

# ACEX2020

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## Curriculum Vitae Dr. habil. Alexey Shutov



### Personal information

Date of birth: July 29, 1979  
Place of birth: Novosibirsk, USSR

### Current place of work

Lavrentyev Institute of Hydrodynamics  
Department of solid mechanics  
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### Academic education

08/2004 – 06/2005	DAAD fellow at the Martin-Luther University Halle-Wittenberg
07/2001 – 06/2004	Doctoral studies at Novosibirsk State University, Faculty of Mechanics and Mathematics, Chair of Solid Mechanics
09/1996 – 06/2001	Studies of mechanics at Novosibirsk State University, Faculty of Mechanics and Mathematics, Chair of Solid Mechanics. Main focus: mechanics

### Scientific degrees

05/2014	Habilitation, Technische Universität Chemnitz. Degree: Dr. habil. Title of the Habilitation thesis: „ <a href="#">Numerical simulation of viscoplastic behaviour of metallic materials at finite strains</a> “ (in German and English)
06/2004	PhD, Novosibirsk State University. Degree: PhD in Physics and Mathematics Title of the PhD thesis: „Numerical simulation of fracture in thin-walled structures“ (in Russian)
06/2001	Diploma thesis, Novosibirsk State University. Degree: Specialist in Mechanics Title of the diploma thesis: „Equations of the elasticity theory for a strip with a hole“ (in Russian)

## Work history

Since 02/2016	Head of the Laboratory of mechanics of composites, Lavrentyev Institute of Hydrodynamics (Novosibirsk, Russia) University teacher at the chair of Theoretical Mechanics, Novosibirsk State University (Russia).
01/2015-01/2016	Research worker at Lavrentyev Institute of Hydrodynamics, Department of Solid Mechanics (Novosibirsk, Russia) University teacher at the chair of Solid Mechanics, Novosibirsk State University (Russia).
2014	Research worker at the chair of Solid Mechanics, Institute of Mechanics and Thermodynamics, Technische Universität Chemnitz (Germany). Joint management of Projects „Material laws and identification“ and „Simulation-based extension of the Presta method for assembled camshafts“ within SFB 692 together with Prof. Ihlemann.
2006-2013	Research worker at the Chair of solid mechanics, Institute of mechanics and thermodynamics, Technische Universität Chemnitz (Germany). Research on the project „Material laws and identification“ within SFB 692: 1) Development and analysis of models for viscoplasticity of metals at large strains. 2) Development of efficient and robust algorithms for numerical simulation. 3) Implementation of material models into commercial FEM codes (MSC.MARC and ABAQUS). 4) Identification of material parameters basing on experimental data.
2005 – 2006	Research worker at the Institute of applied analysis und numerical simulation, University of Stuttgart (Germany). Project C5 within SFB 404: 1) Analysis of existence and uniqueness of solution for the Kachanov-Rabotnov creep damage model. 2) The influence of the damage and its gradient on the lifetime of engineering components is characterized.
2004 – 2005	DAAD fellow at the Martin-Luther University Halle-Wittenberg, Chair of technical mechanics, Halle (Germany). Participation on a project dealing with numerical simulation of creep and damage: Construction of analytical solution for creep in pressurized pipe weldments.
2001 – 2004	Research worker at Lavrentyev Institute of Hydrodynamics, Laboratory of damage mechanics, Novosibirsk (Russia). Participation on development of the PIONER FEM code: 1) Development and analysis of models for crack propagation simulation. 2) Development of programs for pre- and post-processing.
2000 – 2001	Research worker at Institute of mining, Laboratory of rock mechanics, Novosibirsk (Russia). Development of the boundary element method for static problems.

## Top 5 publications

Shutov, A. V.; Silbermann, C. B; Ihlemann, J.: Ductile damage model for metal forming simulations including refined description of void nucleation. International Journal of Plasticity (2015), 71, 195-217.

Shutov, A. V.; Ihlemann, J.: Analysis of some basic approaches to finite strain elasto-plasticity in view of reference change. *International Journal of Plasticity* (2014), 63, 183-197.

Shutov, A. V.; Landgraf, R.; Ihlemann, J.: An explicit solution for implicit time stepping in multiplicative finite strain viscoelasticity. *Computer Methods in Applied Mechanics and Engineering* (2013), 256, 213-225.

Shutov, A. V.; Ihlemann, J.: A viscoplasticity model with an enhanced control of the yield surface distortion. *International Journal of Plasticity* (2012), 39, 152-167.

Shutov, A. V.; Kreißig, R.: Finite strain viscoplasticity with nonlinear kinematic hardening: Phenomenological modeling and time integration. *Computer Methods in Applied Mechanics and Engineering*, (2008) 197, 2015-2029.