SASCHA HEITKAM ne BECKER

CURRICULUM VITAE November 2015

Professur für Strömungsmechanik
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Born: 18.12.1984
German nationality
Married, 2 children (*2012, 2014)

EDUCATION

2010 - 2014	**Doctoral degree,** *summa cum laude* at TU Dresden, Germany and Université Paris-Sud XI, France. Simulation of the generation of metal foam with electromagnetic fields.
2007 - 2009	**Diploma in Power Engineering** with grade 1.1, best of class (out of approx. 800), TU Dresden
2005 - 2007	**Preliminary diploma in Physics,** with grade 1.7, TU Dresden **Preliminary diploma in Mechanical Engineering,** with grade 1.6, TU Dresden
2004 - 2005	**Correspondence course Physics** TU Kaiserslautern, Germany
1997 - 2004	**Abitur** with grade 1.0, Max-Steenbeck-Gymnasium, Cottbus, Germany

MAJOR GRANTS, FELLOWSHIPS AND AWARDS

2015	DFG Project: Investigation of the Convective Instability in Wet Foam.
2015	Finalist in the ERCOFTAC DaVinci competition
2015	Klaus-Tschira-Award for intelligible science (KlarText!)
2011 - 2012	Eiffel Scholarship for research at the Université Paris-Sud XI, France
2010	Enno-Heidebroek-Award for excellence in the diploma studies
2010	Festo Award for best graduation of class
2008	Fellowship of Vattenfall (1 year)
2004	Young Scientists Contest: 2nd prize (Germany) *acoustics of foam*
2000 - 2004	Various Prizes in Physics-, Mathematics-, Chemistry- and Young Scientists Contests.

WORK EXPERIENCE

since 2015	**Post-Doc** Chair of Fluid Mechanics, TU Dresden, Germany

2010 - 2014	**Doctoral studies** Chair of Fluid Mechanics, TU Dresden, Germany
2011 - 2012	**Doctoral studies** Laboratoire de Physique des Solides, Université Paris-Sud XI, France
2009 (6 Mo)	**Student placement** ABB Turbosystems, Baden, Switzerland
2007-2009	**Student assistant** Chair of Measurement and Testing Technique, TU Dresden
2006 (2 Mo)	**Student placement** at AMD Saxony, Dresden, Germany
2005 (2 Mo)	**Student placement** at Vestas Blades Germany, AG, Lauchhammer
2001 - 2004	**Student assistant** at BTU Cottbus, Germany

SKILLS AND TECHNIQUES

Languages	German, native tongue English, fluent in speech and writing French, basic knowledge
Programming	FORTRAN, C, MPI, OpenMP, MATLAB, LabVIEW
Software	Paraview, Tecplot, CAD, LaTeX, LinuxPC, WindowsPC
Laboratory	HWA, LDA, Pressure, PIV, LIF, Schlieren

TEACHING

2015 - 2016	Lecture: CFD for engineers
2010 - 2015	Exercise: Fluid Mechanics 1+2
2010 - 2014	Lab course: Flow measurement

PEER REVIED PUBLICATIONS

Voigt, A.; **Heitkam, S.**; Büttner, L. & Czarske, J. A Bessel beam laser Doppler velocimeter. *Optics Communications*, **282**, 1874-1878, 2009.

Heitkam, S. & Fröhlich, J. Formation of crystalline bubble structure in wet metal foams. *PAMM*, **11**, 653-654, 2011.

Heitkam, S.; Drenckhan, W. & Fröhlich, J. Packing spheres tightly: Influence of mechanical stability on close-packed sphere structures. *Physical review letters*, **108**, 148302, 2012.

Heitkam, S.; Schwarz, S. & Fröhlich, J. Simulation of the influence of electromagnetic fields on the drainage in wet metal foam. *Magnetohydrodynamics*, **48**, 0024-0028, 2012.

Heitkam, S.; Yoshitake, Y.; Toquet, F.; Langevin, D. & Salonen, A. Speeding up of sedimentation under confinement. *Physical review letters*, **110**, 178302, 2013.

Fröhlich, J.; Schwarz, S.; **Heitkam, S.**; Santarelli, C.; Zhang, C.; Vogt, T.; Boden, S.; Andruszkiewicz, A.; Eckert, K.; Odenbach, S. & others Influence of magnetic fields on the behavior of bubbles in liquid metals. *The European physical journal. Special topics*, **220**, 167-183, 2013.

Heitkam, S.; Schwarz, S.; Santarelli, C. & Fröhlich, J. Influence of an electromagnetic field on the formation of wet metal foam. *The European Physical Journal Special Topics*, **220**, 207-214, 2013.

Heitkam, S. Manipulation of liquid metal foam with electromagnetic fields: a numerical study. *PhD Thesis*, TU Dresden, 2014.

Heitkam, S.; Ihlenfeld, H. & Fröhlich, J. Investigation of potential flow using the soap film analogy-a historical review. *PAMM*, **14**, 1011-1012, 2014.