PHILLIP G. RESOR

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EDUCATION:

Ph.D. **Stanford University**, Geology (January, 2004)
Dissertation: "Deformation Associated with Continental Normal Faults"
Advisor: Dr. David D. Pollard

M.S. **University of Wyoming**, Geology (May, 1996)
Thesis title: "Nature and Timing of Deformation associated with the Laramie Peak shear zone, Laramie Mts., WY.", Co-advisors: Dr. Arthur W. Snoke, Dr. Carol D. Frost

A.B. **Dartmouth College**, Earth Sciences (June 1989) *Magna cum Laude*
Certificate in Environmental Studies
Honor's thesis title: "Analysis of the mineral composition and chemical variations in ore-forming fluids of the Peregrina and El Cubo mines, Gto., Mexico." Advisor: Dr. Half Zantop

PROFESSIONAL EXPERIENCE

Assistant Professor, Department of Earth and Environmental Sciences, Wesleyan University, Middletown, CT (2004-present).

Stanford Graduate Fellow, Stanford University, Dr. David D. Pollard, advisor (1999-2003). Interdisciplinary research integrated geologic field mapping, GPS surveying, remote sensing, and earthquake seismology to image 3D fault patterns and deformation associated with normal fault systems during a single earthquake and over geologic time.

Summer Faculty, Stanford Continuing Studies Program, Stanford, CA. Designed and taught a mini-course entitled "A Plate Boundary in our Backyard, an Introduction to Plate Tectonics" With Dr. Paul Segall. (Summer, 2002)

Teaching Assistant, Department of Geological and Environmental Sciences, Stanford University (2000-2001). Coordinated and co-taught new Teaching Assistant orientation and a fall TA seminar - "Issues in Geoscience Education".

Senior Geologist, Exxon Exploration Company, Houston, TX (1996-1999)

Teaching and Research Assistant, Department of Geology and Geophysics, University of Wyoming (1993-1996). Designed and taught summer session Physical Geology class with two fellow graduate students.

Science Intern, Western Environmental Law Center, Eugene, OR (Fall 1995)

AWARDS AND HONORS:

2002	Geological Society of America, Structure and Tectonics Division Student Research Award
2002	American Association of Petroleum Geologists Grant-in-Aid recipient
2000, 2002	McGee Research Grants, Stanford School of Earth Sciences
1999-2003	ARCO Stanford Graduate Fellowship
1993	National Science Foundation Graduate Fellowship Honorable Mention
1989	Phi Beta Kappa

COURSES TAUGHT

EES 101 Physical Geology: Our Dynamic Earth
EES 223 Structural Geology
EES 225 Field Geology
EES 322 Introduction to GIS
EES 397 Senior Seminar
EES 398 Death Valley Field Course

UNIVERSITY SERVICE

NSM Computing Committee 2005-2007
Service Learning Initiative Grant Advisory Committee 2005-2007
Committee on International Studies 2005-2006
New Student Orientation – Major Fair 2004, 2005
High School Career Fair 2005

THESES ADVISED

"Syndepositional Deformation of the Capitan Carbonate Reef Complex, Slaughter Canyon, New Mexico: Application of Photogrammetry and GPS Survey Techniques" Jeremy Fairbanks, B.A. (with honors) 2006.

"Surface, Slip and Stress Analysis of the Arkitsa Fault, Greece:A review of the relationships among curvature, fracture zones, and stress fields on a test site in the Gulf of Evvia" Vanessa Meer , B.A. (with honors) 2006.

"Interpretation of Mesoscopic Deformation in Reverse-drag Folding of Parashant Canyon, Arizona" Pat Welsh, B.A. (with honors) 2005.

PROFESSIONAL AFFILIATIONS

Geological Society of America
American Geophysical Union
American Association of Petroleum Geologists

AWARDED GRANTS

External

$212K NASA Planetary Geology and Geophysics (PG&G) program, "Mapping and Structural Analysis of Fold Belts in Tessera Terrain, Venus", Co-Investigator (PI M. Gilmore), 2/1/2009-1/31-2012.

$4K City of Middletown, Agriculture Viability Project. (under subcontract) 2007.

$40 K American Chemical Society – Petroleum Research Fund. "Three Dimensional Structural and Geomechanical Analysis of Syn-sedimentary Deformation of a Prograding Carboante Reef Complex, Guadaulpe Mountains, New Mexico and Texas." 1/2007-12/2008.

$24.2K Chevron Corporation, consulting contract, "A 2-D Geomechanical Model of Synsedimentary Deformation Associated with a Prograding Reef, Permian Capitan Reef Complex, Guadalupe Mountains, New Mexico and Texas". Co-PI with Eric Flodin, IPFW. Wesleyan to receive $14.3K.

$2.5K Middlesex County Community Foundation, "A Study of Changes to Agricultural Land Use in Middlesex County from 1978 – 2004" (PI, S. Prisloe, UConn Cooperative Extension Service) 1/05-6/05. Wesleyan to receive $617 under contract.

Internal

$59K "Implementing Mobile Computing in the Earth and Environmental Sciences Curriculum" Fund For Innovation Proposal. Joint with Jolee West.

$5K Service Learning Grant to incorporate service learning projects into E&ES 322: Introduction to GIS.

$1.5K Pedagogical Grant to purchase professional-grade GPS unit for GIS course.

PUBLICATIONS

Refereed Publications

Resor, P. G., and Meer, V., (in review), Slip heterogeneity on a corrugated fault.

Resor, P. G. and Flodin, E. A., (in press), Forward modeling synsedimentary deformation associated with a prograding steep-sloped carbonate margin, Journal of Structural Geology.

Resor, P. G., 2008, Deformation associated with a continental normal fault system, western Grand Canyon, Arizona: Geological Society of America Bulletin, v. 120, no. 3-4, p. 414-430.

Maerten, F., **Resor, P.**, Pollard, D., and Maerten, L., 2005, Inverting for slip on three-dimensional fault surfaces using angular dislocations: Bulletin Of The Seismological Society Of America, v. 95, no. 5, p. 1654-1665.

Resor, P. G., Pollard, D. D., Wright, T. J., and Beroza, G. C., 2005, Integrating high-precision aftershock locations and geodetic observations to model coseismic deformation associated with the 1995 Kozani-Grevena earthquake, Greece: Journal Of Geophysical Research-Solid Earth, v. 110, no. B9, doi:10.1029/2004JB003263.

Resor, P. G., and Snoke, A. W., 2005, Laramie Peak shear system, central Laramie Mountains, Wyoming, USA: Regeneration of the Archean Wyoming province during Palaeoproterozoic accretion, in Bruhn, D., and Burlini, L., eds., Microstructural Evolution and Physical Properties in High-Strain Zones: Special Publication: London, Geological Society of London, p. 81-107.

Resor, P. G., Chamberlain, K. R., Frost, C. D., Snoke, A. W., and Frost, B. R., 1996, Direct dating of deformation; U-Pb age of syndeformational sphene growth in the Proterozoic Laramie Peak shear zone: Geology, v. 24, no. 7, p. 623-626.

Field Trip Guides

Resor, P. G., de Boer, J. Z., 2005, Hartford Basin Cross Section – Southington to Portland, CT, in McHone, N. W. and Peterson, M. J. Eds., Guidebook for Field Trips in Connecticut, 97th Annual Meeting of the NEIGC, State Geologic and Natural History Survey of Connecticut, Department of Environmental Protection, Guidebook no. 8, p. 177-189.

Resor, P. G., de Boer, J. Z., 2005, Western end of the Honey Hill Fault Along the Eastern Bank of the Connecticut River, in McHone, N. W. and Peterson, M. J. Eds., Guidebook for Field Trips in Connecticut, 97th Annual Meeting of the NEIGC, State Geologic and Natural History Survey of Connecticut, Department of Environmental Protection, Guidebook no. 8, p. 295-303.

Bauer, R. L., Chamberlain, K. R., Snoke, A. W., Frost, B. R., **Resor, P. G.**, and Gresham, D. A., 1996, Ductile deformation of mid-crustal Archean rocks in the foreland of early Proterozoic orogenies, central Laramie Mountains, Wyoming: Colorado Geological Survey, 96-4.

Online Teaching Resources

Resor, P. G., Cracking and Crumbling: Exploring Mechanisms of Dike Emplacement, Teaching Structural Geology in the 21st Century, Resources for Teaching Structural Geology, http://serc.carleton.edu/NAGTWorkshops/structure04/activities/3927.html.

Abstracts

2009

Resor, P. G., Meer, V. E., geometry and kinematics of a corrugated fault surface, Arkitsa, Greece, Geological Society of America Abstracts with Programs, Vol. 41, No. 3, p. 88.

Resor, P. G., Bennum, G., Flodin, E., Toward Predictive Models of Early-Formed Fractures in Steep-Sloped Carbonate Systems, AAPG Abstracts with Programs, 2009 annual convention, Denver.

2008

Bennum, G.*, **Resor, P.**, Flodin, E, Fairbanks, J.*, Photogrammetric 3D Mapping of the Permian Reef, NM and TX, USA, Geological Society of America Abstracts with Programs, Vol. 40, No. 6, p. 188.

Flodin, E. A. **Resor, P. G.**, Integrating Geomechanical modeling and Three-dimensional Mapping to Constrain Deformation Associated with Growth of the Permian Capitan Reef Complex, AAPG Abstracts with Programs, 2008 annual convention, San Antonio.

Resor, P., Teaching Structural Geology through Integrated Field Observation and Modeling, Geological Society of America Abstracts with Programs, Vol. 40, No. 6, p. 422.

2007

Resor, P. G., 2007, Evaluating models of reverse-drag folding, Geological Society of America Abstracts with Programs, Vol. 39, No. 6, p. 128.

2006

Resor, P. G. and Meer, V. E., 2006, Characterizing Geometry, Kinematics, and Fracturing of a Wavy Fault Surface, Arkitsa, Greece, Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract T21C-0440.

P. G. Resor, E. A. Flodin, 2006, Testing Geomechanical Models of Deformation Associated with an Evolving Reef Margin, Capitan System (Permian), Guadalupe Mountains, Texas and New Mexico, U.S.A., AAPG Abstracts with Program International Meeting, Perth Australia.

2005

Krueger, T. E., O'Connell, S., **Resor, P.**, Tait, J., and Prisloe, S., 2005, Quantifying rapid erosion in coastal Connecticut using remotely sensed imagery, GIS, and detailed ground surveys: Geological Society of America Abstracts with Programs, v. 37, no. 7, p. 66-67.

Resor, P. G., and Welsh, P.*, 2005, Fracturing in a reverse drag fold, Parashant Canyon, AZ: Geological Society of America Abstracts with Programs, v. 37, no. 7, p. 204.

Resor, P. G., Maerten, F., Pollard, D. D., and Maerten, L., Coseismic slip estimate for the 1999 Hector Mine earthquake using a multi-segment fault model, Geological Society of America Penrose conference on Kinematics and Geodynamics of Intraplate Dextral Shear in Eastern California and Western Nevada.

2004

Resor P. G., Pollard D. D., Wright T. J., and Beroza G. C.. (2004) Integrating high-precision aftershock locations and geodetic observations to model coseismic deformation associated with the 1995 Kozani-Grevena Earthquake, Greece, in Chatzipetros A. A. and Pavlides S. B., eds. Proceedings of the 5th International Symposium on Eastern Mediterranean Geology, T5-28.

STIMAC, J. P., COOKE, M. L., CRIDER, J. G., JIANG, D., **RESOR, P**., TIKOFF, B., and TORO, J (2004) An Analog and Mathematical Modeling Resource Catalog for Undergraduate Structural Geology Courses, *Geological Society of America Abstracts with Programs*, Vol. 36, No. 5, p. 438.

CRIDER, J. G., COOKE, M. L.,JIANG, D., **RESOR, P**., STIMAC, J. P., TIKOFF, B., and TORO, J (2004) Using Analog and Mathematical Models to Address Multiple Learning Objectives in Undergraduate Structural Geology Courses, *Geological Society of America Abstracts with Programs*, Vol. 36, No. 5, p. 347.

2003

Resor, P. G., Maerten F., Pollard D.D., Inverting for heterogeneous slip on three-dimensional fault systems; a first step toward understanding fault mechanics. GSA Abstracts with Programs, Vol. 35, No. 6, p. 112.

2002

Maerten, F, Maerten, L, **Resor, P.**, 2002, Slip inversion on complex fault surfaces using angular elastic dislocations: Eos Trans. AGU, 83(47), Fall Meet. Suppl., Abstract G61B-0989.

Resor, P. G. and Pollard, D. D., 2002, Deformation associated with a continental normal fault system, western Grand Canyon, Arizona: GSA Abstracts with Programs Vol. 34, No. 6, Paper No. 79-4.

Pollard, D., Maerten, F, Maerten, L, **Resor, P.**, Fiore, P., 2002, Forward 3d modeling of complex fault systems using an elastic boundary element method: GSA Abstracts with Programs Vol. 34, No. 6, Paper No. 112-7.

2001

Resor, P. G., Beroza, G. C., and Pollard, D. D., 2001, Imaging Fault Structure of the 1995 Kozani-Grevena Earthquake Sequence, Greece Using High Precision Aftershock Locations: Eos Trans. AGU, 82(47), Fall Meet. Suppl., Abstract G31B-0143.

Pollard, D., Maerten, F, Maerten, L, **Resor, P**, Muller, J, Aydin, A, 2001, Improved 3D Modeling of Complex Fault Geometries Using Poly3D, an Elastic Boundary Element Code: Eos Trans. AGU, 82(47), Fall Meet. Suppl., Abstract S21B-0572.

2000

Egger, A. E., Surpless, K. D., **Resor, P. G.**, Dunbar, R. W., 2000, Graduate students as teachers: TA training, enrichment, and professional development: Eos Trans. AGU, 81 (48), Fall Meet. Suppl., Abstract ED51A-04.

Surpless, K. D., **Resor, P. G.**, Egger, A., Dunbar, R. W., 2000, Creating graduate student teaching opportunities within a teaching assistant development program: GSA Abstracts with Programs Vol. 32, No. 7, p. 75-76.

1999

Snoke, A.W., **Resor, P.G.**, 1999, Strain partitioning and other complexities associated with a Proterozoic deformation front, Laramie Mountains, Wyoming: GSA Abstracts with Programs Vol. 31, No. 7., p. 259.

1996

Resor, P. G., Snoke, A. W., and Chamberlain, K. R., 1996, Development of a shear-zone bounded block uplift within the middle crust of the Archean Wyoming Province during Proterozoic accretion, Laramie Mts., WY, GSA Abstracts with Programs Vol. 28, No. 7. p. 496.

1994

Resor, P. G., Chamberlain, K. R., Frost, C. D., Snoke, A. W., 1994, U/Pb sphene date of mylonitization associated with the Proterozoic Laramie Peak shear zone, Laramie Mountains, WY, GSA Abstracts with Programs Vol. 26, No. 7. p. 465.

Invited Talks

"Stretching the Crust – Earthquakes in Greece to Earth Structures in the Grand Canyon", University of Massachusetts Department of Geosciences Lecture Series, March 7, 2008.

"Forward modeling synsedimentary deformation associated with a prograding steep-rimmed carbonate margin", SEPM Carbonate Research Group Annual Meeting, San Antonio, TX, April 21, 2008.

SYNERGISTIC ACTIVITIES

- *Session Co-Chair, Geological Society of America, Annual Meeting.* "The Edges of Extension: Boundaries of the Basin and Range Province as Natural Laboratories for Studying Tectonic and Structural Processes". Co-chairs Eric Flodin and Joe Colgan.
- *Reviewer for* Bulletin of the Seismological Society of America, Journal of Geology, Journal of Geophysical Research, Journal of Structural Geology, Mathematical Geology, Tectonophysics, National Science Foundation Tectonics Program, American Chemical Society Petroleum Research Fund.
- *Participant in NSF- funded workshops*: Participated in "On the Cutting Edge" workshop entitled "Early Career Geoscience Faculty: Teaching, Research, and Managing Your Career", June 2004. Participant in and contributor to "On the Cutting Edge" workshop entitled "Teaching Structural Geology in the 21st Century", July 2004.
- *Participated in NITLE funded workshop* entitled "Teaching with GIS in the Liberal Arts: It's Hot, It's New, Now What Do I Do?", August 2004.
- *Established Service Learning GIS program at Wesleyan University.*