#### Peter G. DeCelles

Curriculum Vitae Spring, 2025

# **CONTACT INFORMATION**

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# **EDUCATION**

1980	B.S. in Geology, University of Notre Dame, Notre Dame, IN
1984	Ph.D. and M.S. in Geology, Indiana University, Bloomington, IN
1984-1986	Postdoctoral Scholar, Stanford University, Stanford, CA

# PROFESSIONAL EXPERIENCE

2023	Guest Professor, Università di Pavia, Pavia, Italy
1998-present	Professor, Department of Geosciences,
	University of Arizona, Tucson, AZ
2014-15	Guest Professor, Geological Institute, ETH Zentrum, Zürich, Switzerland
2007-08	Cox Professor, Stanford University
2007 (part)	Guest Professor, Università di Bologna, Bologna, Italy
1993-98	Associate Professor, Department of Geosciences,
	University of Arizona, Tucson, AZ
1996 (part)	Visiting Professor, Università di Roma (La Sapienza), Rome, Italy
1990-91	NSF-NATO Fellow, Università di Bologna, Bologna, Italy
1992-93	Associate Professor, Department of Geological Sciences,
	University of Rochester, Rochester, NY
1986-92	Assistant Professor, Department of Geological Sciences,
	University of Rochester, Rochester, NY
1986	Visiting Professor, Indiana University Geologic Field Station, Cardwell, MT
1984-85	Postdoctoral Scholar, Stanford University, Department of Geology
1984	Summer Research Geologist, Conoco, Inc., Clastics Research Group, Ponca
	City, Oklahoma
1980-84	Associate Instructor, Indiana University, Department of Geology
1979, 81	Associate Instructor, Indiana University Geologic Field Station, Cardwell, MT
1980	Geologist, U.S. Geological Survey

# FIELD EXPERIENCE

Nepal and India, 25 expeditions 1994-present; Tibet, 13 expeditions 2002-present; Bolivia, Argentina, Chile, 16 expeditions, 1997-present; Yukon Territory and Alaska, 2 expeditions 1991-1993; Spain, Corsica, and mainland Italy, numerous field seasons 1990-2005; western U.S.A., numerous field seasons 1980-present.

#### RESEARCH INTERESTS

- Regional structural evolution of collisional and cordilleran orogenic belts and sedimentary basins, including the Himalayan, Tibetan, Andean, North American Cordilleran, Pamir, and Alpine-Apennine orogenic systems
- Structural geology of fold-thrust belts
- Petrology, provenance (conventional and geochemical), and detrital geo-petrothermochronology of clastic sediments and sedimentary rocks
- Physical sedimentology and depositional systems in fluvial, alluvial, eolian and marine settings
- Landscape evolution in orogenic highlands

#### **AWARDS and PROFESSIONAL AFFILIATIONS**

Gallagher Lecturer, University of Calgary (2019)

Francis J. Pettijohn Medal, Society for Sedimentary Geology-SEPM (2018)

American Geophysical Union Fellow (2017)

Geosciences Alumni Board Outstanding Faculty Award, University of Arizona (2017)

Galileo Circle Fellow, University of Arizona (2009)

Laurence L. Sloss Award, Geological Society of America (2008)

Cox Professorship, Stanford University (2007)

Emmons Lecturer, Colorado Scientific Society (2006)

Most Cited Paper Award, Earth & Planetary Science Letters (2004-2007)

Geological Society of America (Fellow)

The Explorers Club (National Fellow, 2005)

American Alpine Club (Member)

## PROFESSIONAL SERVICES AND ACTIVITIES

2023	JGR—Solid Earth Editor in Chief Search Committee (AGU)
	University of Pavia International Winter School: Basins associated with collisions
	Co-leader of field excursion through Italian and Swiss Alps
2023	Keynote speaker, Cordilleran Section of GSA, Reno
2021	The Explorers Club, SW Chapter Connect lecture
2020	University of Pavia International Winter School: Thermal history of basin-source
	systems: techniques, modelling and applications
2018-present	Associate Editor, Journal of Geophysical Research—Solid Earth
2018-present	Advisory Board, Department of Earth and Atmospheric Sciences, Indiana
	University, Bloomington
2015	Short courses on Thrust Belts and Foreland Basins, Geological Institute, ETH and
	University of Roma-Tre
2015	Co-leader of field excursion through Italian Alps, Apennines, and Corsica, ETH
2015-16	GSA International Committee, Chair
2014-18	GSA Penrose Conference and Thompson Field Forum Committee
2013	Field Trip leader for trans-Andean excursion, Univ. Arizona and ExxonMobil
2011	Theme Session Co-Chair at 2011 AGU National Meeting in San Francisco
	Session title: Linkages among orogenic processes in Cordilleran systems
	GSA SG&T Career Contribution Award Committee Chair
2010	Keynote lecture, Himalaya-Karakoram-Tibet Meeting, San Francisco
	GSA SG&T Career Contribution Award Committee member

	GSA Sloss Award Committee Chair
2006-12	Field Trip leader and short-course instructor for ExxonMobil
2008-12	·
2007	Guest Lecturer, Platinum Jubilee, Indian Institute of Statistics, Kolkata
	Field Trip leader for Devon Energy in Sevier thrust belt
2004	Field Trip leader for ExxonMobil in Sevier thrust belt
2003	Field Trip leader for ExxonMobil and Midland Valley in Sevier thrust belt
0000 05	Short course on tectonics of sedimentary basins, ExxonMobil
2002-05	Panel member, Continental Dynamics Program, National Science Foundation
2001-07	Editor, Basin Research
2001-03	Editor, Journal of the Nepal Geological Society
1998	Co-leader of geological field trip for AAPG National Meeting, Salt Lake City:
	Coupled structure and sedimentation through 100 m.y. of thrust wedge
	evolution, Sevier thrust belt, northern Utah, western Wyoming and SE Idaho
1997	Co-leader of geological field trip for GSA National Meeting, Salt Lake City:
	Hinterland to foreland transect through the Sevier orogen, northeast
	Nevada to north central Utah: Structural style, metamorphism, and kinematic
	history of a large contractional orogenic wedge
1997-00	Editorial Board, Basin Research
1997	Theme Session Co-Chair (with P. Hennings, Mobil) at 1997 AAPG National
	Meeting in Dallas: Coupled tectonics and sedimentation.
1995-04	Editorial Board, Geology
1993-03	Associate Editor, Geological Society of America Bulletin
1995	Leader of geological field trip for AEC and Norcen Energy Resources,
1773	Ltd., Calgary: Kinematic history and synorogenic sedimentation,
	Sevier thrust belt, Utah and Wyoming.
1993	Leader of geological field trip for Norcen Energy Resources, Ltd., Calgary. Trip
1775	title: Paleocene synorogenic alluvial fan deposits of the Beartooth Range,
	Montana
1992	Special Symposium Co-Chair (with T. F. Lawton) at 1992 SEPM Theme Meeting
1772	on the Western Interior Cretaceous Basin: Recent Advances in Interpretation of
	Thrust-Generated Clastics
	GSA Rocky Mountain Section field trip Co-Leader (with W. A. Yonkee and J. P.
1001	Evans): Tectonics of the northern Wasatch Range
1991	Keynote Speaker, GSA Penrose Conference on Development and Evolution of
1007	Foreland Basins, Can Boix, Spain: Structural controls on foreland basins
1986-present	Reviewer of numerous proposals submitted to U.S. National Science
	Foundation, Swiss National Science Foundation, Italian CNR, American Chemical
	Society, National Geographic, NCERC (Canada)
1986-	Reviewer of numerous manuscripts for publication in Science,
present	Nature, Nature Geoscience, Tectonics, Journal of Sedimentary Research,
	Geological Society of America Bulletin and Memoirs, Geological Magazine,
	Sedimentology, Geology, Journal of Geology, Journal of Structural Geology,
	Sedimentary Geology, Basin Research, Paleo-cubed, G-cubed, and various
	books and special publications.
1989	Leader of geological field trip for ARCO Research Lab: Middle Cenozoic
	sequence stratigraphy of the San Emigdio Range, California
1987	Symposium Co-Chair (with T. F. Lawton) at 1987 Annual GSA, Phoenix, AZ

1986 Leader of SEPM Pacific Section Field Trip: Middle Cenozoic depositional

systems of the San Emigdio Range, southern California

1985 Leader of geological field trips for Sohio and Tenneco: Cenozoic

siliciclastic deposystems and volcanism in the San Emigdio Range, southern

California

# SPEAKING ENGAGEMENTS WITHOUT PUBLISHED ABSTRACTS

<u>AKING ENGA</u>	GEMENTS WITHOUT PUBLISHED ABSTRACTS
2025	Doerr School of Sustainability, Stanford University
	Jackson School of Geosciences, University of Texas, Austin
2024	Geological Society of India, Bangalore (remote lecture)
	Department of Geosciences, University of Arizona
2023	Department of Earth, Atmospheric, and Planetary Sciences, MIT
	Department of Earth, Planetary, and Space Sciences, UCLA
	Dipartmento di scienze dell'ambiente e di scienze della terra, Universitá di Milano-Bicocca, Italy
	Department of Earth and Environmental Sciences, Università di Pavia, Italy
2022	Department of Geology, University of Illinois Urbana-Champaign
2021	The Explorers Club, SW Chapter Connect
2020	Department of Earth and Environmental Sciences, Università di Pavia, Italy
2019	Department of Geosciences, University of Nevada-Las Vegas
	Gallagher Lecture, Department of Geoscience, University of Calgary
	Crough Fellowship Lecture, Department of EAPS, Purdue University
	Petrobras, Rio de Janeiro, Brazil
2018	Institute for Tibetan Plateau Research, Chinese Academy of Sciences, Beijing
2016	Department of Geosciences, University of Texas-Dallas
	Department of Earth & Enviornmental Sciences, University of Texas-Arlington
	Department of Earth Science, University of Toronto
2015	Dipartmento di Scienze della Terra, Università di Roma-Tre, Italy
	Institut des Sciences de la Terre, Université Joseph Fourier, Grenoble France
2014	Department of Geology & Geophysics, University of Bucharest, Romania
	Dipartmento di scienze dell'ambiente e di scienze della terra, Universitá di Milano-Bicocca, Italy
	Geological Institute, ETH, Zürich Switzerland
	TopoEuro Workshop, Barcelona Spain
2013	Department of Geology, Northern Arizona University
	Explorers Club, Southwest Chapter
	Department of Geosciences, Miami University
2012	U.S. Geological Survey, Denver
	Department of Geoscience, Colorado University, Boulder
2011	Department of Geology & Geophysics, Rice University
	ExxonMobil Upstream Research Corporation
2009	Department of Geology & Geophysics, University of Wyoming
	ExxonMobil Senior Technical Personnel Workshop on Fold-Thrust Belts, Calgary
2008	Indian Statistical Institute, Kolkata (3 lectures)
	Department of Geology and Environmental Sciences, Stanford University (7 lectures)
	Department of Geological Sciences, University of California, Santa Cruz

2007	Department of Geological Sciences, University of Michigan Research Institute for Petroleum Exploration and Development, Beijing, China Institute for Tibetan Plateau Research, Chinese Academy of Sciences, Beijing
	Department of Geological and Environmental Sciences, Università di Bologna Department of Geology, Università di Milano-Bicocca
2006	Arizona Geological Society
2000	Colorado Scientific Society, Emmons Lecture
	Department of Geological Sciences, University of Kansas
2004	Department of Geology & Geophysics, University of Wisconsin
	University of Potsdam, Germany (two lectures)
2003	Department of Geological Sciences, Indiana University
	ExxonMobil Exploration Company, Houston
	Department of Geological Sciences, New Mexico State University
	Department of Earth & Planetary Sciences, University of New Mexico
2002	Department of Geological Sciences, Arizona State University
	Institute of Geology, Chinese Academy of Sciences, Beijing
	Department of Geological Sciences, University of Kentucky
2000	Department of Geology, Dennison University
	Department of Geology, Northern Arizona University
	Department of Geology, Tribhuvan University, Kathmandu Nepal
	Geological Institute, ETH, Zürich
	Department of Geology and Geophysics, University of Wyoming
	Department of Earth & Space Sciences, UCLA
1999	Department of Geological Sciences, Indiana University
1998	Department of Earth & Environmental Sciences, Stanford University
	Department of Geological Sciences, University of Houston
	Department of Geological Sciences, University of Oregon
4007	Guest participant in Chevron Overseas Petroleum Thrust Belts short course
1997	Department of Geology & Geophysics, University of Oklahoma
1996	Department of Earth & Space Sciences, UCLA
	Department of Geology, Northern Arizona University
1002	Department of Geological Sciences, Università di Roma-La Sapienza (2)
1993 1992	Department of Earth Sciences, New Mexico State University
1772	Department of Geology, McMaster University
1991	Department of Geosciences, University of Arizona  Department of Geological Sciences, Northwestern University
1771	Department of Mineralogical Science, Università di Bologna (2)
	Keynote Speaker, GSA Penrose Conference, Can Boix, Spain.
1990	Department of Geology & Institute for Meteoritics, University of New Mexico
1989	Department of Geological Sciences, Lehigh University
1707	Department of Geological Sciences, Cornell University
	ARCO Research Lab, Plano
1986	Department of Geology, Stanford University
1985	Department of Geological Sciences, University of Rochester
	Department of Geological Sciences, Mackey School of Mines University of
	Nevada-Reno

Department of Geology, Stanford University Conoco, Inc., Research Lab, Ponca City

#### **PUBLICATIONS**

Articles published in peer-reviewed journals and special publications <sup>†</sup> = student or postdoc supervised by PGD

- 201. George, S.W.M., Gehrels, G.E., DeCelles, P.G., Sherpa, T.Z.L.<sup>†</sup>, Bedle, H., 2025, Climatically modulated growth and erosion of the Nepalese Himalaya from detrital petrochronology of the Siwalik Group: Geological Society of America Bulletin, in review.
- 200. Howlett, C.J., Ronemus, C.B.<sup>†</sup>, Carrapa, B., DeCelles, P.G., 2025, Miocene construction of the High Andes recorded by exhumation of the Frontal Cordillera, La Ramada Massif of western Argentina (31°S): Tectonics, TECT22137.
- 199. George, S.W.M., Carrapa, B., DeCelles, P.G., Jepson, G.M., Nadoya, H., Tabor, C., Howlett, C.J., Ronemus, C.B.<sup>†</sup>, Clementz, M.T., Schoenbohm L., 2025, Increased moisture availability in the Central Andes during the Miocene Climatic Optimum: Palaeogeography, Palaeoclimatology, Palaeoecology 663 (2025) 112732.
- 198. Hayes, R.<sup>†</sup>, DeCelles, P.G., Amadori, C., 2025, Sedimentological and Paleoslope Reconstruction of the Late Triassic Chinle Formation, Western U.S.A.: Constraints on Models for Dynamic Subsidence: Geological Society of America Bulletin. <a href="https://doi.org/10.1130/B37816.1">https://doi.org/10.1130/B37816.1</a>
- 197. Jepson, G., Carrapa, B., Afonso, W., Reeher, L.J., DeCelles, P.G., Howlett, C.J., Caylor, E., Sherpa, T.Z.L.<sup>†</sup>, Wang, J.W., Constenius, K.N., 2025, Regional exhumation of the Laramide: Geological Society of America Bulletin, accepted, https://doi.org/10.1130/B37625.1.
- 196. Sherpa, T.Z.L.<sup>†</sup>, DeCelles, P.G., Gehrels, G.E., Pokhrel, C., 2024, Tectonic evolution of the Himalayan fold-thrust belt in the Okhaldhunga region, eastern Nepal: Tectonics, v. 43, e2024TC008457. https://doi.org/10.1029/2024TC008457
- 195. Carrapa, B., Jepson, G., DeCelles, P.G., George, S.W.M., Ducea, M., Campbell, C., Dawson (née Canavan), R.R., 2024, Crustal bobbing in response to lithospheric foundering recorded by detrital proxy records from the Central Andean Plateau: Geology, doi.org/10.1130/G52455.1.
- 194. Caylor, E., Carrapa, B., DeCelles, P.G., Gehrels, G.E., 2024, The Real McCoy: A record of deepwater basin deposition in southwestern North America during the Cretaceous: Basin Research, v. 36, issue 5, e12902. https://doi.org/10.1111/bre.12902.
- 193. Li, L., DeCelles, P., Kapp, P., Garzione, C., Quade, J., Yanay, N., 2024, Constraining carbonate diagenesis using clumped isotope temperatures and U-Pb dating: A case study and implications for paleoelevation interpretations in western central Tibet, *Geochimica et Cosmochimica Acta*. https://doi.org/10.1016/j.gca.2024.04.007
- 192. Li, L., Quade, J., Garzione, C., Defliese, W.F., DeCelles, P., Kapp, P., 2024, Reliability of micritic carbonates in recording well-preserved isotopic composition and implications for paleoelevation estimates in central Tibet, Geochimica et Cosmochimica Acta. https://doi.org/10.1016/j.gca. 2024.04.009
- 191. Ronemus, C.B.<sup>†</sup>, Howlett, C.J., DeCelles, P.G., Carrapa, B., and George, S.W.M., 2024, The Manantiales basin, Southern Central Andes (~32S), preserves a record of late Eocene-Miocene episodic growth of an east-vergent orogenic wedge: Tectonics, 2023TC008100R. https://doi.org/10.1029/2023TC008100
- 190. Ferroni, F.R.<sup>†</sup>, DeCelles, P.G., and Oller Veramendi, J., 2024, Neogene to modern foreland basin development in the Sub-Andean zone of southern Bolivia and northern Argentina, 21°-23°S: Geological Society of America Bulletin, v. 136, p. 4263–4284.

- 189. Howlett, C., Jepson, G., Carrapa, B., DeCelles, P.G., and Constenius, K., 2023, Late Cretaceous exhumation of the Little Belt Mountains and regional development of the Helena salient, west-central Montana, USA: Geological Society of America Bulletin. doi.org/10.1130/B37081.1
- 188. Caylor, E., Carrapa, B., Jepson, G., Lama Sherpa, T.†, DeCelles, P.G., 2023, The rise and fall of Laramide topography and the sediment evacuation from Wyoming: Geophysical Research Letters, 50, e2023GL103218. doi.org/10.1029/2023GL103218
- 187. DeCelles, P.G., and Carrapa, B., 2023, Differences Between the Central Andean and Himalayan Orogenic Wedges: A Matter of Climate: Earth and Planetary Science Letters, v. 616, 118216. <a href="https://doi.org/10.1016/j.epsl.2023.118216">doi.org/10.1016/j.epsl.2023.118216</a>
- 186. Henriquez, S.<sup>†</sup>, DeCelles, P.G., Carrapa, B., and Hughes, A.N., 2023, Kinematic evolution of the central Andean retroarc thrust belt in northwestern Argentina and implications for coupling between shortening and crustal thickening: Geological Society of America Bulletin, 135, 81-103. doi.org/10.1130/B36231.1
- 185. Sherpa, T.Z.L.<sup>†</sup>, DeCelles, P.G., Carrapa, B., Schoenbohm, L.M., and Wolpert, J., 2023, Bhumichula plateau: a remnant high-elevation low-relief surface in the Himalayan thrust belt of western Nepal: Geological Society of America Bulletin, v. 135, p. 2121-2140. doi.org/10.1130/B36481.1
- 184. Davis, G.E., Reeher, L.J., Jepson, G., Carrapa, B., DeCelles, P.G., and Chaudoir, K., 2022, Structure and thermochronology of basement/cover relations along the Defiance uplift (AZ and NM), and implications regarding Laramide tectonic evolution of the Colorado Plateau: American Journal of Science, v. 322, p. 1047-1087.
- 183. Hayes, R.G.<sup>†</sup>, and DeCelles, P.G., 2022, Reconstructing paleosinuosity and sedimentary mass-balance in the Upper Triassic Shinarump paleoriver in Utah and Arizona: Journal of Sedimentary Research, v. 92, p. 1207-1232. <u>doi.org/10.2110/jsr.2021.122</u>
- 182. Carrapa, B., DeCelles, P.G., Jepson, G., Ducea, M.N., Balgord, E., Stevens Goddard, A., 2022, Estimates of paleo-crustal thickness at Cerro Aconcagua (Southern Central Andes) from detrital proxy-records: implications for models of continental arc evolution: Earth and Planetary Science Letters, v. 585, 117526.
- 181. Dunham, A.M., Kiser, E., Kargel, J.S., Haritashya, U.K., Watson, C.S., Shugar, D.H., Hughes, A., and DeCelles, P.G., 2022, Topographic control on ground motions and landslides from the 2015 Gorkha earthquake. Geophysical Research Letters, 49, e2022GL098582.
- 180. Jepson, G., Carrapa, B., Gillespie, J., Feng, R., DeCelles, P.G., Kapp, P., Tabor, C.R., and Zhu, J., 2021, Climate as the Great Equalizer of Continental-Scale Erosion: Geophysical Research Letters, v. 48, Issue 20, e2021GL095008. doi.org/10.1029/2021GL095008
- 179. Wang, H., Currie, C., and DeCelles, P.G., 2021, Coupling between lithosphere removal and mantle flow in the central Andes: Geophysical Research Letters, 48, e2021GL095075. doi.org/10.1029/2021GL095075
- 178. Chapman, J.B.<sup>†</sup>, and DeCelles, P.G., 2021, Beveling the Colorado Plateau: early Mesozoic rift-related flexure explains anomalous deposition and erosion in the southern Cordilleran foreland basin: Tectonics, v. 40. <a href="https://doi.org/10.1029/2020TC006517">doi.org/10.1029/2020TC006517</a>
- 177. DeCelles, P. G., and Carrapa, B., 2021, Coupled rapid erosion and foreland sedimentation control orogenic wedge kinematics in the Himalayan thrust belt of central Nepal: Journal of Geophysical Research--Solid Earth, 126, e2020JB021256. doi.org/10.1029/2020JB021256
- 176. Caylor, E.A., Carrapa, B., Sundell, K., DeCelles, P.G., and Smith, J., 2021, Age and deposition of the Fort Crittenden Formation: A window into Late Cretaceous Laramide and Cenozoic tectonics in southeastern Arizona: Geological Society of America Bulletin. https://doi.org/10.1130/B35808.1

- 175. Haque, Z., Geissman, J., DeCelles, P.G., and Carrapa, B., 2021, A magnetostratigraphic age constraint for the proximal synorogenic conglomerates of the Late Cretaceous Cordilleran foreland basin, northeast Utah, USA: Geological Society of America Bulletin, v. 133, p. 1795-1814. doi.org/10.1130/B35768.1
- 174. Henriquez, S.<sup>†</sup>, DeCelles, P.G., Carrapa, B., Hughes, A., Davis, G., 2020, Deformation history of the Puna plateau, Central Andes of northwestern Argentina: Journal of Structural Geology, v.140. doi.org/10.1016/j.jsq.2020.104133
- 173. Meek, S.R., Carrapa, B., and DeCelles, P.G., 2020, Recognizing Allogenic Controls on the Stratigraphic Architecture of Ancient Alluvial Fans in the Western U.S.: Frontiers in Earth Science, v. 8, p. 215.
- 172. Wang, X., Carrapa, B., Sun, Y., Dettman, D.L., Chapman, J.B., Caves Rugenstein, J., Clementz, M.T., DeCelles, P.G., Wang, M., Chen, J., Quade, J., Wang, F., Li, Z., Oimuhammadzoda, I., Gadoev, M., Lormann, G., Zhang, X., Chen, F., 2020, The role of the westerlies and orography in Asian hydroclimate since the late Oligocene: Geology, v. 48. doi.org/10.1130/G47400.1
- 171. Quade, J., Leary, R., Dettinger, M.P., Orme, D., Krupa, A., DeCelles, P.G., Kano, A., Kato, H., Waldrip, R. Huang, W., and Kapp, P., 2020, Resetting southern Tibet: the serious challenge of obtaining primary records of paleoaltimetry: Global and Planetary Change, v. 191, 103194.
- 170. DeCelles, P.G., Carrapa, B., Ojha, T.P., Gehrels, G.E., and Collins, D., 2020, Structural and thermal evolution of the Himalayan thrust belt in midwestern Nepal: Geological Society of America Special Paper 547, 77 p., map insert.
- 169. Buceta, R., Schoenbohm, L.M., and DeCelles, P.G., 2020, Glacial and Fluvial Erosion in the Dolpo Basin, Western Nepal: Geomorphology, v. 354, p. 1-10. doi.org/10.1016/j.geomorph.2020.107033
- 168. Wang, X., Carrapa, B., Chapman, J.B., Henriquez, S., Wang, M., DeCelles, P.G., Li, Z., Wang, F., Oimahmadov, I., Gadoev, M., and Chen, F., 2019, Paratethys last gasp in central Asia and late Oligocene accelerated uplift of the Pamirs: Geophysical Research Letters, v. 46, p.11,773-11,781. doi:10.1029/2019GL084838
- 167. Stickroth, S.F.<sup>†</sup>, Carrapa, B., DeCelles, P.G., Gehrels, G.E., and Thomson, S.N., 2019, Tracking the growth of the Himalayan fold-and-thrust belt from lower Miocene foreland basin strata: Dumri Formation, western Nepal: Tectonics, v. 38, p. 3765–3793. https://doi.org/10.1029/2018TC005390.
- 166. Chapman, J.B.<sup>†</sup>, Carrapa, B., DeCelles, P.G., Worthington, J., Mancin, N., Stoica, M., Wang, X., Gadoev, M., and Oimahmadov, I., 2019, The Tajik Basin: a composite record of sedimentary basin evolution in response to tectonics in the Pamir: Basin Research, 2019;00:1-21. doi.org/10.1111/bre.12381
- 165. Kapp, P., and DeCelles, P.G., 2019, Mesozoic-Cenozoic geological evolution of the Himalayan-Tibetan orogen and working tectonic hypotheses: American Journal of Science, v. 319, p. 159-254.
- 164. Carrapa, B., DeCelles, P.G., and Romero, M., 2019, Early inception of the Laramide orogeny in southwestern Montana and northern Wyoming: implications for models of flat-slab subduction: Journal of Geophysical Research-Solid Earth, 124, 2102-2123. doi.org/10.1029/2018JB016888
- 163. Kortyna, C.<sup>†</sup>, DeCelles, P.G., and Carrapa, B., 2019, Structural and thermochronologic constraints on kinematics, timing and shortening during inversion of the Salta Rift in the Tonco-Amblayo sector of the Andean retroarc fold-thrust belt, northwestern Argentina, in Horton, B.K., and Folguera, A., eds., Andean Tectonics, Elsevier, p. 429-464. doi.org/10.1016/B978-0-12-816009-1.00018-6
- 162. Henriquez, S.<sup>†</sup>, DeCelles, P.G., and Carrapa, B., 2018, Cretaceous to middle Cenozoic exhumation history of the Cordillera de Domeyko and Salar de Atacama basin, northern Chile: Tectonics, v. 38, p. 395-416. doi.org/10.1029/2018TC005203
- 161. He, J., Kapp, P., Chapman, J.B.<sup>†</sup>, DeCelles, P.G., and Carrapa, B., 2018, Structural setting and detrital zircon U-Pb geochronology of Triassic—Cenozoic strata in the eastern Central Pamir,

- Tajikistan: in Treloar, P., ed., Himalayan Tectonics: A Modern Synthesis: Geological Society, London, Special Publications, 483. doi.org/10.1144/SP483.11
- 160. DeCelles, P.G., Leary, R.J.<sup>†</sup>, and Kapp, P., 2018, Cenozoic basin evolution in the Indus-Yarlung suture zone and High Himalaya, in Ingersoll, R.V., Lawton, T.F., and Graham, S.A., eds., Tectonics, Sedimentary Basins, and Provenance: A Celebration of William R. Dickinson's Career: Geological Society of America Special Paper 540, p. 707-739. doi.org/10.1130/2018.2540(30)
- 159. Chapman, J.B.<sup>†</sup>, Robinson, A.C., Carrapa, B., Villarreal, D., Worthington, J., DeCelles, P.G., Kapp, P., Gadoev, M., Oimahmadov, I., and Gehrels, G., 2018, Cretaceous shortening and exhumation history of the South Pamir terrane: Lithosphere, v. 10, p. 494-511.
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- 29. DeCelles, P.G.\*, Pile, H.T., and Currie, B.S., 1992, Regional stratigraphic analysis of Jurassic-Cretaceous nonmarine rocks, central Western Interior Basin: SEPM Theme Meeting on Western Interior Basin, Ft. Collins, CO, 22.
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- 4. DeCelles, P.G.\*, 1984, Non-marine sedimentation in a tectonically partitioned foreland basin: the Kootenai Formation, southwestern Montana: Geological Society of America, Abstracts with Programs, 16.
- 3. DeCelles, P.G.\*, and Gutschick, R.C., 1983, Mississippian wood-grained chert in western United States and its significance: Geological Society of America, Abstracts with Programs, 15, 555.
- 2. Schwartz, R.K.\*, DeCelles, P.G., and Suttner, L.J., 1983, Tectonic control on Early Cretaceous foreland basin evolution and sedimentation in southwestern Montana: Geological Society of America, Abstracts with Programs, 15, 682.
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### **GRADUATE THESES and DISSERTATIONS SUPERVISED (completed)**

- 36. Sherpa, T.Z.L., 2024, Magnitude, Architecture, Timing and Rate of Regional Deformation and Metamorphism in the Himalayan thrust belt of Nepal: Ph.D. Dissertation, University of Arizona, 236 pp.
- 35. Felipe Rodrigues Ferroni, 2023, Paleozoic to Cenozoic History of Basin Subsidence in the Sub-Andean Zone of Bolivia and Argentina (21-22°S): Ph.D. Dissertation, University of Arizona, 240 pp.
- 34. Robert G. Hayes, 2022, Reconstructing Triassic Paleogeography of the Southwestern U.S.A. from the Moenkopi and Chinle Formations: Ph.D. Dissertation, University of Arizona, 197 pp. plus supplementary tables.
- 33. Lama Sherpa, T.Z., 2020, Tectonic Evolution of the Bhumichula Plateau: A high elevation low relief surface in western Nepalese Himalaya: Unpublished M.S. Thesis, University of Arizona, 77 p.
- 32. Henriquez, S.M., 2019, Tectono-thermal evolution of the thrust belt in the Central Andes between 23-24S: Ph.D. Dissertation, University of Arizona, 244 pp.
- 31. Chapman, J.B., V, 2018, Orogenic evolution of the Pamir Mountains: Ph.D. Dissertation, University of Arizona, 223 pp.
- 30. Leary, R., 2015, Post-collisional evolution of the India-Asia suture zone: basin development, paleogeography, paleoaltimetry, and paleoclimate: Ph.D. Dissertation, University of Arizona.
- 29. Cross, E.A., 2014, The structure, stratigraphy, and evolution of the Lesser Himalayan thrust belt of central Nepal: M.S. Thesis, University of Arizona, 98 pp.
- 28. Kortyna, C., 2013, Structural and thermochronologic constraints on kinematics, timing and shortening during inversion of the Salta rift into the Andean fold-thrust belt, northwest Argentina: M.S. Thesis, University of Arizona 72 pp.
- 27. Safipour, R., 2012, Shortening in the central Andes at the transition to flat-slab subduction: M.S. Thesis, University of Arizona, 89 pp.
- 26. Leary, R., 2011, Tectonic significance of the Ericson Formation, Rock Springs uplift, SW Wyoming: M.S. Thesis, University of Arizona 104 pp.
- 25. Umlauf, K., 2011, Insights into the Timing of Uplift Along the Western Edge of the Central Andes, Northern Chile, M.S. Thesis, University of Arizona, 77 pp.
- 24. Fuentes, F., 2010, Regional structure and foreland basin history of the northwestern Montana Cordilleran orogenic belt, Ph.D. Dissertation, University of Arizona.
- 23. Peyton, S.L., 2009, Low-temperature thermochronology of the Laramide ranges and eastward translation of shortening in the Sevier belt, Wyomin, Utah and Montana, Ph.D. Dissertation, University of Arizona, 183 pp.
- 22. Fan, M., 2009, Geochemistry and basin analysis of Laramide Rocky Mountain basins, Ph.D. Dissertation, University of Arizona.
- 21. Ojha, T.P., 2009, Magnetostratigraphy, topography and geology of the Nepal Himalaya: a GIS and

- paleomagnetic approach, Ph.D. Dissertation, University of Arizona, 221 pp.
- 20. McBride, S., 2008, Sediment provenance and tectonic significance of the Cretaceous Pirgua Subgroup, NW Argentina: M. S. thesis, University of Arizona, 52 pp.
- 19. Saylor, J., 2008, The late Miocene through Modern evolution of the Zhada basin, south-western Tibet: Ph.D. Dissertation, University of Arizona, 306 pp.
- 18. Fabijanic, J.M., 2006, Synorogenic sediments in the central Lhasa terrane and implications for the tectonic history of the Tibet prior to the Indo-Asian collision: M.S. thesis, University of Arizona, 62 pp.
- 17. Leier, A.L., 2005, The Cretaceous evolution of the Lhasa terrane, southern Tibet: Ph.D. Dissertation, University of Arizona, 234 pp.
- 16. Martin, A.J., 2005, Tectonics of the southern Annapurna Range, central Nepal Himalaya: Ph.D. Dissertation, University of Arizona, 203 pp.
- 15. Barbeau, D.L., 2003, Application of growth strata and detrital-zircon geochronology to stratigraphic architecture and kinematic history: Ph.D. Dissertation, University of Arizona, 227 pp.
- 14. Pearson, O.N., 2002, Structural evolution of the central Nepal fold-thrust belt and regional tectonic and structural significance of the Ramgarh thrust: Ph.D. Dissertation, University of Arizona, 241 pp.
- 13. Robinson, D.M. 2001, Structural and Nd-isotopic evidence for the tectonic evolution of the Himalayan fold-thrust belt, western Nepal and the northern Tibetan Plateau: Ph.D. Dissertation, University of Arizona, 224 pp.
- 12. McQuarrie, N., 2001, The making of a high elevation orogenic plateau: the central Andes of Bolivia: Ph.D. Dissertation, University of Arizona, 255 pp.
- 11. Barbeau, D.L., 2000, A flexural model for the Paradox Basin: implications for the tectonics of the Ancestral Rocky Mountains: M. S. thesis, University of Arizona.
- 10. Garzione, C.N., 2000, Evolution of Thakkhola graben and Paleoelevation in the Southern Tibetan Plateau, Nepal: Ph.D. Dissertation, University of Arizona, 146 pp.
- 9. Horton, B.K., 1998, Late Cretaceous to Recent evolution of the foreland basin system and associated fold-thrust belt in the central Andes of Bolivia: Ph.D. Dissertation, University of Arizona, 208 pp.
- 8. Currie, B.S., 1997, Jurassic-Cretaceous evolution of the central Cordilleran foreland-basin system: Ph.D. Dissertation, University of Arizona, 275 pp.
- 7. Haldar, J.K., 1997, Evolution of Late Cretaceous-Paleocene nonmarine deposystems in the Thistle wedge-top basin, east central Utah: M. S. thesis, University of Arizona, 65 pp.
- 6. Currie, B.S., 1993, Sedimentology, stratigraphy and petrology of the Jurassic-Cretaceous Morrison and Cedar Mountain formations and relationships between nonmarine deposition and early Cordilleran foreland basin development, NE Utah-NW Colorado: M.S. thesis, University of Rochester, 91 pp.
- 5. Cole, R.B., 1993, Middle Tertiary sedimentation and volcanism in southern California along a convergent-to-transform plate boundary: Ph.D. dissertation, University of Rochester, 250 pp.
- 4. Rhoades, M.L., 1992, Provenance of middle Tertiary sandstones of the San Emigdio and Tehachapi Mountains, southern California; M.S. thesis, University of Rochester, 117 pp.
- 3. Ridgway, K.D., 1992, Cenozoic tectonics of the Denali fault system, Saint Elias Mountains, Yukon Territory: Synorogenic sedimentation, basin development, and deformation along a transform fault system: Ph.D. dissertation, University of Rochester, 400 pp.
- Cole, R.B., 1989, Early Miocene volcanism in the southern San Joaquin basin, California: origin and tectonic implications based on facies analysis and trace element geochemistry: M.S. thesis, University of Rochester, 120 pp.

1. Pivnik, D.A., 1988, Compositional and sedimentological trends in Late Cretaceous Little Muddy Creek and Sphinx Conglomerates as signatures of timing and style of thrust-related deformation: M.S. thesis, University of Rochester, 122 pp.

### **COURSES TAUGHT**

Undergraduate: Sedimentology & Stratigraphy, Introduction to Physical Geology, Summer Field Geology, Fieldcamp Preparation

Graduate: Advanced Physical Sedimentology, Thrust Belts & Foreland Basins, Basin Analysis, Orogenic Systems, Sedimentary Petrology, Sequence Stratigraphy, various seminars

## **GRADUATE STUDENTS AND POST-DOCS**

Pivnik, D. A., 1988, M.S., now Vice President of Exploration and New Ventures, Apex International Energy.

Ridgway, K. D., 1992, Ph.D., now tenured Professor, Purdue University.

Cole, R. B., 1993, Ph.D., now tenured Professor and President, Allegheny College.

Rhoades, M. L., 1992, M.S., now Special Lecturer, St. John Fisher College, Rochester, NY.

Haldar, J. K., 1997, M. S., now Senior Vice President, Digital River.

Coogan, J.C., 1994-95, Postdoctoral scholar, now independent consultant.

Currie, B. S., 1997, Ph.D., now tenured Professor, Miami University.

Horton, B.K., 1998, Ph.D., now J. Nalle Gregory Chair in Sedimentary Geology, University of Texas, Austin.

Constenius, K.N., 1999-2001, Postdoctoral scholar, now private consultant in petroleum industry.

Garzione, C. N., 2000, Ph.D., now tenured Professor and Dean of College of Science, University of Arizona.

Barbeau, D. L., 2000, M. S., 2004 Ph.D., now tenured Associate Professor, University of South Carolina.

McQuarrie, N., 2001, Ph.D., now tenured Professor, University of Pittsburgh.

Robinson, D. M., 2001, Ph.D., now tenured Professor, University of Alabama.

Pearson, O.N., 2002, Ph.D., now Associate Science Center Director, U.S. Geological Survey, Denver.

Martin, A.J., 2005, Ph.D., now Assistant Term Professor, George Mason University.

Leier, A., 2005, Ph.D., now tenured Associate Professor, University of South Carolina.

Fuentes, F., 2005, M.S., 2010 Ph.D., now Senior Exploration Geologist, YPF, Argentina.

Fabijanic, M.J., 2005, M.S., now Exploration Geologist with ExxonMobil Corporation.

Saylor, J., 2008, Ph.D., now tenured Associate Professor, University of British Columbia.

Fan, M., 2009, Ph.D., now tenured Professor, University of Texas-Arlington.

Ojha, T.P., 2009, Ph.D., now Research Manager, University of Arizona.

Peyton, S.L., 2009, Ph.D., now owner-operator of Coal Creek Resources, Denver, CO.

Safipour, R., 2011, M.S., now in private enterprise Denver, CO area.

Umlauf, K., 2011, M.S., now with Conoco-Phillips.

Kortyna, C., 2013, M.S., now Postdoctoral Fellow, University of Connecticut.

Cross, E.A., 2014, M.S., now with Novi Labs, Austin, TX.

Leary, R.J., 2015, Ph.D., now Assistant Professor, New Mexico Institute of Technology.

Chapman, J.B., 2018, Ph.D., now Assistant Professor, University of Texas-El Paso.

Henriquez, S.M., 2019, Ph.D., now Assistant Professor, California State University, San Bernardino.

Sherpa, T.Z.L., 2020, M.S.; 2024, Ph.D., now Postdoctoral Scholar, University of Washington.

Hayes, R.G., 2022, Ph.D., now Postdoctoral Fellow, Friedrich-Alexander-Universität, Nuremburg, Germany.

Ferroni, F., 2023, Ph.D., now senior exploration geologist with Petrobras, Rio de Janiero.

Ronemus, C.B., current student, Ph.D. expected 2025.

RESEARCH GRANTS (DeCelles is lead P.I. unless listed otherwise; total funding ~\$12,820,000)	
2021-2025	Lithospheric Dripping in Central Tibet: Underappreciated Factor in Orogenic Plateau Development? National Science Foundation (co-Pl is Paul Kapp).
2020-2025	Collaborative Research: TransANdean Great Orogeny (TANGO), National Science Foundation, (Lead PI is S.L. Beck).
2022	One-year supplement to Are Remnants of the Tibetan Plateau Preserved in the Southern Himalayan Thrust Belt? National Science Foundation.
2019-2022	Timing of cooling and exhumation of Laramide uplifts informs models of flat-slab subduction, National Science Foundation (co-PI is B. Carrapa).
2018-2021	Are Remnants of the Tibetan Plateau Preserved in the Southern Himalayan Thrust Belt? National Science Foundation.
2016-2019	Collaborative Research: Subduction Dynamics, Mantle Structure, and Cenozoic Tectonic Evolution of South America, National Science Foundation (co-P.I.s Lijun Liu and Susan Beck).
2015-2018	Collaborative Research: Tectonic Significance of Long Run-Out Coarse-Grained Facies in the Cordilleran Foreland Basin, National Science Foundation.
2016	In Search of the Edge of Tibet: Are High Plateau Remnants Preserved in the Himalaya? National Geographic Society.
2012-2014	Erosion and exhumation history of the Nepalese frontal Himalaya since earliest Miocene time: constraints on kinematic history, National Science Foundation.
2010-2013	Convergent Orogenic Systems Analysis-2: ExxonMobil.
2011-2014	Collaborative Research: The suturing process: Insight from the India-Asia collision zone (lead P.I. is P. Kapp).
2009-2010	One-year extension of Investigation of syncollisional extension and basin development in the high Himalaya: National Science Foundation.
2007-2008	A New Geological Map of Nepal: National Geographic Society.
2007-2010	Convergent Orogenic Systems Analysis: ExxonMobil.
2007-2010	Collaborative Research: Stratigraphic signatures of orogeny, assessing the timing of initial Andean crustal shortening: National Science Foundation.
2005-2008	Global Assessment of Fold-Thrust Belts and Foreland Basins: ExxonMobil.
2005-2007	Collaborative Research: Investigation of syncollisional extension and basin development in the high Himalaya: National Science Foundation.
2003-2006	Cretaceous-Earliest Tertiary Basin Development, Deformation, and Magmatism in Southern Tibet: Implications for Pre-Indo-Asian Collision Lithospheric Structure: National Science Foundation.

2003-2004	Geostructure Partnership, ExxonMobil.
2002-2004	A test of the out-of-sequence model for the Main Central thrust, western Nepal: National Science Foundation.
2002-2004	Dissertation support and fellowship for David Barbeau, ExxonMobil URC.
2002-2003	Geostructure Partnership, ExxonMobil.
2001-2003	Early Paleozoic tectonism in the Himalaya: National Science Foundation.
2001-2002	Geostructure Partnership, ExxonMobil.
1999-2001	3-D kinematic evolution of the Charleston-Nebo salient, Sevier fold-thrust belt: National Science Foundation.
1999-2001	Nd isotopic study of foreland basin sediments and source terranes of the Himalayan fold-thrust belt: Implications for regional tectonic history: National Science Foundation.
1998-2000	Late Cretaceous-Tertiary foreland basin evolution in the Eastern Cordillera of southern Bolivia: National Science Foundation.
1999-2000	Geostructure Partnership, British Petroleum.
	Geostructure Partnership, Conoco.
1998-1999	Geostructure Partnership, British Petroleum.
	Geostructure Partnership, Conoco.
1998	British Petroleum, for support of Ph.D. student Brian Horton's research in the Andes.
1998-2000	The 87Sr/86Sr record of Himalayan paleorivers during the Neogene: patterns and causes: National Science Foundation.
1996-1998	Kinematic history of a retroarc fold-thrust orogen: the Sevier orogenic belt, Utah and Wyoming: National Science Foundation.
1995-1997	Erosional unroofing of the Nepal Himalayas over the past 12 m.y.: <sup>87</sup> Sr/ <sup>86</sup> Sr and sedimentary petrological indicators from Siwalik foreland deposits: National Science Foundation.
1995	Miocene-Pliocene erosional unroofing of the Himalayan thrust belt, Nepal: University of Arizona Foundation.
1994	Cooperative research between the University of Arizona Geosciences Department and CogniSeis Development, Inc.: GeoSec software grant.
1993-1996	Tectonic controls on distal, thrust-derived sediment, Bighorn basin, Wyoming: National Science Foundation.
1993-1995	Reconstruction of thrust-wedge taper in the Wyoming-Utah Sevier thrust belt: National Science Foundation.
1992-1994	Incremental retrodeformation of NE Utah thrust belt using late Cretaceous-Paleocene synorogenic conglomerates: National Science Foundation.
1991-1993	Regional sequence-stratigraphic and geochronologic analysis of Cordilleran foreland basin, Wyoming and Idaho: National Science Foundation.
1990-1992	Middle Cenozoic syntectonic sedimentation along the Denali fault, Yukon Territory, Canada: American Chemical Society, Petroleum Research Fund.
1990-1991	Tectonic implications of Neogene submarine-slope clastics, southern Italy: National Science Foundation-NATO Fellowship.

1989	Acquisition of automated X-ray diffractometer: National Science Foundation.
1989-1991	Facies and provenance modeling of thrust-derived synorogenic conglomerates: National Science Foundation.
1988-1990	Regional tectonic-stratigraphic analysis of Late Jurassic-Early Cretaceous Cordilleran foreland basin: National Science Foundation.
1987-1989	Petrologic controls and tectonic setting of a middle Tertiary fan-delta sequence, southern California: American Chemical Society, Petroleum Research Fund.