Curriculum Vitae

Personal information

First name / Surname	**Christian Kehl**
Address	Breestraat 33-2, 2611RE Delft, Netherlands | Rosenberg 6c, 19071 Brüsewitz, Germany
Mobile Telephone	(0031) 628518524
E-mail	c.kehl@tudelft.nl | christian-kehl@web.de
Nationality	German
Date of birth	6th Dec 1986
Gender	Male

Education and Training

[Annotation of the grading system: 1.0 (summa cum laude) to 5.0 (not passed)]

Dates	2003-2006
Specialisation	Technical School - Data Processing Technology
Name and type of organisation providing education and training	Vocational School of Technology of the State Capital Schwerin Gadebuscher Straße 153 D-19057 Schwerin
Level in national or international classification	A-Level
Final Grade	2.0
Dates	2006-2010
Principal subjects/occupational skills covered	Multimedia Engineering
Name and type of organisation providing education and training	University of Applied Science Technology, Business and Design Wismar Postbox 1210 D-23952 Wismar
Level in national or international classification	Bachelor of Engineering
Thesis topic	Research on Optimization of graphical Data Processing Systems in Multi-GPU Environments
Final Grade	1.5
Dates	2010-2012
Principal subjects/occupational skills covered	Multimedia Engineering
Name and type of organisation providing education and training	University of Applied Science Technology, Business and Design Wismar Postbox 1210 D-23952 Wismar
Level in national or international classification	Master of Engineering
Thesis topic	Conformal multi-material mesh generation from labelled medical volumes
Final Grade	1.2 (cum laude) [Thesis: 9 out of 10 points, Dutch grading system]

Internship and Exchanges

Dates	September 2011 – March 2012
purpose	Master Thesis project

University and Department	Delft University of Technology / Netherlands Computer Graphics and Visualization Group Department of Intelligent Systems Faculty of Electrical Engineering, Mathematics and Computer Science Postbox 5031, 2600 GA Delft, The Netherlands
Dates	March 2011 – July 2011
purpose	Foreign Exchange Semester
University and Department	Aalborg University / Denmark Department of Electronic Systems Course "Vision, Graphics and Interactive Systems"
Dates	March 2009 – August 2009
employment description	Internship as Web Developer
Company	M2Mobi Herengracht 258-266 NL-1016 BV Amsterdam

Skills

Language Skills

Mother tongue: German

Other languages:

	Understanding			Speaking			Writing	
	Listening		Reading		Spoken interaction		Spoken production	Writing
English	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user
Dutch	C1	Independent user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C1	Independent user
French	A2	Elementary	B1	Intermediate	A2	Elementary	A2	Elementary	B1	Intermediate

[Assessment according to "Common European Framework of Reference for Languages"]
References available upon request.

Programming Skills

Programming Language/API	Level of Experience
C/C++	Professional (3+ years)
CUDA	Intermediate
OpenCL	Professional (3 years)
OpenGL	Professional (3+ years)
Python	Professional
Java, Fortran	Introductory

Experience

Work Experience

Year	Period	Employer
2009	June – July	Nord/LB – Landesförderinstitut Mecklenburg-Vorpommern (eng.: North-German State Bank – State Valorisation Institute MV)
2008	June – July	Nord/LB – Landesförderinstitut Mecklenburg-Vorpommern
2007	June – July	Nord/LB – Landesförderinstitut Mecklenburg-Vorpommern
2006	June – July	Nord/LB – Landesförderinstitut Mecklenburg-Vorpommern
2005	June	Hermes Logistics Group Germany

Teaching Experience

- Tutor for 1st semester Students in practicing "Basics of C/C++ Programming"
- Tutor for 2nd semester Students in practicing "Algorithms and Data Structures"
- Presentations and Lessons given in "Basics of Graphical Data Processing" and "Web Development"
- Lecture on "LiDAR Acquisition" and "Basics of Fluid Simulations" in the course of "Visualisation for Climate Change"

Research Experience	Lab Assistant for Multimedia Systems, working on Graphics, GPU Computing, Video Processing and Computer Vision. Presentations and Documents are available on: • http://www.slideshare.net/MultimediaLabWismar • http://www.docstoc.com/profile/christian_kehl

Professional Achievements

Publications	
	Kehl, C. & de Haan, G. "Interactive Simulation and Visualisation of Realistic Flooding Scenarios", Intelligent Systems for Crisis Management, 2012
	Kehl, C., Malan, D.F. and Eisemann, E. "Conformal multi-material mesh generation from labelled medical volumes", 3D NordOst workshop, 2012
Presentations	
	Kehl, C., Tutenel, T. and Eisemann, E. „Smooth, Interactive Rendering and On-line Modification of Large-Scale, Geospatial Data in Flood Visualisations", ICT Open, 2013
	Kehl, C. & de Haan, G. "Interactive Simulation and 3D Visualization for water protection policy management", ICT Open, 2012
	Kehl, C. & de Haan, G. "Interactive Simulation and Visualization of Flooding Scenarios", International Supercomputing Conference, 2012
Awards	*Best Research Poster Award* at the International Supercomputing Conference (ISC) 2012 Title: Interactive Simulation and Visualization of Flooding Scenarios Track: Large Scale Simulations
Scholarships	
Period	March 2009 – August 2009
Description	ERASMUS European internship scholarship
Period	March 2011 – July 2011
Description	DAAD (*German Academic Exchange Service*) full exchange scholarship
Period	September 2011 – March 2012
Description	Foreign Exchange Scholarship from the Federal State of Mecklenburg – Western Pommerania

Further Interests

Topic	*Parallel Computing on Heterogeneous Architectures*
Statement	Since my first experiences for using GPUs for generic calculations in 2010, I got curious about the possibilities of using dedicated chips for "crunching" immense amounts of data. During the recent years, I followed the development of GPU Computing in the HPC domain. I welcome the movement towards Heterogeneous Computing, with the idea of using specialised chips to execute calculations particularly suitable to their architecture. I see lots of potential in GPU cluster development, the exploitation of other PC-components (i.e. the Audio Processing Unit for Fourier Analysis) and the distributed, parallel computation of real-world problems using mobile devices (as being part of nowadays everyday life). I personally like to be part of that development by developing new close-to-chip libraries and programming interfaces for better usability.
Topic	*Processing, Semantification and Visualisation of massive Geospatial Data*
Statement	During my research in 2012 and 2013, I got well accustomed with the Visualisation of massive, coloured LiDAR data. In that time, I developed algorithms and data structures that allow real-time rendering and annotation of these data. The development of Full-Waveform LiDAR and overlays with Multispectral Images makes it possible to extract further meaning of the data, given appropriate semantic rulesets. I am curious how far we can go with real-world geographic object detection, classification and reasoning with such data. I follow up developments in this domain and I will gratefully contribute algorithms, data structures, interfaces and related publications, if possible.
Topic	*Environmental Visualisation for Decision Making*

Statement	Another domain that caught my interest is Environmental Visualisation, where geospatial data are combined with atmospheric-, hydrologic- and climate simulations or measurement series. Visualising these data helps scientists and decision maker to get insight into the natural processes and reason out of the information towards adaptation strategies in urban planning, landscape preservation and social policy changes. I am grateful to have taken part in that development with visualisation software development that helps in flood hazard understanding and I will follow up further developments in that domain in the future.
Personal Interest	Astronomy, Geology and Climate, Nuclear Physics, History, Politics
Recent software projects	Overview via https://graphics.tudelft.nl/christian-kehl In-detailed descriptions available upon request.
References	References available upon request.