



UNIVERSITY OF CONNECTICUT  
Department of Civil & Environmental Engineering  
Curriculum Vitae of  
**Kay Wille, Assistant Professor**

**Employment**

- 2010 – present Assistant Professor at the University of Connecticut, Department of Civil and Environmental Engineering
- 2008 – 2010 Postdoctoral Fellow at the University of Michigan, Department of Civil and Environmental Engineering, supervisors Prof. S. El-Tawil, Prof. A. E. Naaman and Prof. G. J. Parra-Montesinos
- 2002 – 2008 Graduate research and teaching assistant at the University of Leipzig, Department of Structural Engineering and Building Materials, advisor Prof. N. V. Tue
- 1998 – 2002 Research assistant at the University of Leipzig, Department of Statics and Dynamics, supervisors Prof. R. Thiele and Prof. W. Schneider

**Education**

- Feb. 2008 **Ph.D.** in Civil Engineering, University of Leipzig, *summa cum laude*  
“Load Carrying Behavior of Novel Composite Structures with regard to Two-dimensional Reinforcement”, in german  
Viva voce: structural engineering & mechanics, *with excellence*
- April 2002 **Diploma** in Civil Engineering, University of Leipzig, *very good*  
Diploma thesis: “Punching of Structural Concrete Slabs”
- June 1996 **Abitur**, Georg-Cantor-Gymnasium Halle (High School graduate with special focus on mathematics, science and technology), *very good*

**Awards**

- 2010 Seven-week Postdoctoral Short-Course on College Teaching in Science and Engineering
- 2009 Extension of DAAD Postdoctoral scholarship for additional 7 months to study strain rate effects
- 2008 DAAD, 17 month Postdoctoral scholarship supporting the research project “Load Carrying Behaviour of Ultra High Performance Fibre Reinforced Concrete subjected to Tensile Loading with special Focus on Fibre Orientation”
- 2002 Award for outstanding academic achievement from the University of Leipzig

**Books**

Wille, K., “Beschreibung des Tragverhaltens neuartiger Verbundkonstruktionen unter Verwendung eines flächigen Bewehrungselementes” (“Load Carrying Behaviour of Novel Composite Structures with regard to a Two-dimensional Reinforcement”), University of Leipzig, Doctoral Thesis, 2008, Schriftenreihe des Instituts für Massivbau und Baustofftechnologie, Bd. 15., 222 p. ISBN: 978-3-8370-1029-98, Books on Demand GmbH (2008)

**Journal Articles (4 most recent)**

- Wille, K., Naaman, A., Parra-Montesinos, G. “ULTRA HIGH PERFORMANCE CONCRETE WITH COMPRESSIVE STRENGTH EXCEEDING 150 MPA (22 ksi): A SIMPLER WAY”, ACI Materials Journal (accepted for publication: Apr. 2010)
- Wille, K., Kim, D., Naaman, A. E.: “Strain-Hardening UHP-FRC with Low Fiber Contents”, Materials and Structures, 2010, accepted in July 2010, in press

Kim, D., Wille, K., El-Tawil, S., Naaman, A. E., "MATERIAL TESTING UNDER HIGH STRAIN RATE TENSILE LOADING USING ELASTIC STRAIN ENERGY", ASCE Journal (Submission date: July 2010)

Wille, K., Loh, K. J., "Nano-Engineering Ultra-High Performance Concrete with Multi-Walled Carbon Nanotubes", Journal of the Transportation Research Board, May, 2010, Impact Factor: 0.206

#### Conference Papers (4 most recent)

Wille, K., Naaman, A. E., "BOND STRESS SLIP HARDENING BEHAVIOR OF STEEL FIBERS EMBEDDED IN ULTRA HIGH PERFORMANCE CONCRETE", 18th European Conference on Fracture, Dresden, 2010 (accepted for publication)

Naaman, A. E., Wille, K., "Some Correlation Between High Packing Density, Ultra-High Performance, Flow Ability, and Fiber Reinforcement of a Concrete Matrix" for BAC2010 – 2nd Iberian Congress on Self Compacting Concrete, University of Minho – Guimaraes, Portugal, July 1-2, 2010

Wille, K., Naaman, A. E. "Fracture Energy of UHPFRC under Direct Tensile Loading", FraMCoS-7 International Conference, Jeju, KOREA, May 23-28, 2010

Wille, K., Loh, K. J., "Nano-Engineering Ultra-High Performance Concrete with Multi-Walled Carbon Nanotubes", 1st International Conference in North America on Nanotechnology in Cement and Concrete, Irvine, USA, May 5-7, 2010

#### Patents

Pending Tue, N. V., Wille, K. "Hybride Verbundkonstruktion" ("Hybrid Composite Construction" patent), patent number: 10 2007 033 557.3, File date: Juli 2007

Pending Tue, N. V., Wille, K. "Hybride Verbundkonstruktion" ("Hybrid Composite Construction" utility patent), utility patent number: 20 2007 010 034.5, File date: Juli 2007

#### Teaching experience

2002 - 2008 Graduate student instructor (in Germany at Leipzig University) for:  
- Principles of Reinforced Concrete Construction  
- Reinforced Concrete Construction  
- Principles of Prestressed Reinforced Concrete Construction  
- Structural Engineering / Building Construction  
- Computer Science / CAD in Civil Engineering

1998 - 2002 Student teaching assistant at the University of Leipzig, Department of Statics and Dynamics

#### Service

2010 Faculty Advisor for the Concrete Canoe Team at UConn

2005 - 2008 Representative of the graduate student researchers to the Faculty of Economics and Management Advisory Committee

Graduate student representative to the Civil Engineering Department Advisory Committee

Graduate student representative from the Faculty of Economics and Management to the university-wide advisory council

#### Programming language skills / FE-Software

C and C++ Advanced level of proficiency (e.g. programming a fixed crack smeared material model and implementation in the FE-software SOFiSTiK)

SOFiSTiK Advanced level of proficiency

LS-DYNA Advanced level of proficiency

Hypermesh Advanced level of proficiency

Java Intermediate - advanced level of proficiency

Perl Intermediate level of proficiency