# Curriculum Vitae

## Uwe Muench

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#### Date and Place of Birth

November 8, 1970 in Porz am Rhein (now: Köln (Cologne)), Germany.

#### Nationality

German

#### Education

Elementary School (Städtische Gemeinschaftsgrundschule Köln-Porz): August 1977 – July 1981

High School (Städtisches Gymnasium Heerstraße Köln-Zündorf): September 1981 – May 1990 Certificate of General Matriculation Standard (Abitur): 05/30/1990

Physics study at the University of Cologne (Universität zu Köln): October 1990 – September 1997 Intermediate Examination (Vordiplom) in Physics: 10/09/1992

**Diploma** in Physics: 09/24/1997, Title of Diploma Thesis: Über teleparallele Gravitationstheorien (On teleparallel gravitation theories)

Ph. D. study in physics at the University of Missouri-Columbia: January 1998 – August 2002 Ph. D. qualifying exam: 01/11/1999 Ph. D. comprehensive exam: 09/26/2000

**Ph. D.** in Physics: 08/02/2002, Title of Dissertation: Studies in the Physical Foundations of Gravitational Theories

Teacher Certificate in Missouri for High School Physics: Aug 15, 2002

#### **Professional Activities**

Computer Administration Assistant at the Regional Computing Center of the University of Cologne (Regionales Rechenzentrum der Universität zu Köln): July 1995 – December 1997

Responsibilities included:

- Installation and administration of the program package T<sub>F</sub>X
- User support
- Administering the course  $\cancel{E}^{1}T_{\cancel{E}}X$  An Introduction
  - -08/21/95-08/25/95
  - -02/26/96-03/01/96
  - 08/26/96-08/30/96
  - -02/17/97-02/21/97
  - -09/22/97-09/26/97
- Creating the webpages

http://www.uni-koeln.de/themen/texmf/

Teaching Assistant at the University of Missouri-Columbia, Department of Physics and Astronomy and Department of Mathematics: January 1998

– August 2002

Responsibilities included:

- Grading weekly quizzes, homework, and exams, Physics 176 (University Physics II), and Physics 21 (College Physics I), WS '98
- Physics 21 (College Physics I) laboratory, SS '98
- Two Physics 21 (College Physics I) laboratories, and one Physics 175 (University Physics I) laboratory, FS '98
- Three Physics 21 (College Physics I) laboratories, coordinating exam grading (Physics 21), WS '99, FS '99
- Three Physics 22 (College Physics II) laboratories, coordinating exam grading (Physics 22), WS '00
- Two Physics 22 (College Physics II) laboratories, one Physics 21 (College Physics I) laboratory, coordinating exam grading (Physics 21), FS '00
- Two Physics 22 (College Physics II) laboratories, one Physics 21 (College Physics I) laboratory, coordinating exam grading (Physics 21 and Physics 22), WS '01
- Two Math 80 (Calculus I) recitation sections, FS '01
- One Math 80 (Calculus I) recitation section, WS '02

Tutor for physics and mathematics at the University of Missouri-Columbia, Total Person Program, Athletic Department: January 2002 – August 2003.

High School Teacher and Teacher Aide at Christian Fellowship High School, Columbia, MO: August 2002 – June 2003

Responsibilities include:

- Teaching Algebra I and Algebra II
- Teacher Aide in Geometry and Pre-Calculus

Physics Instructor at Columbia College, Columbia, MO: Summer Semester 2003, June – July 2003. Responsibilities include:

- Teaching and preparing Physics 111 course
- Teaching and preparing Physics 111 lab

Missionary Associate with Chi Alpha Campus Ministries, University of Missouri-Columbia, August 2003 – January 2005 (volunteering before August 2003). Responsibilities include:

- Bible study leader, January 2000 January 2005
- Member of Leadership, June 2000 January 2005
- Treasurer, April 2001 January 2005
- Staff member, August 2001 January 2005
- Secretary of Christian Council at the University of Missouri-Columbia, August 2000 – January 2005

Missionary Associate with Chi Alpha Campus Ministries, University of California, Los Angeles (UCLA), January 2005 – August 2007. Responsibilities include:

- Bible Study leader, January 2005 August 2007
- Treasurer, January 2005 August 2007
- Staff member and member of leadership, January 2005 August 2007

Shift Supervisor, Starbucks Coffee Germany, Cologne, Germany, November 2007 – December 2007.

## Other Activities

Organizing the monthly meeting of the Cologne group of DANTE (German TEX Users Group), April 1996 – December 1997: inviting guest speakers, giving 12 talks myself. Material (in German) partly available on http://www.uni-koeln.de/themen/texmf/speziell/stammtisch/

Editor of Dante-magazine *Die TeXnische Komödie*, ISSN 1434-5897, between issues 2/96 (August 1996) and 3/97 (October 1997), and between issue 4/98 (December 1998) and 3/01 (September 2001)

Public Relations Officer for ESA (European Students Association) at the University of Missouri-Columbia, including the maintenance of the webpage http://students.missouri.edu/~esaww/, August 1998 – January 1999

#### Awards and Scholarships

Graduate Teaching Scholar 1998/99, University of Missouri-Columbia

Recipient of the O.M. Stewart summer scholarship 1999

Recipient of Donald K. Anderson Graduate Student Teaching Award 1998–1999, University of Missouri-Columbia

Recipient of the O.M. Stewart summer scholarship 2000

Honorary Coach for the Big XII Women's Softball Team of the University of Missouri-Columbia, March 19, 2001

Recipient of the O.M. Stewart summer scholarship 2001

Member of Sigma Xi honorary society since May 2001

Recognition for Excellence in Leadership with Chi Alpha Campus Ministries, May 2001

Recipient of the O.M. Stewart summer scholarship 2002

#### Conferences and Institutes Attended

Spring Conference of the German Physical Society (DPG), Jena, March 1996

Spring Conference of the German Physical Society (DPG), München, March 1997

179. WE Heraeus Seminar, Black Holes: Theory and Observation, Bad Honnef, August 1997

Eighth Teaching Renewal Conference, Program for Excellence in Teaching, University of Missouri-Columbia, March 1998

Effective College Teaching Institute, Program for Excellence in Teaching, University of Missouri-Columbia, August 1998

Student Activist Leadership Training (Chi Alpha Campus Ministries), Indianapolis, Indiana, December 1998

Graduate Teaching Scholars retreats, Program for Excellence in Teaching, Jefferson City, October 1998 and February 1999

Ninth Teaching Renewal Conference, Program for Excellence in Teaching, University of Missouri-Columbia, February 1999

AAPT summer meeting, San Antonio, TX, American Association of Physics Teachers (AAPT), July/August 1999

Student Activist Leadership Training (Chi Alpha Campus Ministries), Indianapolis, Indiana, December 1999

Tenth Teaching Renewal Conference, Program for Excellence in Teaching, University of Missouri-Columbia, February 2000

- APS April meeting, Long Beach, CA, American Physical Society (APS), April  $2000\,$
- AAPT summer meeting, Guelph, Ontario, Canada, American Association of Physics Teachers (AAPT), July 2000
- World Student Activist Leadership Training (Chi Alpha Campus Ministries), Los Angeles, California, December 2000
- AAPT winter meeting, San Diego, CA, American Association of Physics Teachers (AAPT), January 2001
- Eleventh Teaching Renewal Conference, Program for Excellence in Teaching, University of Missouri-Columbia, February 2001
- AAPT summer meeting, Rochester, NY, American Association of Physics Teachers (AAPT), July 2001
- Athletic International Ministries Conference (Chi Alpha Campus Ministries), Phoenix, Arizona, August 2001
- Student Activist Leadership Training (Chi Alpha Campus Ministries), Indianapolis, Indiana, December 2001
- Student Activist Leadership Training (Chi Alpha Campus Ministries), Cincinnati, Ohio, December 2002
- Reach the U Institute (Chi Alpha Campus Ministries), Veteran B Track, Springfield, MO, June 2003
- Student Activist Leadership Training (Chi Alpha Campus Ministries), Chicago, Illinois, December 2003
- Reach the U Institute (Chi Alpha Campus Ministries), Campus Missionary Aide/Intern Track, Springfield, MO, June 2004
- Student Activist Leadership Training (Chi Alpha Campus Ministries), Cincinnati, Ohio, December 2004
- The World Missions Summit (Chi Alpha Campus Ministries), Louisville, Kentucky, December 2005
- California Winter Retreat (Chi Alpha Campus Ministries), Sacramento, California, January 2007
- European Student Conference (Students for Christ Europe), Nürnberg, Germany, December 2007

#### List of Publications

F. Gronwald, U. Muench, F. W. Hehl: Nongravitational vacuum energy and the volume element of spacetime, Hadronic Journal 21 (1998) 3–17.

- U. Muench, F. Gronwald, F. W. Hehl: A small guide to variations in teleparallel gauge theories of gravity and the Kaniel-Itin model, Gen. Rel. Grav. J. 30 (1998) 933-961.
- F. Gronwald, U. Muench, A. Macías, F. W. Hehl: Volume elements of spacetime and a quartet of scalar fields, Phys. Rev. **D58** (1998) 084021.
- U. Muench, F. W. Hehl, B. Mashhoon: Acceleration-induced nonlocal electrodynamics in Minkowski spacetime, Phys. Lett. A 271 (2000) 8–15.
- B. Mashhoon and U. Muench: Length measurement in accelerated systems, Ann. Phys. 11 (2002) 532–547.

#### Other Publications (unrefereed)

- Technical Dante working group "typesetter": Eine eigene Lichtsatzanlage für Dante e. V.? (Should Dante own a Linotype typesetter?), Die Texnische Komödie 3/96, S. 21–25, December 1996.
- Uwe Münch: Protokoll der Sitzung AK Öffentlichkeitsarbeit (Protocol of the technical working group "public relations"), Die TEXnische Komödie 4/97, S. 18–24, February 1998.
- Uwe Muench: *Motor oil mysteries* (newspaper article on neutron scattering research), Columbia Missourian, p. 6, March 24, 2000.
- Uwe Muench: Looking for answers (newspaper article on diabetes research), Columbia Missourian, p. 5, March 31, 2000.

#### Presentations

- Uwe Muench: Uber teleparallele Gravitationstheorien (On teleparallel gravitation theories), Talk at the University of Konstanz, 11/14/1997
- Uwe Muench, Frank Gronwald, **Friedrich W. Hehl**: On teleparallel theories of gravity and the Kaniel-Itin model. Talk at the spring conference of the German Physical Society (DPG) at the University of Regensburg, 03/24/1998
- Uwe Muench: Gauge theories in gravity, Talk in the Geometry-Relativity Seminar, University of Missouri-Columbia, 03/24/1998
- Uwe Muench: Volume elements of space-time and a quartet of scalar fields, Talk in the Geometry-Relativity Seminar, University of Missouri-Columbia, 11/10/1998

Alix Fink, Troy Lepper, Uwe Muench, Christine Thomas: The Graduate Teaching Scholars (GTS): Preparing Future College Faculty, Presentation at the Ninth Annual Teaching Renewal Conference, Program for Excellence in Teaching, University of Missouri-Columbia, 02/05/1999

- Uwe Muench: Teleparallel Lagrangians, Talk in the Geometry-Relativity Seminar, University of Missouri-Columbia, 04/13/1999
- Uwe Muench: The teleparallel equivalent of Einstein's theory of general relativity, Talk in the Geometry-Relativity Seminar, University of Missouri-Columbia, 11/23/1999
- Uwe Muench: Post-Newtonian parameters and teleparallel theories, Talk in the Geometry-Relativity Seminar, University of Missouri-Columbia, 04/18/1999
- Uwe Muench: *PPN-formalism and teleparallel theories*, Talk at the APS April meeting, Long Beach, California, April 2000.
- Uwe Muench: Gauge Theories of Gravity: Teleparallelism and Nonlocality, Presentation in the Cosmology-Relativity-Geometry Seminar, University of Missouri-Columbia, 09/26/2000
- Uwe Muench: Radiation by a uniformly accelerated charge, Presentation in the Cosmology-Relativity-Geometry Seminar, University of Missouri-Columbia, 04/23/2002

### Memberships

- Member of Dante (German TeX Users Group) Jan. 1992 – present
- Member of German Physical Society (DPG) Jan. 1993 – present
- Chi Alpha Campus Ministries March 1998 – present
- Member of American Physical Society (APS) Jan. 1999 – present
- Member of American Association of Physics Teachers (AAPT) Apr. 1999 – present
- Member of Sigma Xi honorary society May 2001 – present