

Dan A. KOSCHIER

PERSONAL DATA

PLACE AND DATE OF BIRTH: Offenbach am Main, Germany | 01 August 1988
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EDUCATION

SINCE	JAN 2018	Research Associate University College London London, United Kingdom Smart Geometry Processing Group, Prof. Niloy Mitra
JUL 2016 – DEC 2017		PhD student Rheinisch-Westfälische Technische Hochschule Aachen Aachen, Nordrhein-Westfalen, Germany Grade: summa cum laude (with highest honours) Advisor: Prof. Jan BENDER
SEP 2012 – JUN 2016		PhD student (Fast-Track Scholarship Holder) Graduate School of Computational Engineering, TU Darmstadt Darmstadt, Hessen, Germany Advisor: Prof. Jan BENDER
OCT 2011 – SEP 2014		Master of Science in COMPUTATIONAL ENGINEERING Technical University of Darmstadt Darmstadt, Hessen, Germany Grade: 1.1 (with honours) (Scale: 1.0 (best) – 5.0 (worst))
OCT 2008 - SEP 2011		Bachelor of Science in COMPUTATIONAL ENGINEERING Technical University of Darmstadt Darmstadt, Hessen, Germany Grade: 1.8 (Scale 1.0 (best) – 5.0 (worst))

PUBLICATIONS

- J. BENDER, D. KOSCHIER, T. KUGELSTADT, and M. WEILER (2018). “Turbulent Micropolar SPH Fluids with Foam”. *IEEE Transactions on Visualization and Computer Graphics*, pp. 1–1.
- T. KUGELSTADT, D. KOSCHIER, and J. BENDER (2018). “Fast Corotated FEM using Operator Splitting”. *Computer Graphics Forum*. Vol. 37. 8.
- M. WEILER, D. KOSCHIER, M. BRAND, and J. BENDER (2018). “A Physically Consistent Implicit Viscosity Solver for SPH Fluids”. *Computer Graphics Forum (Eurographics)* 37.2, pp. 1–12.
- J. BENDER and D. KOSCHIER (2017). “Divergence-Free SPH for Incompressible and Viscous Fluids”. *IEEE Transactions on Visualization and Computer Graphics* 23.3, pp. 1193–1206.
- J. BENDER, D. KOSCHIER, T. KUGELSTADT, and M. WEILER (July 2017). “A Micropolar Material Model for Turbulent SPH Fluids”. *ACM SIGGRAPH / Eurographics Symposium on Computer Animation*, pp. 1–8.
- D. KOSCHIER and J. BENDER (July 2017). “Density Maps for Improved SPH Boundary Handling”. *ACM SIGGRAPH / Eurographics Symposium on Computer Animation*, pp. 1–10.

- D. KOSCHIER, J. BENDER, and N. THUERREY (2017). “Robust eXtended Finite Elements for Complex Cutting of Deformables”. *ACM Transactions on Graphics* 36.4, 55:1–55:13.
- D. KOSCHIER, C. DEUL, M. BRAND, and J. BENDER (2017). “An hp-Adaptive Discretization Algorithm for Signed Distance Field Generation”. *IEEE Transactions on Visualization and Computer Graphics* 23.10, pp. 2208–2221.
- D. KOSCHIER, C. DEUL, and J. BENDER (2016). “Hierarchical hp-Adaptive Signed Distance Fields”. *ACM SIGGRAPH / Eurographics Symposium on Computer Animation*, pp. 1–10.
- M. WEILER, D. KOSCHIER, and J. BENDER (2016). “Projective Fluids”. *ACM Motion in Games*, pp. 1–6.
- J. BENDER and D. KOSCHIER (2015). “Divergence-Free Smoothed Particle Hydrodynamics”. *ACM SIGGRAPH / Eurographics Symposium on Computer Animation*, pp. 1–9.
- J. BENDER, D. KOSCHIER, P. CHARRIER, and D. WEBER (2014). “Position-Based Simulation of Continuous Materials”. *Computers & Graphics* 44.1, pp. 1–10.
- D. KOSCHIER, S. LIPPONER, and J. BENDER (2014). “Adaptive Tetrahedral Meshes for Brittle Fracture Simulation”. *ACM SIGGRAPH / Eurographics Symposium on Computer Animation*, pp. 1–10.

TEACHING

ST17 Practical course	“ Game Physics ” at RWTH Aachen Full organisation and teaching
ST17 Lecture and exercise	Assistant for the course “ Adv. Techniques in Physically Based Animation ” at RWTH Aachen, Preparation of assignment sheets and teaching in lab sessions
ST17 Seminar	Assistant for the seminar “ Current Topics in Fluid Animation ” at RWTH Aachen, Supervision of individual students
ST17 Proseminar	Assistant for the seminar “ Selected Topics in Game Physics ” at RWTH Aachen, Supervision of individual students
WT16/17, WT17/18 Practical course	“ Fluid Simulation in Computer Graphics ” at RWTH Aachen, Full organisation and teaching
WT16/17, WT17/18 Lecture and exercise	Assistant for the course “ Physically Based Animation ” at RWTH Aachen Preparation of assignment sheets and teaching in lab sessions
WT16/17, WT17/18 Seminar	Assistant for the seminar “ Current Topics in Physically Based Animation ” at RWTH Aachen, Supervision of individual students
WT16/17, WT17/18 Proseminar	Assistant for the seminar “ Computer Animation ” at RWTH Aachen Supervision of individual students
WT14/15, WT15/16 Lecture and exercise	Assistant for the course “ Dynamic Simulation of Multibody Systems ” at TU Darmstadt, Preparation of assignment sheets and teaching in lab sessions
WT14/15, WT15/16 Seminar	Assistant for the seminar “ Physically Based Animation ” at TU Darmstadt Supervision of individual students
ST14, ST15 Lecture and exercise	Assistant for the course “ Physically Based Animation ” at TU Darmstadt Preparation of assignment sheets and teaching in lab sessions

ST14,ST15 | Assistant for the course “**Simulation in Computer Graphics**”
Practical course | at TU Darmstadt, Preparation of assignment sheets and teaching in lab
sessions

ST := Summer term

WT := Winter term

WORK EXPERIENCE

MAY 2010 – JAN 2011 | Software Developer
FRAUNHOFER INSTITUTE FOR COMPUTER GRAPHICS RESEARCH, Fraunhofer-
str. 5, 64283 Darmstadt, Germany
Development of the scientific visualization software IFX VISUALIZATION

MAY 2008 – APR 2010 | Software Developer
UNITEC INFORMATIONSSYSTEME GMBH, Rodenbacher Chaussee 6, 63457
Hanau-Wolfgang, Germany
Development of in-house software and plugins for CAD products including AUTODESK
AUTOCAD and AUTODESK P&ID

SCHOLARSHIPS AND CERTIFICATES

JAN 2015 Softskill certificate: Scientific Writing in English, Ingenium, TU Darmstadt
OCT 2014 Softskill certificate: Conference Presentation, Ingenium, TU Darmstadt
JUN 2014 Softskill certificate: Voice and Body Coaching, Ingenium, TU Darmstadt
JAN 2014 Softskill certificate: Communication and Teamwork, Ingenium, TU Darmstadt
SEP 2012 Scholarship for Fast-Track PhD programme at GSC CE, TU Darmstadt

LANGUAGES

GERMAN: Native
ENGLISH: Fluent

PROGRAMMING SKILLS

Excellent knowledge: C, C++, OPENGL, PYTHON, L^AT_EX
Good knowledge: JAVA, C#, LINUX (BASH), WINDOWS (BATCH), MATHEMATICA, MATLAB

INTERESTS AND ACTIVITIES

Ballroom dancing, travelling, technology, open-source software, programming