof. Bourquin's and Prof. Pohl's group

Geneva, Switzerland

1999 - 2003

LD Research Staff

CERN, PH DEPARTMENT

in the CMG group

Geneva, Switzerland

2003 - 2007

Principal Research Physicist

CERN, PH DEPARTMENT

in the CMG group

Geneva, Switzerland

2007 - now

Details on CMS Research Activities

ALIGNMENT AND CALIBRATION ACTIVITIES

Worked on the study of the characteristics under irradiation of different types of crystals used in the ECAL calorimeter. Developed an iterative intercalibration technique for the testbeam campaign of the ECAL calorimeter in 2006.

From 2005 to 2006: **coordinator of the CMS ECAL calibration effort** in the electron-photon physics group of CMS.

From 2006 to 2007: coordinator of the offline and commissioning group on **Alignment and Calibrations and DataBase infrastructure**.

RUN COORDINATION ACTIVITIES

Global-Data analysis coordinator, from June 2008 to end of 2009, in charge of coordinating the analysis activities of the data taking during commissioning global runs.

In 2009 pioneered, proposed and co-coordinated the Physics Validation Team. The relevance of such group has been recognized by CMS management and the group was then promoted to a Level 1 coordination area (Physics Performance and Datasets).

Appointed deputy Run Coordinator for the a two-years period: 2010-2011. Activated the Prompt Feedback groups. Designed a first prototype of automatic validation tool that compared Data Quality Monitoring histograms, promptly and automatically produced after data taking, to reference histograms. Designed and implemented an automatic tool for beam parameters monitoring.

PHYSICS ANALYSIS ACTIVITIES

Member of the CMS Editorial Board since January 2005 and **editor** of the Physics, Reconstruction and Selection group for analysis notes. **Co-coordinated the analysis activities of the first CMS physics paper on cosmics data** on atmospheric muon charge ratio. Worked, together with two supervised CERN fellows, on the study of the Drell-Yan process with two electrons in the final state for the early physics commissioning and on the analysis of the WZ process with three electrons in the final state inside the Trilinear Gauge Coupling Analysis Group.

Co-coordinated the Global Event Description (GED) team with the goal to optimize the object reconstruction using an unified approach based on Particle Flow.

Appointed as deputy Physics Coordinator for the term 2012-2013. In this rôle participated in many task forces related to specific analyses issues: $B_s \rightarrow \mu\mu$ background evaluation, MC tuning of the forward energy flow, trigger TDR for the upgrades.

Appointed as CMS Physics Coordinator for the term 2014-2015.

Together with few other members of the CMG group started to study the possibility of a W boson mass measurement in CMS.

UPGRADES RELATED ACTIVITIES

Fast Simulation towards Technical Proposal: together with past experts, resurrected the tracking fast simulation of the CMS detector and adapted to the detector geometries proposed for Phase-2.

Appointed as CMS deputy Upgrade manager for the term 2016-2017 (extended to Spring 2018) overseeing the studies of the physics capabilities of the proposed upgraded detector in view of the Technical Design Reports (TDR).

Personal involvement in the High Granularity Calorimeter: participated to the study of the local and global reconstruction of the High Granularity Calorimeter in view of the TDR.

CMG(CMS) CERN GROUP LEADERSHIP

CMG group leader: since Jan 2016 leading the CERN CMG group. The group is composed by roughly 60 physicists (Staff, Fellow, Technical and Doctoral students).