

Dr. Julia Schneider

*The Jackson School of Geosciences
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Education

- 2012 Postdoctoral Fellow *Bureau of Economic Geology, Austin, TX*
- 2011 Ph.D., Geosciences *The University of Texas at Austin, TX*
Dissertation: Compression and permeability behavior of natural mudstones
Advisor: Prof. Dr. Peter Flemings, GPA: 3.85/4.00
- 2006 Diplom (M.S.), Geosciences *University of Bremen, Germany*
- 2004 Bachelor of Science (B.S.), Geosciences *University of Bremen, Germany*

Fellowships / Awards

- Fall 2011 Ewing/Worzel Fellowship from UT Institute for Geophysics
- 2010 AGU Outstanding Student Paper Award (2010 AGU Fall Meeting)
- 2010 - 2011 Schlanger Ocean Drilling Fellowship Award
- 2009 - 2010 Outstanding Teaching Assistant Award (UT)
- Spring 2009 Hess Fellowship
- Fall 2008 Ewing/Worzel Fellowship from UT Institute for Geophysics
- Fall 2008 Chevron Excellence Award
- Summer 2008 Ewing/Worzel Fellowship from UT Institute for Geophysics
- Fall 2007 Chevron Excellence Award
- 2007 ConocoPhillips Distinguished GeoFluids Fellowship
- 2007 Third Prize Award for oral presentation by a Ph.D. Student (Pre-Comprehensive Exam) at 39th Annual Graduate Student Colloquium, The Pennsylvania State University, University Park, PA, April 16-20, 2007

Work Experience

- Aug. 2006 – Present *The University of Texas at Austin, TX*
Graduate Research Assistant for various semesters, GeoFluids group, under supervision of Dr. Peter Flemings. Performed pore pressure prediction in mudstones in shallow subsurface of deepwater Gulf of Mexico. Currently performing geotechnical experiments on laboratory-prepared sediment mixtures to study influence of composition and mineralogy on compression and permeability behavior of mudstones. Developed a coupled permeability-compressibility model.
- Summer 2007 *Shell Oil Company, E&P, Houston, TX*
Geoscience Intern, Fundamental Rock Properties group
Integrated and interpreted regional pore pressure, temperature, and well log data to study reservoir connectivity in a complex compressive system.

Curriculum Vitae: Julia Schneider

Aug. 2001 – July 2006 *University of Bremen, Germany*
Student Assistant, research groups: Geophysics, Sediment Transport Modeling, and Crystallography. Built sensor strings for heat flow probe, performed literature search and updated EndNote database, prepared samples for X-ray diffraction (XRD), analyzed/processed XRD data.

Research Experience

2011 **Onshore scientist** working on Integrated Ocean Drilling Program (IODP) Expedition 322, Nankai Trough, Japan

2008 – 2009 **Helped design and setup** the UT Jackson School GeoMechanics Lab

2008 – 2009 **Visiting Student**, Department of Civil and Environmental Engineering at Massachusetts Institute of Technology (MIT) (7 months), supervised by Dr. John T. Germaine. Built/setup/performed uniaxial consolidation and flow-through permeability experiments.

March 2009 **Invited Workshop Participant**, Seabed Sediment Pore Pressure: Genesis, Measurement and Implications for Design/Analysis, Oslo, Norway

August 2008 **Summer School Participant**, Marie Curie Summer School on Aqueous and Porous Materials, Trèst, Czech Republic

July 2008 **Software Training Course Participant**, TEMIS 2D/3D (Basin Modeling), Beicip-Franlab, Houston, TX

July 2007 **Workshop Participant**, Soil Mechanics, Shell E&P, Houston, TX

2005 **Shipboard Sedimentologist**, Integrated Ocean Drilling Program (IODP) Expedition 308, Gulf of Mexico (6 weeks). Worked in an international team of 30 researchers from around the world. Described and sampled sediment cores, measured magnetic susceptibility, and took color scans and core photos

2004 **Student Assistant**, Expedition ARK XX/3, Arctic Ocean (Svalbard) (5 weeks) Sailed in order to collect own data for B.S. thesis. Deployed and recovered multi corer and piston corer, performed Multi Sensor Core Logger (MSCL) measurements, and sampled sediment cores.

2003 **Summer Intern**, GeoPro (geophysical company), Hamburg, Germany

2002 **Student Assistant**, Expedition M54/2, Costa Rica, Nicaragua (4 weeks) Deployed, recovered, and repaired heat flow probe, monitored measurements during deployment, loaded and processed temperature data.

2001 - 2004 **Various Undergraduate Research Projects**, University of Bremen, Germany Marine geology on the R/V Littorina in Baltic Sea. Geomagnetic and Gravity field survey in Haithabu, Germany. Visiting offshore wind park in North Sea.

Teaching Experience

Spring 2011 **Mentored undergraduate student** from UT in mudrock analyses and resedimentation

Summer 2010 **Mentored visiting undergraduate and new incoming graduate student** in grain size analyses and geotechnical experimentation.

Spring 2010 **Mentored undergraduate student** from UT in grain size analyses.

Spring 2010 **Teaching Assistant** for undergraduate course 'Petroleum Geology' at UT Austin

Summer 2009 **Mentored summer intern** from Fort Valley State University for two months in geotechnical experimentation.

Publications

Day-Stirrat, R.J., Schleicher, A.M., **Schneider, J.**, Flemings, P.B., Germaine, J.T., van der Pluijm, B.A. (2011). Preferred orientation of phyllosilicates: Effects of composition and stress on resedimented mudstone microfabrics, *Journal of Structural Geology*, Vol. 33, No. 9, p. 1347-1358, doi:10.1016/j.jsg.2011.06.007.

Schneider, J., Flemings, P.B., Day-Stirrat, R.J., Germaine, J.T. (2011). Insights into pore-scale controls on mudstone permeability through resedimentation experiments, *Geology*, Vol. 39, No. 11, p. 1011-1014, doi:10.1130/G32475.1.

Schneider, J., Flemings, P.B., Dugan, B., Long, H., and Germaine, J.T. (2009). Overpressure and consolidation near the seafloor of Brazos-Trinity Basin IV, Northwest Deepwater Gulf of Mexico, *Journal of Geophysical Research*, 114, B05102, doi:10.1029/2008JB005922.

Dugan, B., Flemings, P.B., Urgeles, R., Sawyer, D., Iturrino, G.J., Moore, J.C., **Schneider, J.** (2007). Physical Properties of Mass Transport Complexes in the Ursa Region, Northern Gulf of Mexico (IODP Expedition 308) Determined from Log, Core, and Seismic Data, *Proceedings 2007 Offshore Technology Conference: Paper OTC 18704*.

Publications in preparation

Schneider, J., Flemings, P.B., Dugan, B., Long, H., Germaine, J.T., Saffer, D.M. (in prep.), Permeability - porosity behavior of shallow mudstones in the Ursa Basin, Northern Deepwater Gulf of Mexico, *Marine Geology*.

Schneider, J., Flemings, P.B., Germaine, J.T. (in prep.), Deformation and transport processes of resedimented mudstones from the Shikoku Basin, IODP Expedition 322.

Schneider, J., Flemings, P.B., Day-Stirrat, R.J. (in prep.), Data Report: Permeability, compressibility, and microstructure of resedimented mudstones from the Shikoku Basin, seaward of the Nankai Trough, IODP Site C0011, *Proceedings IODP Scientific Results*.

Selected Abstracts

Schneider, J., Flemings, P.B., Day-Stirrat, R.J., Germaine, J.T. (2011). Insights into pore-scale controls on mudstone permeability and compressibility through resedimentation experiments, (Oral), *Geopressure 2011, An International Interdisciplinary Conference on Pressure Regimes and Their Prediction at all Scales*, Galveston, TX, October 2-5, 2011.

Schneider, J., Flemings, P.B., Day-Stirrat, R.J., Germaine, J.T. (2011). Insights into pore-scale controls on mudstone permeability and compressibility through resedimentation experiments, (Oral), Abstract EGU2011-9052 presented at *EGU General Assembly 2011*, Vienna, Austria, April, 3-8, 2011.

Schneider, J., Flemings, P.B., Day-Stirrat, R.J., Germaine, J.T. (2010). Experimentally derived model to predict permeability behavior of mudstones, (Poster), Abstract MR11B-1880 presented at *2010 Fall Meeting, AGU*, San Francisco, CA, December 13-17, 2010.

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Schneider, J., Peets, C.S., Flemings, P.B., Day-Stirrat, R.J., Germaine, J.T. (2010). Experimentally derived mechanical and flow properties of mudstones, (Poster), Extended Abstract for the *EAGE Shale Workshop - Shale – Resource and Challenge*, 3 pp., Nice, France, April, 26-28, 2010.

Schneider, J., Peets, C.S., Flemings, P.B., Day-Stirrat, R.J., Germaine, J.T. (2009). Experimentally derived mechanical and flow properties of fine-grained soil mixtures, (Poster), *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract H23F-1024, San Francisco, CA, December 14-18, 2009.

Schneider, J., Flemings, P.B., Dugan, B., Long, H., Germaine, J.T., Saffer, D.M. (2008). Porosity vs. Permeability Behavior of Shallow Mudstones in the Ursa Basin, Deepwater Gulf of Mexico, (Poster), *Eos Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract OS11A-1105, San Francisco, CA, December 15-19.

Schneider, J., Flemings, P.B., Long, H., Dugan, B., Germaine, J.T., Saffer, D.M., and IODP Expedition 308 Shipboard Scientific Party (2008). Pore pressure prediction near the seafloor in the Brazos-Trinity Basin, Gulf of Mexico, (Oral), *International Conference “Overpressure 2008: Present and Future Challenges – A Research Conference”*, Durham, England, April 6-9.

Schneider, J., Flemings, P.B. (2008). Overpressure and compaction of porous marine sediments, (Poster, Oral), *Marie Curie Summer School, Knowledge Based Materials, Hydrous and porous systems*, Trèst, Czech Republic, August 19-29.

Schneider, J., Moerz, T., Bartetzko, A., Iturrino, G.J., Edeskaer, T.M., Flemings, P.B., Behrmann, J.H., John, C.M., and IODP Expedition 308 Shipboard Scientific Party (2005). Examples of mass wasting and hemipelagic sedimentation of Brazos-Trinity Basin #4 and Ursa Basin, (Poster), *Eos Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract OS21A-1516, San Francisco, CA, December 5-9.

Schneider, J., Moerz, T., Bartetzko, A., Iturrino, G.J., Edeskaer, T.M., Flemings, P.B., Behrmann, J.H., John, C.M., and IODP Expedition 308 Shipboard Scientific Party (2005). Examples of mass wasting and hemipelagic sedimentation of Brazos-Trinity Basin IV and Ursa Basin, Northern Gulf of Mexico, IODP Expedition 308, (Poster), *German IODP Meeting*, Greifswald, Germany, March 27-29.

Computer Proficiency

Operating systems: Windows, Mac, Unix, Linux
Illustration and Visualization: Adobe CS Suite, SigmaPlot, Matlab, Corel Draw, GMT
Seismic/Logging: Seisworks, GeoLog, Vista, Kingdom Suite, ProMAX
Numerical Modeling: FLAC, TEMIS, PetroMod, PLAXIS

Professional Affiliations

AAPG (American Association of Petroleum Geologists)
AGU (American Geophysical Union)
EAGE (European Association of Geoscientists and Engineers)

Languages: Fluent in English and German. Limited French knowledge.