

Thomas Müller - Curriculum Vitae



Born on January 16th, 1953, in Wuppertal, Germany

Married, four children

Affiliation: Institut für Experimentelle Kernphysik, Karlsruhe Institute of Technology (KIT)
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Scientific Career

Study of Physics	Diploma in Physics, Bonn University (magna cum laude).....	1979
	PhD in Physics, Bonn University Subject: "Particle Production in Proton-Antiproton-Reactions at 540 GeV Center of Mass Energy" (summa cum laude).....	1983
Habilitation	Venia Legendi, Bonn University Subject: "Production Properties of the Intermediate Vector Bosons W and Z at the CERN P anti-P Collider"	1988
Employment	CERN Fellow, (UA1-Experiment)	1984-1985
	CERN Research Staff, (UA1-Experiment).....	1986-1989
	Assistant, Associate and finally Full Professor at University of California, Los Angeles (UCLA).....	1990-1996
	SSC Fellow (SDC Experiment).....	1991-1993
	Professor and Chair, Karlsruhe University – now called KIT	since 1995

Boards (Selection)

University	Member of the Legislative Assembly UCLA	1992-1994
	Head of institute.....	since 1995
	Deputy Dean.....	2000-2002
	Dean	2004-2006
Research	Member of LEP Committee	2000-2001
	Member of ECFA.....	since 2005
	Member of RECFA	since 2010
	Co-editor of Springer "Tracts in Modern Physics"	since 1996
	Member of the RRB.....	1998-2003
	Member of the Scientific Review Panel of the Ministry of Science	1999-2008
	Chair of the BMBF <i>Gutachterausschuss</i>	2005-2008
	Mamber, later Chair of EUDET advisory board	2005-2011
	Member of IUPAP C11	since 2009

Outreach

On average one lecture, colloquium or presentation on LHC / CMS per month. Talk to scientific committees, high school teachers, university members, the broad public, journalists, students, funding agencies, members of the Church.

Organisation of meetings and conferences ($W\gamma Z$ 1993, US-LHC 1994, US-CMS 1994 and 1995, Hadron Collider Physics 2002, Physics in Collision 2010, German Physics Society 2011), numerous workshops, strategy meetings.

Research Profile

Physics at hadron colliders: properties of the Top quark, search for the Higgs boson, search for anomalies in the EWK interaction, search for physics beyond the Standard Model. Development and construction of detectors, focus on calorimeters and tracking detectors. Participation in the following experiments:

R708 (CERN ISR), UA5 und UA1 (CERN p-pbar Collider), ICARUS (Grand Sasso), CDF (FNAL Tevatron), SDC (SSC), APEX (FNAL Antiproton Source), Belle 2 (KEK), CMS (CERN LHC)

Most important 10 Publications

- [1] Production of photons and search for Centauro events at the SPS Collider, UA5 Collaboration, Phys.Lett.B115:71, 1982.
- [2] Production Properties of the Intermediate Vector Bosons W and Z at the CERN p anti-p Collider, Th. Muller, Fortschr. Phys.37:339, 1989.
- [3] Search for antiproton decay at the Fermilab Antiproton Accumulator, T861 Collaboration, Phys.Rev.Lett.72:1596-1599,1994.
- [4] Measurement of W – γ couplings with CDF in ppbar collisions at $\sqrt{s} = 1.8$ TeV, CDF Collaboration, Phys.Rev.Lett.74:1936-1940, 1995.
- [5] The CMS tracker and its performance, CMS Collaboration, Nucl.Instrum.Meth. A408: 119-127, 1998.
- [6] Development and studies of a time projection chamber with GEMs, J. Kaminski, *et al.*, Nucl.Instrum.Meth.A535:201-205, 2004.
- [7] First Observation of Electroweak Single Top Quark Production, CDF Collaboration, Phys. Rev.Lett. 103:092002, 2009
- [8] Measurement of the Top-antitop Production Cross Section in pp Collisions at $\sqrt{s} = 7$ TeV using the Kinematic Properties of Events with Leptons and Jets, CMS Collaboration, Eur. Phys. J. C71 (2011) 1721.
- [9] Measurement of the t-Channel Single Top Quark Production Cross Section in pp Collisions at $\sqrt{s}=7$ TeV, CMS Collaboration, Phys. Rev. Lett. 107 (2011) 091802.
- [10] Measurement of the charge asymmetry in top-quark pair production in proton-proton collisions at $\sqrt{s}=7$ TeV, CMS Collaboration, arXiv:1115.5100, submitted to Phys. Lett. B.

Contributions to CMS construction (under my supervision)

At UCLA:

Development of CSC prototypes for the CMS Endcap Muon detector
Preparation of the CSC construction..... 1994-1996

At Karlsruhe:

Development of construction prototypes for the CMS MSGC Tracker 1996-2001
Development, quality control, radiation hardness studies for 8000 silicon sensors 2001-2003
Production of 800 modules, 102 petals for the Tracker Endcap 2004-2007
Tracker Control System since 2006
Responsibility for installation and commissioning of the HV system 2007
Construction, installation of BCM2 2008
HL-LHC detector development..... since 2007
Contribution to CMS computing, B-Tagging, analysis preparations since 1996

Participation in CMS Management

Participation in

Foundation of US-LHC and US-CMS..... 1994, 1995
Foundation of CMS management system..... 1994
Foundation of the German Tier1-Center GridKa..... 2002
Chair of US-CMS Institutional Board 1994-1995
Spokesperson of the German CMS Collaboration 1998-2003
Deputy spokesperson of the German CMS Collaboration since 2012
Member of CMS Management Board..... 1994-2007
Member of CMS Finance Board 1998-2003
Member of CMS Collaboration Board since 1994
Chair of Conference Committee 2002-2007
Member of CMS 2007 Committee 2007
Chair of several election committees
Member of CB since 1994