

Dr. Dyanna M. Czeck

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Education

- 2001 Ph. D. in Geology (structural geology emphasized) at the University of Minnesota, Minneapolis, MN. Advisor: Dr. Peter J. Hudleston.
- 1995 B. S. with high distinction and honors in Geology, minor in Mathematics: University of Iowa, Iowa City, IA. Advisor: Dr. James E. Faulds.

Positions held

- 2020-present Professor: Dept. of Geosciences, University of Wisconsin-Milwaukee
- 2009-2020 Associate Professor: Dept. of Geosciences, University of Wisconsin-Milwaukee
- 2019-2020 Graduate Program Director: Dept. of Geosciences, University of Wisconsin-Milwaukee (also 2014-2016; 2017-2018)
- 2003-2009 Assistant Professor: Dept. of Geosciences, University of Wisconsin-Milwaukee
- 2002-2003 Assistant Professor: Dept. of Geosciences, Indiana University of Pennsylvania
- 2001-2002 Visiting Assistant Professor: Dept. of Geology, Oberlin College

Quantitative Structural Geologist

- Link classical structural analysis fieldwork with mathematical modeling of deformation, geochemical techniques (X-ray fluorescence, Fourier transform infrared spectroscopy), texture and microstructural analysis (petrographic, electron back scatter diffraction, cathodoluminescence), geophysical techniques (magnetic fabrics), and image analysis.
- Key research questions:
 - How do fluids and strain interrelate during fault and shear zone deformation?
 - How can we use naturally deformed rocks to extract rheologic information?
 - How does strain partition into a variety of structures during oblique tectonic plate collisions over space and time?
 - How can kinematic models constrain ancient tectonic plate collision geometries?

Leader in Increasing Inclusion and Diversity in Geosciences

- PI for UWM GO FoRWARD program, an NSF-sponsored initiative to increase diversity of students entering geosciences major.
<http://people.uwm.edu/goforward/2019/01/17/what-is-go-forward/>
- Faculty mentor for Stem-INSPIRE WiscAMP, part of Wisconsin Louis Stokes Alliance for Minority participation
- Mentored 3 McNair scholars
- Supervised 18 MS students; co-supervised 2 PHD students
- Supervised 41 BS students in research projects, lab work, and/or field work
- Many students recruited to work in research group are from groups traditionally underrepresented in geosciences: 60% female; 40% first-generation college students; 25% nontraditional students; 15% underrepresented minority; 10% LGBTQ

- Nominated for UWM Undergraduate Research Mentor of the Year
- Chair of Department of Geosciences Diversity, Equity, and Inclusion committee
- College of Letters & Sciences Dean's Working Group for Howard Hughes Medical Institute Inclusive Excellence Proposal

Grants

External

- 2020 **NSF IUSE Pathways into Geoscience.** “LET'S GEO: Learning Ecosystem for Training Student Geoscientists for Employment Opportunities.” Czeck Lead PI; Co-PIs (all from UWM): Julie Bowles, Victoria McCoy, Lindsay McHenry, Charles Paradis. \$290,907 (9/1/2020- 8/31/2023)
- 2020 **Advanced Light Source - Lawrence Berkeley National Laboratory General Sciences Proposal.** “Pathways for water in quartz grains: exploring strain softening along the Willard Thrust Fault.” Czeck is sole PI: beamtime rather than monetary award. (1/1/2020-12/31/2021)
- 2019 **NSF International Research Experiences for Students Program-1854155** “IRES Track I: Lithological controls on strain localization in metasedimentary rocks along the Southern Iberian Shear Zone.” Czeck is sole PI: \$300,000. (8/15/2019-8/14/22)
- 2017 **Advanced Light Source - Lawrence Berkeley National Laboratory General Sciences Proposal.** “Pathways for water in quartz grains: exploring mineral weakening during deformation.” Czeck is sole PI: beamtime rather than monetary award. (1/1/2018-12/31/2019)
- 2017 **NSF IUSE Pathways into Geoscience-1701101.** “GEOPATHS-IMPACT: Geosciences Opportunities with Fossils, Rocks, & Water to Attract underRepresented Discoverers (GO FoRWARD).” Czeck is sole PI; Margaret Fraiser (UWM) was co-PI from 12/1/2017-5/15/2018. \$319,494. (12/1/2017-11/30/2020)
- 2011 **NSF Tectonics Program EAR-1128849.** “Sponsoring Early Career Researchers for Penrose Conference: Deformation Localization in Rocks.” \$26,306 (4/1/2011-3/31/2012; Czeck was sole PI)
- 2011 **UW-Madison/UW-Milwaukee Intercampus Research Incentive Grants Program.** “The relationship between magmatism and tectonism.” \$50,000 (Lead PI Czeck, UW-Milwaukee \$37,500; Co-PI Basil Tikoff, UW- Madison \$12,500; 7/1/2011-6/40/2012)
- 2009 **NSF Tectonics Program EAR-0838240.** “Collaborative Research: Linking fluid-rock interaction and strain accumulation in a naturally deformed diamictite, implications for hydrolytic weakening and reaction softening.” \$190,467 (1/1/2009-12/31/2012; Lead PI Czeck, UW-Milwaukee \$166,374; Co-PI Adolph Yonkee, Weber State \$24,093)
- 2005 **NSF Tectonics Program EAR-0510893.** “Collaborative Research: Quantifying the dependence of microstructures and rheology on finite strain for naturally deformed rocks.” \$181,681 (7/1/2005-6/30/2009; Lead PI Czeck, UW-Milwaukee \$114,318; Co-PI Basil Tikoff, UW- Madison \$67,363)

Internal (Related to Faculty Research; student research grants not included)

- 2017 **UWM Research Growth Initiative.** “Pathways for water in quartz grains: exploring mineral weakening during deformation.” \$137,339. (7/1/2017-12/31/2019)
- 2016 **UWM Research and Creative Activities Support Awards.** “Characterizing the geochemical changes in the Beja-Acebuches metabasites due to retrograde

- metamorphism and fluid flow along the Southern Iberian Shear Zone.” \$15,000 (7/1/2016-12/31/2017).
- 2012 **UWM Center for International Education Faculty/Academic Staff Travel Awards to Develop/Implement Overseas Field Research Experiences for Undergraduates.** “The relationship between magmatism and tectonism in the Northwest Scottish Highlands.” \$3175
- 2011 **UWM Sabbatical Enhancement Award.** “Structural Geology: Testing Transpression Models and Studying Folds in Transpression.” \$6000
- 2011 **UWM Center for International Education Faculty Travel Award.** \$300
- 2009 **UW System Synchrotron Beamtime Proposal.** “Linking fluid-rock interaction and strain accumulation in a naturally deformed diamictite, implications for hydrolytic weakening and reaction softening.” Instrumentation time rather than monetary award.
- 2009 **UWM Research Growth Initiative IV.** “Quantifying fabrics in shear zones.” \$65,350
- 2008 **UW System Synchrotron Beamtime Proposal.** “Fourier Transform Infrared Spectroscopy determinations of water concentration in quartz-bearing clasts exhibiting variations in strain” with Kimberly Johnson (MS student). Instrumentation time rather than monetary award.
- 2006 **UWM Research Growth Initiative I.** “Linking Quantitative Values of Strain and Fabrics in Naturally Deformed Rocks.” \$87,519
- 2003 **UWM Graduate School Research Committee Awards.** “When Tectonic Plates Collide: Predicting Strain For Rocks Under Stress.” \$14,827
- 2001 **Oberlin College Research and Development Grant-in-Aid.** “Stabilization of continents: constraining the relative timing of granites and tectonic plate collisions.” \$2500

Peer-reviewed Publications (*students in italics*)

- 2019 **Czeck, D. M., Traut, J. T.,** Hudleston, P. J., 2019. Rheologic information determined from cleavage refraction in naturally deformed interlayered quartzites and phyllites. In: *Folding and Fracturing of Rocks: 50 Years of Research since the Seminal Text Book of J. G. Ramsay.* Bond, C. E. & Lebit, H. D. (eds). Geological Society, London, Special Publications, 487. <https://doi.org/10.1144/SP487-2018-49>.
- 2019 Díaz-Azpiroz, M., Fernández, C., **Czeck, D. M.**, 2019. Are we studying deformed rocks in the right sections? Best practices in the kinematic analysis of 3D deformation zones. *Journal of Structural Geology* 125, 218-225. <https://doi.org/10.1016/j.jsg.2018.03.005>
Note: this article was selected for prestigious special volume “Back to the future: 40 years of Structural Geology and beyond.”
- 2014 Díaz-Azpiroz, M., *Barcos, L.,* Balanyá, J.C., Fernández, C., Expósito, I., **Czeck, D.**, 2014. Testing triclinic transpression models in highly partitioned brittle shear zones. A case study from the Torcal de Antequera massif (External Betics, southern Spain). *Journal of Structural Geology* 68, 316-336.
- 2013 Fernández, C., **Czeck, D. M.**, and Díaz-Azpiroz, M., 2013. Testing the model of oblique transpression with oblique extrusion in two natural cases: steps and consequences. *Journal of Structural Geology* 54, 85-102.
- 2013 Yonkee, W. A., **Czeck, D. M.,** *Nachbor, A., Barszewski, C. B., Pantone, S., Balgord, E., and Johnson, K. R.,* 2013. Strain accumulation and fluid-rock interaction in a naturally

- deformed diamictite, Willard thrust system, Utah (USA): Implications for crustal rheology and strain softening. *Journal of Structural Geology* 50, 91-118.
- 2012 DeVasto, M. A., **Czeck, D. M.**, and Bhattacharyya, P., 2012. Using image analysis and ArcGIS® software to improve automatic grain boundary detection and quantify geological images. *Computers and Geosciences* 49, 38-45.
- 2012 Druguet, E., *Castaño, L.M.*, **Czeck, D.M.**, Hudleston, P.J., Carreras, J., 2012. The tectonic significance of dikes of irregular fold-like shape. *Geology* 40, 579-582.
- 2011 Bauer, R.L., **Czeck, D.M.**, Hudleston, P.J., Tikoff, B., 2011. Structural geology of the subprovince boundaries in the Archean Superior Province of northern Minnesota and adjacent Ontario, in Miller, J.D., Hudak, G.J., Wittkop, C., and McLaughlin, P.I., eds., *Archean to Anthropocene: Field Guides to the Geology of the Mid-Continent of North America: Geological Society of America Field Guide* 24, p. 203–241.
- 2010 Carreras, J., **Czeck, D. M.**, Druguet, E., Hudleston, P. J., 2010. Structure and development of an anastomosing network of ductile shear zones. *Journal of Structural Geology* 32, 656-666.
- 2009 **Czeck, D. M.**, *Fissler, D. A.*, *Horsman, E.*, and Tikoff, B., 2009. Strain analysis and rheology contrasts in polymictic conglomerates: an example from the Seine metaconglomerates, Superior Province, Canada. *Journal of Structural Geology* 31, 1365-1376.
- 2008 Bhattacharyya, P. and **Czeck, D. M.**, 2008. Using network analyses within GIS technologies to quantify geometries of shear zone networks. *Geosphere* 4, 640–656.
- 2008 Druguet, E., **Czeck, D. M.**, Carreras, J., and *Castaño, L. M.*, 2008. Emplacement and deformation features of syntectonic leucocratic veins from Rainy Lake zone (Western Superior Province, Canada). *Precambrian Research* 163, 384–400.
- 2008 *Horsman, E.*, Tikoff, B., and **Czeck, D. M.**, 2008. Rheological implications of heterogeneous deformation at multiple scales in the Late Cretaceous Sierra Nevada, California. *Geological Society of America Bulletin* 120, 238-255.
- 2007 **Czeck, D. M.** and Ormand, C. J., 2007. Geometry and folding history of the Baraboo Syncline: Implications for the Mazatzal Orogeny in the north-central U.S. *Precambrian Research* 157, 203-213.
- 2006 **Czeck, D. M.**, *Maes, S. M.*, *Sturm, C. L.*, and *Fein, E. M.*, 2006. Assessment of the relationship between emplacement of the Algoman Plutons and regional deformation in the Rainy Lake region, Ontario. *Canadian Journal of Earth Sciences* 43, 1653-1671.
- 2004 **Czeck, D. M.** and Hudleston, P. J., 2004. Physical experiment of vertical transpression with localized nonvertical extrusion. *Journal of Structural Geology* 26, 573-581.
- 2004 Bhattacharyya, P. and **Czeck, D. M.**, 2004. Using candies to demonstrate concepts of weathering and sedimentary processes in lecture-based introductory earth science courses. *Journal of Geoscience Education* 52, 293-300.
- 2003 **Czeck, D. M.** and Hudleston, P. J., 2003. Testing models for obliquely plunging lineations in transpression: a natural example and theoretical discussion. *Journal of Structural Geology* 25, 959-982.

Other Publications

- 2016 Díaz-Azpiroz, M., Leever, K.A., Brune, S., Fernández, C., and **Czeck, D. M.**, 2016. Editorial: Tectonics of oblique plate boundary systems. *Tectonophysics* 693(B), 165-170.

- 2013 Druguet, E., **Czeck, D. M.**, Alsop, G. I., Bons, P. D., 2013. Preface: Deformation localization. *Journal of Structural Geology* 50, 1-4.
- 2010 **Czeck, D. M.** and Poulsen, K. H. (**Invited**) Field trip guide: Deformation in the Rainy Lake Region: A Fabulous Display of Structures Controlled by Rheological Contrasts. Institute on Lake Superior Geology 56th Annual Meeting, International Falls, MN, 2010; 56 Part 2, 47-75.
- 2007 **Czeck, D. M.** and Markley, M. J. Activity: Exploring lithological assemblages and structural styles of granite-greenstone belts. NSF/NAGT Workshop: Teaching about the Early Earth Resource Collection.
<http://serc.carleton.edu/NAGTWorkshops/earlyearth/activities/17847.html>
- 2004 **Czeck, D. M.** Laboratory Exercise: What Controls Rheology? NSF/NAGT Workshop: Teaching Structural Geology in the 21st Century Resource Collection.
<http://serc.carleton.edu/NAGTWorkshops/structure04/activities/3870.html>
- 2002 **Czeck, D. M.** and Fralick, P. (**Invited**) Field trip guide to the Seine River Conglomerates and adjacent rocks near Mine Centre, Canada. Institute on Lake Superior Geology 48th Annual Meeting, Kenora, ON, 2002; 48 Part 2, 37-67.

Presentations at Professional Conferences (presenter has asterisk*; *students in italics*)

- 2019 **Czeck, D. M.***, *Stephenson, S. I.*, Díaz-Azpiroz, M., Fernández, C., García-Arias, M. Syndeformational fluid flow in metabasite rocks along the Southern Iberian Shear Zone. Geological Society of America Abstracts with Programs 51 (5), Paper No. 45-3. Phoenix, AZ. September, 2019.
- 2019 *Martin, C.** **Czeck, D. M.**, Yonkee, A. Characterization of syndeformational water pathways and hydrolytic weakening within naturally deformed quartz grains along a strain gradient. Geological Society of America Abstracts with Programs 51 (5), Paper No. 142-10. Phoenix, AZ. September, 2019.
- 2019 **Czeck, D. M.***, *Stephenson, S. I.*, Díaz-Azpiroz, M., Fernández, C., García-Arias, M. Geochemical, microstructural, and retrograde metamorphic evolution related to fluid flow along the Southern Iberian shear zone. International Conference on Deformation Mechanisms, Rheology, and Tectonics. Tübingen, Germany. June, 2019.
- 2019 Druguet, E., **Czeck, D. M.***, Carreras, J. Localized embrittlement in an overall ductile fold and shear belt: a case study from Cap de Creus. International Conference on Deformation Mechanisms, Rheology, and Tectonics. Tübingen, Germany. June, 2019.
- 2017 *Stephenson, S. I.**, **Czeck, D. M.**, Díaz-Azpiroz, M. Fernández, C. Characterizing the geochemical changes across a strain gradient in the Beja-Acebuches metabasites due to retrograde metamorphism and fluid flow along the Southern Iberian Shear Zone. Geological Society of America Abstracts with Programs 49 (6), Paper No. 89-8. Seattle, WA. October, 2017.
- 2016 *Johnson, D.** **Czeck, D. M.** Geochemistry of Seine River metaconglomerates from Mine Centre, Ontario: interpreting fluid flow and volume changes during deformation with implications for strain analysis. Institute on Lake Superior Geology 62nd Annual Meeting. Duluth, MN. May, 2016.
- 2014 Díaz-Azpiroz, M.* Fernández, C., *Barcos, L.*, Jiménez, A., Balanyá, J. C., Expósito, I., Portillo, L., **Czeck, D. M.** Tectonic uplift related to inclined transpression with oblique extrusion: Preliminary data from the Torcal shear zone (External Betics, southern Spain). European Geosciences Union General Assembly. Vienna, Austria. April, 2014.

- 2013 *Barszewski, C. B.,* Czeck, D. M.,* and Yonkee, A. CL “lamellae” in tectonically deformed quartz grains. Geological Society of America Abstracts with Programs 45 (5), Paper No. 255-8. Denver, CO. October, 2013.
- 2013 *Block, J. A.,* and Czeck, D. M.* Gneissic domes in an Archean terrane: structural mapping & kinematic analysis. Geological Society of America Abstracts with Programs 45 (5), Paper No. 38-3. Denver, CO. October, 2013.
- 2013 *Calhoun, J. J.,* Czeck, D. M.,* Bowles, J., and Tikoff, B. Fabric analysis of the Loch Borrallan pluton, Northwest Highlands, Scotland. Geological Society of America Abstracts with Programs 45 (5), Paper No. 250-3. Denver, CO. October, 2013.
- 2013 Yonkee, A.,* Weil, A. B., Wells, M., and **Czeck, D. M.** Tectonic transect of the Sevier fold-thrust belt: evolution of a complex orogenic wedge. Geological Society of America Abstracts with Programs 45 (5), Paper No. 293-3. Denver, CO. October, 2013.
- 2013 Díaz-Azpiroz, M.,* *Barcos, L.,* Balanyá, J.C., Expósito, I., Fernández, C., Jiménez A., **Czeck, D.,** and Faccena C. Flow and strain partitioning at multiple scales in a brittle-ductile transpressive deformation zone at the external Betics (southern Spain). International Conference on Deformation Mechanisms, Rheology, and Tectonics. Leuven, Belgium. September, 2013.
- 2012 *Barszewski, C. B., * Czeck, D. M.,* and Yonkee, A. Microstructural analyses of clasts in a tectonically deformed diamictite from the Willard Thrust, UT. Geological Society of America Abstracts with Programs 44 (5), Paper No. 39-4. Charlotte, NC. November, 2012.
- 2012 *Calhoun, J. J.,* Czeck, D. M.,* and Tikoff, B. Fabric and microstructural analysis of the Loch Borrallan pluton, Northwest Highlands Scotland. Geological Society of America Abstracts with Programs 44 (5), Paper No. 234-2. Charlotte, NC. November, 2012.
- 2012 Díaz-Azpiroz, M.,* *Barcos, L.,* Balanya, J. C., Fernández, C., Exposito, I., and **Czeck, D. M.** A standardized protocol to test oblique transpression models in heterogeneous high-strain zones (the Torcal de Antequera Massif, southern Spain). Geological Society of America Abstracts with Programs 44 (5), Paper No. 85-6. Charlotte, NC. November, 2012.
- 2012 **Czeck, D. M.,*** and *Traut, J. T.* Rheologic information determined from naturally deformed interlayered phyllites and quartzites. Structural Geology and Tectonics Forum. Williamstown, MA. June, 2012.
- 2012 *Thalhamer, E. J.* and Czeck, D. M.* Analyzing ductile shear zone network geometries in the Grassy Portage Sill, Rainy Lake Region, northwestern Ontario, Canada. Institute on Lake Superior Geology 58th Annual Meeting. Thunder Bay, Ontario. May, 2012.
- 2011 *Barszewski, C. B., * Czeck, D. M.,* Yonkee, A., *Pantone, S.,* and *Nachbor, A.* Microstructural study of deformed diamictites along the Willard thrust fault, with implications for fluid interaction along a fault. Geological Society of America Abstracts with Programs 43 (5), Paper No. 31-6. Minneapolis, MN. October, 2011.
- 2011 *DeVasto, M. A. *, Czeck, D. M.,* and Bhattacharyya, P. Quantifying the relationships between geochemical and microtextural changes across small-scale granitic shear zones. Geological Society of America Abstracts with Programs 43 (5), Paper No. 271-3. Minneapolis, MN. October, 2011.
- 2011 *Thalhamer, E. J.* and Czeck, D. M.* Analyzing ductile shear zone network geometries in the Grassy Portage Sill, Rainy Lake region, northwestern Ontario, Canada. Geological Society of America Abstracts with Programs 43 (5), Paper No. 31-4. Minneapolis, MN.

- October, 2011.
- 2011 **Czeck, D. M.**,* *Anderson, T. N.*, Horsman, E., and Tikoff, B. Linking fabric and texture development to three-dimensional strain evolution in deformed quartzite and granitoid conglomerate clasts. International Conference on Deformation Mechanisms, Rheology, and Tectonics. Oviedo, Spain. September, 2011.
- 2011 Díaz-Azpiroz, M.,* *Barcos, L.*, Fernández, C., and **Czeck, D. M.** Testing transpression models in brittle shear zones compared with ductile deformation. A standardized procedure with contrasting approaches. International Conference on Deformation Mechanisms, Rheology, and Tectonics. September, 2011.
- 2011 Fernández, C., * Díaz-Azpiroz, M., and **Czeck, D. M.** Protocol for testing the model of oblique transpression with oblique extrusion in ductile shear zones. International Conference on Deformation Mechanisms, Rheology, and Tectonics. Oviedo, Spain. September, 2011.
- 2011 **Czeck, D. M.**,* Yonkee, A., *Nachbor, A.*, *Johnson, K. R.*, *Barszewski, C. B.*, and *Pantone, S.* Fluid-rock interaction in deformed diamictites, Willard thrust fault, Sevier orogenic belt, Utah (USA): Macroscopic strain and alteration patterns. Penrose Conference “Deformation Localization in Rocks: New Advances.” Cadaqués, Spain. June, 2011.
- 2011 Druguet, E.,* *Castaño, L.M.*, **Czeck, D.M.**, Hudleston, P.J., Carreras, J. The tectonic significance of veins of irregular fold-like shape (contorted veins). Penrose Conference “Deformation Localization in Rocks: New Advances.” Cadaqués, Spain. June, 2011.
- 2011 Yonkee, A.,* **Czeck, D. M.**, *Pantone, S.*, *Nachbor, A.*, *Johnson, K. R.*, and *Barszewski, C. E.* Fluid-rock interaction in deformed diamictites, Willard thrust fault, Sevier orogenic belt, Utah (USA): Microstructures and fluid pathways. Penrose Conference “Deformation Localization in Rocks: New Advances.” Cadaqués, Spain. June, 2011.
- 2011 *Traut, J. T.* * and **Czeck, D. M.** Using cleavage refraction and microstructural evidence to determine the relative rheology of naturally deformed quartzites and phyllites from Baraboo, Wisconsin. Institute on Lake Superior Geology 57th Annual Meeting. Ashland, WI. May, 2011.
- 2011 *DeVasto, M. A.* *, **Czeck, D. M.**, and Bhattacharyya, P. Quantifying deformation fabrics and chemistry across small granitic ductile shear zones from Mountain, Wisconsin. Institute on Lake Superior Geology 57th Annual Meeting. Ashland, WI. May, 2011.
- 2011 Yonkee, A., *Pantone, S.*, * and **Czeck, D. M.** Quantifying heterogeneous strain, fluid-rock interaction, and deformation mechanisms along the Willard Thrust, Utah. Geological Society of America Abstracts with Programs 43 (4), Paper No. 13-2. Logan, UT. May, 2011.
- 2010 **Czeck, D. M.**,* *Anderson, T. N.*, Horsman, E., and Tikoff, B. Tracking fabric development with increasing finite strain in a deformed polymictic conglomerate. American Geophysical Union Fall Meeting, Paper: T33E-03. San Francisco, CA. December, 2010.
- 2010 Bhattacharyya, P.,* *DeVasto, M. A.*, and **Czeck, D. M.** Application of GIS-based software for quantifying microstructures. Abstracts with Programs- Geological Society of America 42, Paper No. 5-11. Denver, CO. October, 2010.
- 2010 *DeVasto, M. A.* * and **Czeck, D. M.** Detailed geochemistry through a strain gradient in small scale granitic ductile shear zones. Abstracts with Programs- Geological Society of America 42, Paper No. 271-5. Denver, CO. October, 2010.

- 2010 *Nachbor, A.*, * **Czeck, D. M.**, Yonkee, A., and *Johnson, K. R.*, Fluid-rock interaction in deformed diamictite, Willard Thrust System, Utah. Abstracts with Programs- Geological Society of America 42, Paper No. 271-6. Denver, CO. October, 2010.
- 2010 *Traut, J. T.* * and **Czeck, D. M.** Linking cleavage refraction to mineralogy in deformed quartzites and phyllites. Abstracts with Programs- Geological Society of America 42, Paper No. 104-5. Denver, CO. October, 2010.
- 2010 **Czeck, D. M.**,* Yonkee, A., *Nachbor, A.* and *Johnson, K. R.* **(Invited)** Linking strain accumulation and fluid-rock interactions in a naturally deformed diamictite. Structural Geology and Tectonics Forum. Madison, WI. May 2010.
- 2009 **Czeck, D. M.**,* Yonkee, A., and *Johnson, K. R.*, Linking fluid-rock interaction and strain accumulation in a naturally deformed diamictite. Abstracts with Programs- Geological Society of America 41, Paper No. 157-11. Portland, OR. October, 2009.
- 2009 Carreras, J.,* **Czeck, D. M.**, Druguet, E., Hudleston, P. J. Structure and development of an anastomosing network of ductile shear zones: an example from the Rainy Lake zone (Archean Western Superior Province, Canada). International Conference on Deformation Mechanisms, Rheology, and Tectonics. Liverpool, UK. September, 2009.
- 2008 *Johnson, K. R.*,* **Czeck, D. M.**, and Yonkee, A. Deformation and Fluid Interactions in the Mineral Fork Diamictites, Antelope Island, Utah. Abstracts with Programs- Geological Society of America 40, Paper No. 147-33. Houston, TX. October, 2008.
- 2008 *Anderson, T. N.** and **Czeck, D. M.** Quantified Strains and Electron Backscatter Diffraction (EBSD) on quartz fabrics in the Seine Metaconglomerates. Abstracts with Programs- Geological Society of America 40, Paper No. 147-19. Houston, TX. October, 2008.
- 2008 *Anderson, T. N.** and **Czeck, D. M.** Quartz fabrics and quantified strains during transpressional deformation in the Seine Metaconglomerates. Microbeam Analysis Society Electron Backscattered Diffraction Topical Conference. Madison, WI. May, 2008.
- 2008 *Anderson, T. N.** and **Czeck, D. M.** Quartz Fabrics and Quantified Strains During Transpressional Deformation in the Seine Metaconglomerate. Institute on Lake Superior Geology 54th Annual Meeting. Marquette, MI. May, 2008.
- 2007 Horsman, E.,* **Czeck, D. M.**, and Tikoff, B. Texture development in naturally deformed granite, Seine metaconglomerate, Ontario. American Geophysical Union Fall Meeting, Paper: T33C-1506. San Francisco, CA. December, 2007.
- 2007 Druguet, E.,* Bons, P. D., *Castaño, L. M.*, **Czeck, D. M.**, and Carreras, J. Emplacement and deformation of syntectonic granitic veins in mid-crustal domains. International Conference on Deformation Mechanisms, Rheology, and Tectonics. Milano, Italy. September, 2007.
- 2007 *Rymaszewski, J. A.*,* *Friedrich, J. L.*, and **Czeck, D. M.** Bedrock fractures in southeastern Wisconsin: paleostress estimates and relationships to the Waukesha Fault. Institute on Lake Superior Geology 53th Annual Meeting. Lutsen, MN. May, 2007.
- 2007 **Czeck, D. M.**,* and Ormand, C. J. Rheological information from naturally folded quartzite and phyllite layers. Geological Society Arthur Holmes Meeting: Continental Tectonics and Mountain Building. Ullapool, Scotland. May, 2007.
- 2006 *Maes, S. M.*,* **Czeck, D. M.**, *Sturm, C. L.*, and *Fein, E. M.* Syn-tectonic emplacement of an Algoman pluton: constraints from AMS and gravity modeling. American Geophysical Union Fall Meeting, Paper : GP31A-0079. San Francisco, CA. December, 2006.

- 2006 Bhattacharyya, P.* and **Czeck, D. M.** Using GIS technology for fabric analyses in structural geology. Abstracts with Programs- Geological Society of America 38, Paper No. 3-9. Philadelphia, PA. October, 2006.
- 2006 Horsman, E.,* Tikoff, B., and **Czeck, D. M.** Constraints on late Cretaceous kinematics in the Sierra Nevada, California from strain analysis and transpressional modeling. Abstracts with Programs- Geological Society of America 38, Paper No. 49-13. Philadelphia, PA. October, 2006.
- 2006 Druguet, E.,* Carreras, J., **Czeck, D. M.**, and *Castaño, L. M.* Syntectonic granitic veins: Rheological insights from vein – host rock structural patterns. European Geosciences Union. Vienna, Austria. April, 2006.
- 2005 **Czeck, D. M.*** and Ormand, C. J. Using cleavage refraction, microstructural analysis, and mineralogy to learn about rheology in the Baraboo quartzite. Abstracts with Programs- Geological Society of America 37, Paper No. 255-6. Salt Lake City, UT. October, 2005.
- 2005 Bhattacharyya, P.* and **Czeck, D. M.** Causes of shear localization and shear zone geometry in Precambrian granitic rocks. Abstracts with Programs- Geological Society of America 37, Paper No. 208-7. Salt Lake City, UT. October, 2005.
- 2005 *Byars, R. M.*, **Czeck, D. M.*** and Sussman, A. Characterizing fabric connectivity in fault zones using anisotropic wavelet transforms. Abstracts with Programs- Geological Society of America 37, Paper No. 101-13. Salt Lake City, UT. October, 2005.
- 2005 *Fissler, D. A.** **Czeck, D. M.**, and *Horsman, E.* Quantifying strain in various lithologies and documenting a strain gradient within the Seine River basin, Northwestern Ontario, Canada. Abstracts with Programs- Geological Society of America 37, Paper No. 89-20. Salt Lake City, UT. October, 2005.
- 2005 *Horsman, E.** **Czeck, D. M.**, *Fissler, D. A.*, and Tikoff, B. Does the rheology of naturally deformed rocks depend on finite strain? Abstracts with Programs- Geological Society of America 37, Paper No. 255-3. Salt Lake City, UT. October, 2005.
- 2005 *Meeuwssen, M. L.** **Czeck, D. M.**, and *Fissler, D. A.* Quantitative analysis of fabric formation localized at competence contrast zones between biotite/chlorite and feldspars in the Seine River metaconglomerates, Northwestern Ontario, Canada. Abstracts with Programs- Geological Society of America 37, Paper No. 89-21. Salt Lake City, UT. October, 2005.
- 2005 Bhattacharyya, P.* and **Czeck, D. M.** Can the academic performance of athletes in science courses be related to their learning styles? Abstracts with Programs- Geological Society of America 37, Paper No. 6-5. Minneapolis, MN. May, 2005.
- 2005 *Fissler, D. A.** **Czeck, D. M.**, and *Horsman, E.* A quantitative analysis of strain in the Seine River metaconglomerates, Rainy Lake region, Northern Ontario, Canada. Abstracts with Programs- Geological Society of America 37, Paper No. 21-1. Minneapolis, MN. May, 2005.
- 2005 Ormand, C. J.* and **Czeck, D. M.*** Cleavage refraction as a measure of viscosity contrast: new insights from the Baraboo Syncline. Abstracts with Programs- Geological Society of America 37, Paper No. 2-9. Minneapolis, MN. May, 2005.
- 2004 *Horsman, E.** Tikoff, B., and **Czeck, D.** The effects of composition and finite strain on rock rheology: constraints from analysis of natural deformation. American Geophysical Union Fall Meeting, Paper T41F-1301. San Francisco, CA. December, 2004.

- 2004 **Czeck, D. M.**,* Druguet, E., and Carreras, J. The role of rheology in the emplacement and deformation of syntectonic veins. Abstracts with Programs- Geological Society of America 36, Paper No. 109-2. Denver, CO. November, 2004.
- 2004 Tullis, J.,* Campbell, P., **Czeck, D.**, Harrison, M., Kopf, C., Ormand, C., Reinen, L., Sussman, A.,* Torrez, B., and Wojtal, S. Why and how to include grain-scale deformation mechanisms, microstructures, and rheology in undergraduate structural geology courses. Abstracts with Programs- Geological Society of America 36, Paper No. 186-7. Denver, CO. November, 2004.
- 2004 **Czeck, D. M.*** Laboratory Exercise: What Controls Rheology? NSF/NAGT Workshop: Teaching Structural Geology in the 21st Century. Northampton, MA. June, 2004.
- 2004 Ormand, C. J.* and **Czeck, D. M.** Three-dimensional geometry and strain of the Baraboo syncline: kinematic implications. Institute on Lake Superior Geology 50th Annual Meeting, 50 Part 1, 125-126. Duluth, MN. May, 2004.
- 2003 Ormand, C. J.* and **Czeck, D. M.*** Structure and kinematics of the Baraboo Syncline: a three-dimensional analysis. Abstracts with Programs- Geological Society of America 35, Paper No. 136-18. Seattle, WA. November, 2003.
- 2002 Bhattacharyya, P.* and **Czeck, D. M.** Weathered m&m's®: using candies to demonstrate geologic concepts in lecture-based introductory earth science courses. Abstracts with Programs- Geological Society of America 34, Paper No. 39-8. Denver, CO. October, 2002.
- 2002 **Czeck, D. M.**,* *Sturm, C. L.*, and *Fein, E. M.* Reinterpretation of the “post-deformational” nature of the Ottetail Pluton using anisotropy of magnetic susceptibility and microstructures. Abstracts with Programs- Geological Society of America 34, Paper No. 18-11. Denver, CO. October, 2002.
- 2002 **Czeck, D. M.*** Competency contrasts and foliation formation at a range of scales: a field example from the Superior Province, Canada. Penrose Conference “Three-Dimensional Flow, Fabric Development, and Strain in Deformed Rocks and the Significance for Mountain Building Processes: New Approaches.” Ascona, Switzerland. August, 2002.
- 2002 *Fein, E. M.*,* *Sturm, C. L.*, and **Czeck, D. M.** Anisotropy of magnetic susceptibility in the Ottetail pluton, Northern Ontario. Institute on Lake Superior Geology 48th Annual Meeting 48 Part 1, 9-10. Kenora, Ontario. May, 2002.
- 2002 *Sturm, C. L.*,* **Czeck, D. M.**, and *Fein, E. M.* Petrographic study of the Ottetail Pluton, Superior Province, Northwestern Ontario. Institute on Lake Superior Geology 48th Annual Meeting 48 Part 1, 51. Kenora, Ontario. May, 2002.
- 2001 **Czeck, D. M.*** and Hudleston, P. J. Heterogeneous deformation and deformation processes in the Seine River Conglomerate. Abstracts with Programs- Geological Society of America 33 no. 7, 323. Boston, MA. November, 2001.
- 2000 **Czeck, D. M.*** and Hudleston, P. J. Structural facing (Shackleton's rule): a discussion and cautionary tale. Abstracts with Programs- Geological Society of America 32 no. 7, 29. Reno, NV. November, 2000.
- 2000 **Czeck, D. M.*** and Hudleston, P. J. A sequence of folding and dextral transpression in the Seine River conglomerates. Institute on Lake Superior Geology 46th Annual Meeting 46 Part 1, 10-11. Thunder Bay, Ontario. May, 2000.
- 1999 **Czeck, D. M.*** and Hudleston, P. J. Structural fabric and strain for the Seine River conglomerates at the Wabigoon- Quetico subprovince boundary near Mine Centre,

- Ontario. Institute on Lake Superior Geology 45th Annual Meeting 45 Part 1, 11-12. Marquette, MI. May, 1999.
- 1998 **Czeck, D. M.*** and Hudleston, P. J. Oblique lineations in transpression: models utilizing anastomosing shear zone geometries. Abstracts with Programs- Geological Society of America 30 no. 7, 133. Toronto, Ontario. October, 1998.
- 1998 **Czeck, D. M.*** and Hudleston, P. J. Strain fabrics along an Archean subprovince boundary, Ontario, Canada: evidence for a modified transpression model. Abstracts from Geological Association of Canada- NUNA conference to honour Paul Williams "Evolution of Structures in Deforming Rocks." Canmore, Alberta. September, 1998.
- 1998 **Czeck, D. M.*** and Hudleston, P. J. Kinematic fabrics near Mine Centre, Ontario: evidence for a modified transpression model. Institute on Lake Superior Geology Proceedings, 44th Annual Meeting 44, Part 1, 61. Minneapolis, MN. May, 1998.
- 1996 **Czeck, D. M.*** and Faulds, J. E. Middle Devonian faults and joints, Coralville Spillway, east-central Iowa; a brittle manifestation of the Acadian Orogeny in the Midcontinent. Abstracts with Programs- Geological Society of America 28 no. 6, 35. Ames, IA. May, 1996.

Awards and Fellowships

- 2019 Nominated for Undergraduate Research Mentor of the Year, Office of Undergraduate Research: University of Wisconsin-Milwaukee.
- 2017 Special Commendation by University of Wisconsin-Milwaukee Chancellor for extraordinary work on Faculty Rights and Responsibilities Committee, Summer 2017
- 2008 Graduate School/Univ. of Wisconsin-Milwaukee Foundation Research Award
- 2005 Sigma Xi, The Scientific Research Society, Elected Member
- 2000-2001 Univ. of Minnesota Department of Geology & Geophysics Gruner Fellowship
- 1999-2000 Univ. of Minnesota Department of Geology & Geophysics Emmons Fellowship
- 1995-1996 Univ. of Minnesota Department of Geology & Geophysics Dennis Fellowship
- 1995-1996 Univ. of Minnesota Graduate School Fellowship

Teaching

University of Wisconsin-Milwaukee (2003-2020):

- Structural Geology, lecture (taught 13 times)
- Structural Geology, laboratory (taught 13 times)
- Introduction to the Earth (taught 12 times)
- Advanced Structural Geology (taught 6 times)
- Topics in Structural Geology and Tectonics: Tectonic History of Wisconsin (taught 4 times)
- Topics in Structural Geology and Tectonics: Structural Styles Around the World
- Conducted Fieldtrip: Tectonic History of the Archean Superior Province of northern Minnesota and adjacent Ontario
- Conducted Fieldtrip: Geology of Dinosaur National Park and the Colorado Plateau
- Internship in Geoscience (Field course in Structural geology of the subprovince boundaries in the Archean Superior Province of northern Minnesota and adjacent Ontario)

- Masters Thesis (numerous times)
- Candidate for Degree (numerous times)
- Undergraduate Research Opportunity (UROP) Apprenticeship (numerous times)
- Advanced Independent Reading (numerous times)

Indiana University of Pennsylvania (2002-2003)

- Dynamic Earth (taught 2 times)
- Field Geology, lecture and lab
- Structural Geology, lecture and lab

Oberlin College (2001-2002)

- Structural Geology, lecture and lab
- Geology Gone Wrong: A writing intensive seminar for non-science majors
- Evolution of the Earth (Historical Geology), lecture and lab
- Dinosaurs