Anne-Sophie Sur

Work : Technische Universität Dresden, Faculty of Mathematics, Institute of Numerical Mathematics, 01062 , Dresden , Germany

WORK EXPERIENCE

Technische Universität Dresden

City: Dresden | **Country:** Germany

[01/10/2024 – Current] **Scientific employee (Postdoc)**

- research in the scientific field of phase-field modeling of ductile fracture, development of algorithms using the finite element method

- teaching for different courses at Bacherlor's and Master's level

Norwegian University of Science and Technology

City: Trondheim | **Country:** Norway

[15/01/2020 – 14/01/2024] **PhD candidate**

- research in the scientific field of porous materials, plasticity, phase-field modelling

- participation in international conferences

- supervision of Master students

Technische Universität Berlin

City: Berlin | **Country:** Germany

[04/2016 – 03/2017] **Student assistant (tutor)**

- exercises in Analysis I + II for mathematicians

- teaching, supervision and assignment correction

EDUCATION AND TRAINING

[15/01/2020 – 13/06/2024] **PhD**

Norwegian University of Science and Technology

City: Trondheim | **Country:** Norway | **Field(s) of study:** Structural engineering, Computational mechanics | **Thesis:** Phase-field models for ductile fracture: Stress triaxiality deoendent approaches applied to pipeline steel

[04/2017 – 01/2020] **M.Sc. Mathematics**

Technische Universität Berlin

City: Berlin | **Country:** Germany | **Field(s) of study:** Mathematics | **Final grade:** 1,1 | **Thesis:** Fracture in elasto-plastic materials: On the mathematical analysis of a variational model

[10/2012 – 02/2018] **B.Sc. Civil Engineering , TU**

Technische Universität Berlin

City: Berlin | **Country:** Germany | **Field(s) of study:** Civil Engineering | **Final grade:** 1,8 | **Thesis:** Experimental and theoretical analysis of frictional behaviour of concrete samples under periodic loading

[10/2012 – 08/2016] **B.Sc. Mathematics**

Technische Universität Berlin

City: Berlin | **Country:** Germany | **Field(s) of study:** Mathematics | **Final grade:** 1,6 | **Thesis:** Contact problems in nonlinear elasticity

LANGUAGE SKILLS

Mother tongue(s): German

Other language(s):

English

LISTENING C1 **READING** C1 **WRITING** C1

SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

French

LISTENING B2 **READING** B2 **WRITING** B2

SPOKEN PRODUCTION B1 **SPOKEN INTERACTION** B2

Norwegian

LISTENING C1 **READING** C1 **WRITING** C1

SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

SKILLS

Abaqus (FEA) | programming: Python, Fortran 90, MATLAB | LaTeX | Inkscape

PUBLICATIONS

[2025] **A variational phase-field model for ductile fracture depending on hydrostatic stresses**

Reference: A.-S. Sur, L. De Lorenzis, C. Maurini, O.S. Hopperstad. 'A variational phase-field model for ductile fracture depending on hydrostatic stresses'. Meccanica.

under publication - accepted March 2025

[2025] **Modelling of ductile fracture in stainless steel combining porous plasticity and phase-field models'.**

Reference: A.-S. Sur, D. Morin, G. Gruben, O.S. Hopperstad. 'Modelling of ductile fracture in stainless steel combining porous plasticity and phase-field models'.

in preparation

HONOURS AND AWARDS

[2016] **Award at DMV's student conference Awarding institution:** German Mathematical Society

Award for best oral presentation of the Bachelor thesis.

MANAGEMENT AND LEADERSHIP SKILLS

Supervision of Master's students in preparing their final thesis

COMMUNICATION AND INTERPERSONAL SKILLS

Good public speaking and networking skills gained through participation in conferences

Good communication and explanation skills at different levels through interaction with students