

Curriculum vitae



Personal

Name: Dr. Martin Treiber
Born in Nuremberg, Germany, Aug. 30, 1961
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Professional Formation

1982-1986 Study of High Precision Mechanics and Optics at the Technical University of Nuremberg. Degree: Qualified Engineer ("very good").
1986-1992 Study of Physics at the University of Bayreuth. Diploma thesis about "thermal fluctuations near pattern-forming instabilities in nematic liquid crystals". Advisor: Prof. L. Kramer PhD. Degree: Diploma ("excellent").
1992-1996 Work as research assistant at the University of Bayreuth. Ph.D Thesis about a new physical model of electrohydrodynamic instabilities in nematic liquid crystals ("Weak Electrolyte Model"). Advisor: Prof. L. Kramer PhD.
1993-1995 Visit to the University of California, Santa Barbara (four months), and two visits to the University of Arizona, Tucson (four months, each).
July 1996 Completion of the PhD dissertation (in English) with the degree "Summa cum Laude".

Professional Work

1997-2000 Scientific research in the field of traffic dynamics at the University of Stuttgart. Advisor: PD. Dr. Helbing and Prof. Weidlich. Collaboration with DaimlerChrysler, Siemens, and others.
Since 2000 Scientific worker at the Technical University of Dresden. Research topics include traffic modelling and dynamics, driver-assistance systems, and algorithms for traffic-state recognition.

Special Qualifications

Rewards	“Emil-Warburg-Forschungspreis” (Research Prize) for the best dissertation in Physics at the University of Bayreuth, 1996.
Teaching	Lectures on Statistics, Traffic modelling, -simulation and -planning. Advisor of several diploma and PhD students.
Scientific work	About thirty primary publications including one in Science, and three in Physical Review Letters. Coauthor of a book about holography. Acting as referee for about 30 manuscripts per year to be published in <i>Physical Review</i> , <i>Physical Review Letters</i> , <i>Transportation Research B</i> , and others.
Languages	Native German speaker. Fluent in English, good skills in French, Latin.
Projects	<ol style="list-style-type: none">1. SANDY - <i>Verehrsanwendungen der Nichtlinearen Physik</i> (BMBF, together with Daimler-Chrysler, Volkswagen, Siemens and other automotive-related companies),2. <i>Stauvermeidung durch intelligentes Fahrzeugverhalten</i> (VW AG),3. VASIS - <i>Modellbasierte Verkehrszustandsschätzung unter Berücksichtigung verschiedener Datenquellen</i> (ddg GmbH),4. INVENT - <i>Intelligenter Verkehr und nutzergerechte Technik</i> (BMBF, together with Volkswagen, Daimler-Chrysler, BMW, and other automotive-related companies)
Computer skills	Unix/Linux, C/C++, Mathematica, L ^A T _E X, HTML, Java, Perl, and many others. Author of the internet simulation site www.traffic-simulation.de with about 50 000 visits per month

Leisure interests

Free climbing, mountaineering, cross-country skiing