

Kennet E. Flores

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Dept. Earth, Marine and Environmental Sciences
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ORCID **Google Scholar Profile**

EDUCATION

- 2006-2010** Institut de Géologie et Paléontologie, Université de Lausanne, Switzerland
Ph.D. in Geosciences and Environment (06.2010)
Thesis: Mesozoic oceanic terranes of southern Central America - Geology, Geochemistry and Geodynamics
Committee: P.O. Baumgartner, G.M. Stampfli, L.P. Baumgartner, J. Escuder-Virueite and J. Pindell.
- 2004-2006** Institut de Géologie et Paléontologie, Université de Lausanne, Switzerland
DEA in Earth Sciences (03.2006)
Thesis: Jurassic-Late Cretaceous oceanic crustal terranes and arc-derived sediments south Chortís Block (NE Nicaragua to NW Costa Rica). Preliminary results of two key areas: Nicoya Peninsula and Siuna District. (DEA requires 1.5 years and it is equivalent to a M.Sc. degree).
Supervisor: P.O. Baumgartner
- 2002-2003** Escuela Centroamérica de Geología, Universidad de Costa Rica, Costa Rica
Lic. in Geology (09.2003)
Thesis: Tectono-stratigraphic structure of the northern region of the Gulf of Nicoya, Costa Rica. *Thesis with honors* (Licentiate requires 1-2 years after the B.Sc, and it is equivalent to a M.Sc. degree).
Supervisor: P. Denyer
- 1998-2002** Escuela Centroamérica de Geología, Universidad de Costa Rica, Costa Rica
B.Sc. in Geology (12.2001)
Undergraduate thesis: Geology – Volcanology of the Borinquen-Las Pailas geothermal field (Rincon de la Vieja Volcano, Costa Rica)
Supervisor: G.E. Alvarado

PROFESSIONAL EXPERIENCE

- 2021-Pres** Dept. Earth, Marine and Environmental Sciences, University of North Carolina at Chapel Hill – Assistant Professor
- 2015-2021** Dept. Earth and Environmental Sciences, Brooklyn College of the City University of New York – Assistant Professor
Dept. Earth and Planetary Sciences, American Museum of Natural History – Associate Research Scientist

- 2011-2015** Dept. Earth and Planetary Sciences, American Museum of Natural History – Postdoctoral research and education fellow
Lamont-Doherty Earth Observatory, Columbia University – Postdoctoral associate research scientist
- 2010-2011** Dept. Earth and Planetary Sciences, American Museum of Natural History – SNSF Postdoctoral fellow

HONORS

- 2020** Tow Faculty Travel Fellowship “A geological awakening for the city that never sleeps: Application of advanced analytical methods to the understudied geology of NYC” [**\$2,000.00** travel fellowship]
- 2019** Visiting researcher fellowship at the Center for Northeast Asian Studies, Tohoku University, Japan [**JP¥ 1,500,000.00**, three-month fellowship]
- 2011-2015** Kathryn W. Davis research and education postdoctoral fellowship of the Master in Art of Teaching Earth Science program at the American Museum of Natural History [**\$288,000.00**, four-year fellowship]
- 2010-2011** Prospective researchers’ postdoctoral fellowship (PBLAP2-124272), Swiss National Science Foundation – SNSF [**CHF 41,000.00**, one-year fellowship]
- 2004-2006** UNIL Rectorat SVS ET Recherche postgraduate fellowship, Canton de Vaud, Switzerland [**CHF 43,000.00**, two-year fellowship]

REFERED ARTICLES

Total number of publications: 30, Citations 735, h-index 16 and i10-index 19. Source [Google Scholar Profile](#) *Key to formatting: *indicates paper authored by graduate student, ** indicates paper authored by postdoctoral fellow*

- [32] *Bradley, T.W., Ustunisik, G.K., Duke, E.F., Ünlüer, A.T., Yıldırım, D.K., Flores, K.E., (submitted). Qualitative Barometry of High P/T Rocks with Field Based NIR Spectroscopy of White Mica. **Lithos**.
- [31] *Morita, I., Tsujimori, T., Boniface, N., Flores, K.E., Aoki, S., Aoki, K., (submitted). Eclogite-to-granulite transition in the Neoproterozoic Ufipa of the Ubendian Belt, Tanzania: Implication for the timescale of collision-induced crustal thickening. **J. Petrol**.
- [30] ** Boschman, L.M., van Hinsbergen, D., Langereis, C., Flores, K.E., Kamps, P.J.J., Kimbrough, D.L., Ueda, H., van de Lagemaat, S.H.A., van der Wiel, E., Spakman, W., 2021. Reconstructing lost plates of the Panthalassa Ocean through paleomagnetic data from circum-Pacific accretionary orogens. **Am. J. Sci.**, 321, 907-954 <https://doi.org/10.2475/06.2021.08>
- [29] Gazel, E., Flores, K.E., Carr, M.J., 2021. Architectural and tectonic control on the segmentation of the Central American Volcanic Arc. **Annu. Rev. Earth Planet. Sci.**, 49, 485-511 <https://doi.org/10.1146/annurev-earth-082420-055108>

- [28] Martin, C., Flores, K.E., Vitale-Brovarone, A., Angiboust, S., Harlow, G.E., 2020. Deep mantle serpentinization in subduction zones: insight from in-situ B isotopes in slab and mantle wedge serpentinites. **Chem. Geol.**, 545, 119637 <https://doi.org/10.1016/j.chemgeo.2020.119637>
- [27] Flores, K.E., Gazel, E., 2020. A 100 m.y. record of volcanic arc evolution in Nicaragua. **Island Arc**, 29 (1), e12346 <https://doi.org/10.1111/iar.12346>
- [26] *Kakefuda, M., Tsujimori, T., Yamashita, K., Iizuka, Y., Flores, K.E., 2020. Revisiting Pb isotope signatures of Ni-Fe alloy hosted by antigorite serpentinite from the Josephine Ophiolite, USA. **J. Miner. Petrol. Sci.**, 115 (1), 21-28 <https://doi.org/10.2465/jmps.190731a>
- [25] *Hara, T., Tsujimori, T., Flores, K.E., Kimura, J-I., 2019. Sr-Pb isotope compositions of lawsonites in a Pacheco Pass metagraywacke, Franciscan Complex, California. **J. Miner. Petrol. Sci.**, 114 (6), 296-301 <https://doi.org/10.2465/jmps.190727>
- [24] *Boschman, L.M., van der Wiel, E., Flores, K.E., Langereis, C., van Hinsbergen, D., 2019. The Caribbean and Farallon plates connected: Constraints stratigraphy and paleomagnetism of the Nicoya Peninsula, Costa Rica. **J. Geophys Res Sol. Ea.**, 124 (7), 6243-6266. <https://doi.org/10.1029/2018JB016369>
- [23] *Madrigal, P., Gazel, E., Flores, K.E., Jicha, B., Bizimis, M., 2016. Record of Massive Upwellings from the Pacific Large Low Shear Velocity Province. **Nature Communications**, 7, 13309. <https://www.nature.com/articles/ncomms13309>
- [22] Martin, C., Flores, K.E., Harlow, G.E., 2016. Boron isotopes discrimination for subduction-related serpentinites. **Geology**, 44(11), 899-902. <http://dx.doi.org/10.1130/G38102.1>
- [21] Harlow, G.E., Flores, K.E., Marschall, H.R., 2016. Fluid-mediated mass transfer from a paleosubduction channel to its mantle wedge: Evidence from jadeitite and related rocks from the Guatemala Suture Zone. **Lithos**, 258-259, 15-36 [invited review article]. <http://dx.doi.org/10.1016/j.lithos.2016.04.010>
- [20] *Madrigal, P., Gazel, E., Denyer, P., Smith, I., Jicha, B., Flores, K.E., Coleman, D., Snow, J., 2015. A melt-focusing zone in the lithospheric mantle preserved in the Santa Elena Ophiolite, Costa Rica. **Lithos**, 230, 198-205. <http://dx.doi.org/10.1016/j.lithos.2015.04.015>
- [19] Flores, K.E., Skora, S., Martin, C., Harlow, G.E., Rodríguez, D., Baumgartner, P.O., 2015. Metamorphic history of riebeckite- and aegirine-augite-bearing high-pressure–low-temperature blocks within the Siuna Serpentinite Mélange, northeastern Nicaragua. **Int. Geol. Rev.**, 57 (5-8), 943-977. <http://dx.doi.org/10.1080/00206814.2015.1027747>
- [18] Flores, K.E., Martens, U.C., Harlow, G.E., Brueckner, H.K., Pearson, N.J., 2013. Jadeitite formed during subduction: In situ zircon geochronology constraints from two different tectonic events within the Guatemala Suture Zone. **Earth Planet. Sci. Lett.**, 371-372, 67-81. <http://dx.doi.org/10.1016/j.epsl.2013.04.015>
- [17] Nadeau, P.A., Flores, K.E., Ustunisik, G., Zirakparvar, N.A., Grcevich, J., Pagnotta, A., Sessa, J.A., Kinzler, R.J., Macdonald, M., Mathez, E.A., Mac Low, M-M., 2013. Pilot program for teaching Earth Science in New York. **EOS**, 94(23), 205-206. <https://doi.org/10.1002/2013EO230001>

- [16] Buchs, D.M., Pilet, S., Baumgartner, P.O., Cosca, M., **Flores, K.E.**, Bandini, A.N., **2013**. Low-volume intraplate volcanism in the Early/Middle Jurassic Pacific basin documented by accreted sequences in Costa Rica. **Geochem. Geophys. Geosyst.**, 14(5), 1552-1568. <https://doi.org/10.1002/ggge.20084>
- [15] Verard, C., **Flores, K.**, Stampfli, G., **2012**. Geodynamic reconstructions of the South America-Antarctica plate system. **J. Geodyn.**, 53, 43-60. <http://dx.doi.org/10.1016/j.jog.2011.07.007>
- [14] Harlow, G.E., **Flores, K.**, **2011**. Jadeite jade: Origin, Sources, Varieties and Exploration. **Proceedings of International Symposium on Jade**, 13-22.
- [13] Buchs, D.M., Baumgartner, P.O., Baumgartner-Mora, C., **Flores, K.**, Bandini, A.N., **2011**. Upper Cretaceous to Miocene tectonostratigraphy of the Azuero area (Panama) and the discontinuous accretion and subduction erosion along the Middle American margin. **Tectonophysics**, 512, 31-46. <http://dx.doi.org/10.1016/j.tecto.2011.09.010>
- [12] Bandini, A.N., Baumgartner, P. O., **Flores, K.**, Dumitrica, P., Hochard, C., Stampfli, G.M, Jackett, S-J., **2011**. Aalenian to Cenomanian Radiolaria of the Bermeja Complex (Puerto Rico) and Pacific origin of radiolarites on the Caribbean Plate. **Swiss J. Geosci.**, 104, 347-408. <https://doi.org/10.1007/s00015-011-0072-2>
- [11] Bandini, A.N., Baumgartner, P. O., **Flores, K.**, Dumitrica, P., Jackett, S-J., **2011**. Early Jurassic to Early Late Cretaceous radiolarians from the Santa Rosa accretionary complex (Northwestern Costa Rica). **Ofioliti**, 36(1), 1-35. <https://doi.org/10.4454/OFIOLITI.V36.11.1>
- [10] Baumgartner, P. O., **Flores, K.**, Bandini, A. N., Girault, F., Cruz, D., **2008**. Upper Triassic to Cretaceous Radiolaria from Nicaragua and Northern Costa Rica -The Mesquito Oceanic terrane. **Ofioliti**, 33(1), 1-19. <https://doi.org/10.4454/ofioliti.v33i1.356>
- [9] Bandini, A. N., **Flores, K.**, Baumgartner, P. O., Jackett, S-J. & Denyer, P., **2008**. Late Cretaceous and Paleogene Radiolaria from Nicoya Peninsula, Costa Rica: a tectonostratigraphic application. **Stratigraphy**, 5(1), 3-21. <http://www.micropress.org/microaccess/check/1561>
- [8] **Flores, K.**, Denyer, P., **2005**. Mapa geológico de la hoja Berrugate. **Rev. Geol. América Central** 32, Colección de mapas geológicos (7). http://www.geologia.ucr.ac.cr/revista/revista/to_pdf/revista/32/32-MapaBerrugate.pdf
- [7] Denyer, P., Montero, W., **Flores, K.**, **2005**. Mapa geológico de la hoja Golfo. **Rev. Geol. América Central**, 32, Colección de mapas geológicos (6). http://www.geologia.ucr.ac.cr/revista/revista/to_pdf/revista/32/32-MapaGolfo.pdf
- [6] Denyer, P., Montero, W., **Flores, K.**, **2005**. Apuntes sobre la geología de las hojas Golfo y Berrugate, Costa Rica. **Rev. Geol. América Central**, 32, 99-108. <https://revistas.ucr.ac.cr/index.php/geologica/article/view/4246/4070>
- [5] **Flores, K.**, Denyer, P. & Aguilar, T., **2003**. Mapa geológico de la hoja Abangares. **Rev. Geol. América Central**, 29, Colección de mapas geológicos (4). http://www.geologia.ucr.ac.cr/revista/revista/to_pdf/revista/29/29-MAPA-ABANGARES.pdf

- [4] **Flores, K.**, Denyer, P., Aguilar, T., **2003**. Geología y estratigrafía de la hoja Abangares, Guanacaste, Costa Rica. **Rev. Geol. América Central** 29, 127-136. <https://revistas.ucr.ac.cr/index.php/geologica/article/view/7780/7435>
- [3] Denyer, P., **Flores, K.**, **2003**. Mapa geológico de la hoja Talolinga. **Rev. Geol. América Central**, 28, Colección de mapas geológicos (2). http://www.geologia.ucr.ac.cr/revista/revista/to_pdf/revista/28/28-TALOLINGA.pdf
- [2] **Flores, K.**, Denyer, P., **2003**. Mapa geológico de la hoja Matambú. **Rev. Geol. América Central** 28, Colección de mapas geológicos (1). http://www.geologia.ucr.ac.cr/revista/revista/to_pdf/revista/28/28-MATAMBU.pdf
- [1] **Flores, K.**, Denyer, P., Aguilar, T., **2003**. Nueva propuesta estratigráfica: Geología de las hojas Matambú y Talolinga, Guanacaste, Costa Rica. **Rev. Geol. América Central**, 28, 131-138. <https://revistas.ucr.ac.cr/index.php/geologica/article/view/7793/7445>

SELECTED MEETING ABSTRACTS (since 2015)

*Key to formatting: *indicates paper authored by graduate student, ** indicates paper authored by postdoctoral fellow*

- [27] Martin, C., **Flores, K.E.**, Harlow, G.E., Angiboust, S., Hodel, F., Guice, G., **2021**. The boron isotopic signature of serpentine from obducted ophiolites: mixture of fluids and tectonic implications. [Invited talk]. Goldschmidt Abstracts, Session 4b. **Goldschmidt Conference, Virtual**, 4-9 Jul., 2021.
- [26] ****Bonnet, G.**, **Flores, K.E.**, Martin, C., Harlow, G.E., **2019**. Distinct P-T histories in a subduction mélange reveal underplating/mixing processes at the plate interface (North Motagua Mélange, Guatemala). [Poster]. Abstract V43E-0127, **Fall Meeting, AGU, San Francisco, CA**, 9-13 Dec. 2019.
- [25] ***Bradley, T.W.**, Ustunisik, G.K., Duke, E.F., **Flores, K.E.**, Ünlüer, A.T., Yildirim, D.K., **2019**. Detecting the Pressure and Bulk Composition Effect on the Al-OH Absorption Band of White Micas: A Case Study in Northwest Turkey and Applications to the Guatemala Suture Zone. [Poster]. Abstract V43E-0128, **Fall Meeting, AGU, San Francisco, CA**, 9-13 Dec. 2019.
- [24] **Flores, K.E.**, Marsh, J., Strauss, B., Estrada, N., **2019**. Metamorphic evolution and exhumation of high-pressure assemblages of the Cordillera Real (Ecuador). [Poster]. Abstract V43E-0126, **Fall Meeting, AGU, San Francisco, CA**, 9-13 Dec. 2019.
- [23] Martin, C., **Flores, K.E.**, Harlow, G.E., **2019**. Origin of the meta-ultramafic rocks from Massachusetts and Staten Island, New York: a complex history. [Poster]. Abstract V43E-0133, **Fall Meeting, AGU, San Francisco, CA**, 9-13 Dec. 2019.
- [22] ***Elizondo, V.**, Sandoval, M.I., **Flores, K.E.**, Sequeira, C., Chesnel, V., **2019**. Bioestratigrafía y paleotectónica de las radiolaritas de San Juanillo, Santa Cruz, Guanacaste. [Poster]. Abstract Resumen (póster 2), **3er Congreso Geológico, Universidad de Costa Rica, San José, Costa Rica**, 9-11 Oct. 2019.

- [21] Martin, C., **Flores, K.E.**, Harlow, G.E., **2019**. Origin of the Meta-ultramafic rocks from the Appalachian Mountains (East Coast of the US) [Talk]. Abstract No 26-3, **GSA Southeastern Section, Charleston, South Carolina**, 28-29 Mar. 2019.
- [20] **DeFelice, D.*, Friedrich, J.M., Ebel, D.S., **Flores, K.E.**, Weisberg, M.K., **2019**. Analysis of the shapes of the CAIS in CV chondrites using 2D and 3D petrography. [Poster]. Abstract 2019 LPI Contribution Series. No. 2132, **50th Lunar and Planetary Science Conference 2019, the Woodlands, Texas**, 18-22 Mar. 2019.
- [19] **Bradley, T.W.*, Ustunisik, G.K., Duke, E.F., **Flores, K.E.**, **2018**. Detecting the Pressure and Bulk Composition Effect on the Al-OH Absorption Band of White Micas: Case Studies in Northwest Turkey and the Franciscan Complex of California. [Poster]. Abstract MR21B-0058, **Fall Meeting, AGU, Washington, D.C.**, 10-14 Dec. 2018.
- [18] **Madrigal, P.*, Gazel, E., **Flores, K.E.**, Bizimis, M., Jicha, B., **2018**. Plume-Ridge Interaction during Large Igneous Province Formation. [Talk]. Abstract V14A-02, **Fall Meeting, AGU, Washington, D.C.**, 10-14 Dec. 2018.
- [17] Martin, C., **Flores, K.E.**, Angiboust, S., Vitale-Brovarone, A., Harlow, G.E., **2018**. Deep mantle metasomatism tracked by in-situ B isotopes: examples of the Alps and the Caribbean [Talk]. Abstract T22B-03, **Fall Meeting, AGU, Washington, D.C.**, 10-14 Dec. 2018.
- [16] Martin, C., **Flores, K.E.**, Angiboust, S., Vitale-Brovarone, A., Harlow, G.E., **2018**. Mantle Metasomatism in Subduction Zones: Insight from in situ B Isotopes [Invited talk]. Goldschmidt Abstracts. **Goldschmidt Conference, Boston, Massachusetts**, 12-17 Aug. 2018.
- [15] Baumgartner, P.O., Andjic, Sandoval, Bandini, A., Dieserens, **Flores, K.E.**, **2018**. Synthesis of terrane stratigraphy and assembly of S-Central America. Geology of Middle America – The Gulf of Mexico, Yucatan, Caribbean, Grenada and Tobago Basins and their margins, **AAPG Hedberg Conferences, Sigüenza, Spain**, 2-5 Jul. 2018.
- [14] **Bonnet, G.*, Martin, C., **Flores, K.E.**, Barrickman, M., Harlow, G.E., **2018**. Unraveling the history of complex zoned garnets in retrograde eclogites: Insights from the North Motagua Mélange in central Guatemala. Geophysical Research Abstract Vol. 20 EGU2018-10917, **EGU General Assembly, Vienna, Austria**, 8-13 Apr. 2018.
- [13] Martin, C., Harlow, G.E., **Flores, K.E.**, Angiboust, S., **2017**. Boron isotopes as tracer of the tectonic origin and geological history of serpentinites in subduction and suture zones [Poster]. Abstract V13A-0377, **Fall Meeting, AGU, New Orleans, Louisiana**, 11-15 Dec. 2017.
- [12] **Flores, K.E.**, Bonnet, G., Cai, Y., Martin, C., Hemming, S.R., Brueckner, H.K., Harlow, G.E., **2017**. 50 Myr. In a serpentinite subduction channel: Insights into slow eclogite exhumation. [Talk]. Abstract V31D-03, **Fall Meeting, AGU, New Orleans, Louisiana**, 11-15 Dec. 2017.
- [11] Martin, C., Bonnet, G., **Flores, K.E.**, Barickman, M., Harlow, G.E., **2017**. Unraveling the history of complex zoned garnets in retrograde eclogites: Insights from the North Motagua Mélange in central Guatemala [Poster]. Abstract 176-21, **GSA Annual Meeting, Seattle, Washington**, 22-25 October 2017. Geol. Soc. Am. Abst. Programs 49(6), doi: 10.1130/abs/2017AM-305322.

- [10] Martin, C., Barickman, M.H., **Flores, K.E.**, Bonnet, G., Harlow, G.E., **2017**. Unraveling the history of complex zoned garnets from the North Motagua Mélange (Guatemala) [Talk]. Abstract volume, **12th International Eclogite Conference, Åre, Sweden**, 20-29 Aug. 2017, 91.
- [9] **Flores, K.E.**, Bonnet, G., Cai, Y., Martin, C., Hemming, S.R., Brueckner, H.K., Harlow, G.E., **2017**. 50 Myr. In a serpentinite subduction channel: Insights into slow eclogite exhumation. [Talk]. Abstract volume, **12th International Eclogite Conference, Åre, Sweden**, 20-29 Aug. 2017, 53.
- [8] Martin, C., Harlow, G.E., **Flores, K.E.**, Angiboust, S., **2017**. Boron isotopes as tracer of the tectonic origin and geological history of serpentinites in subduction and suture zones [Poster]. **Goldschmidt Conference, Paris, France**, Abstracts, 2017 2595.
- [7] Gazel, E., Madrigal, P., **Flores, K.E.**, Bizimis, M., Jicha, B., **2016**. Record of Cyclical Massive Upwellings from the Pacific Large Low Shear Velocity Province in the Mesozoic. [Talk]. Abstract DI11A-2335, **Fall Meeting, AGU, San Francisco, California**, 12-16 Dec. 2016.
- [6] **Barickman, M.H.*, Martin, C., **Flores, K.E.**, Harlow, G.E., Bonnet, G., **2016**. Unraveling the history of complex zoned garnets from the North Motagua Mélange. [Poster]. Abstract T31E-2964, **Fall Meeting, AGU, San Francisco, California**, 12-16 Dec. 2016.
- [5] Martin, C., **Flores, K.E.**, Harlow, G.E., **2016**. Boron isotopes discrimination for subduction-related serpentinites [Talk]. **4th Serpentine Days, Sète, France**, 25-29 September 2016. Société Française de Minéralogie et de Cristallographie. Abstract volume, 48
- [4] Martin, C., Harlow, G.E., **Flores, K.E.**, Angiboust, S., **2016**. Boron isotopes as tracers of the tectonic origin and geological history of serpentinites in subduction and suture zones [Poster]. Abstract 258-4, **GSA Annual Meeting, Denver, Colorado**, 25-28 September 2016. Geol. Soc. Am. Abst. Programs 48(7), doi: 10.1130/abs/2016AM-286031.
- [3] **Madrigal, P.*, Gazel, E., **Flores, K.E.**, Bizimis, M., Jicha, B., **2015**. Record of the Pacific Large Low Shear Velocity Province Upwellings Preserved in the Cretaceous Large Igneous Provinces. [Poster]. Abstract DI41A-2592, **Fall Meeting, AGU, San Francisco, California**, 14-18 Dec. 2015.
- [2] Martin, C., **Flores, K.E.**, Harlow, G.E., **2015**. Boron isotopes discrimination for subduction-related serpentinites: Example of the Guatemala Suture Zone [Talk]. Abstract 168-12, **GSA Annual Meeting, Baltimore, Maryland**, 1-4 November 2015. Geol. Soc. Am. Abst. Programs 47(7), 434.
- [1] **Flores, K.E.**, **2015**. The Formation of Middle America and the Pacific ocean [Talk]. Abstract 10-4, **GSA Annual Meeting, Baltimore, Maryland**, 1-4 November 2015. Geol. Soc. Am. Abst. Programs 47(7), 44.

INVITED LECTURES AND COLLOQUIA (since 2015)

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|-----------------------|---|
| October 2021 | Seminars series, Department of Earth and Planetary Sciences, The University of Texas, San Antonio |
| September 2021 | Geosciences Colloquium, Department of Geosciences, The Pennsylvania State University, University Park, Pennsylvania |

- June 2021** Center for the Northeast Asian Studies Seminars, Tohoku University, Sendai, Japan
- May 2021** Seminars Series, Department of Earth and Planetary Sciences, American Museum of Natural History, New York
- February 2021** Geosciences seminars, Department of Geological Sciences & Engineering, University of Nevada, Reno, Nevada
- December 2020** Advanced Volcanology, Department of Geosciences, The Pennsylvania State University, University Park, Pennsylvania
- November 2020** 40th Aniversario Carrera Geología, Centro Universitario del Norte, Universidad de San Carlos de Guatemala, Cobán, Guatemala
- November 2020** Metamorphic Petrology, School of Earth and Environment, Rowan University Glassboro, New Jersey
- November 2020** Seminar Series, Department of Geological Sciences, Central Washington University, Ellensburg, Washington
- November 2020** Jackson School of Geosciences Lithosphere and Deep Earth (LDE) seminars, The University of Texas at Austin, Austin, Texas
- September 2020** Subduction Processes, Department of Earth and Atmospheric Sciences, Cornell University, Ithaca, New York
- August 2020** Colloquium, Department of Geological Sciences, The University of North Carolina, Chapel Hill, North Carolina
- October 2019** Earth and Environmental Sciences doctoral program, the Graduate Center of the City University of New York, New York
- July 2019** Center for the Northeast Asian Studies Seminars, Tohoku University, Sendai, Japan
- August 2018** Seminarios del Instituto de Geología, Universidad Nacional Autónoma de México, Ciudad de México, México
- May 2018** Seminar Series, Department of Earth and Atmospheric Sciences, City College of New York, The City University of New York, New York
- November 2017** Seminar Series, Department of Geography & Earth Sciences, University of North Carolina Charlotte, Charlotte, North Carolina
- March 2017** Geoscience Seminar Series, Center for Integrative Geosciences, University of Connecticut, Storrs
- August 2016** Charla de la Cátedra Gabriel Dengo, Escuela Centroamericana de Geología, Universidad de Costa Rica, San José, Costa Rica

- May 2016** Science Retreat, School of Natural and Behavioral Sciences, Brooklyn College of The City University of New York, Brooklyn
- November 2015** Seminars Series, Department of Earth and Planetary Sciences, American Museum of Natural History, New York
- November 2015** Colloquium, School of Earth and Environmental Sciences, Queens College of The City University of New York, Queens
- September 2015** Earth and Environmental Sciences doctoral program, the Graduate Center of The City University of New York, New York

TEACHING EXPERIENCE

2021-present *University of North Carolina at Chapel Hill, Assistant Professor*

2021 Research in Geology (**GEOL. 900 FALL'21**: 2 student)

2015-2021 *CUNY Brooklyn College, Assistant Professor*

- 2021 Thesis Research (**EESC. 7951G SPRING'21**: 1 student)
 Structural Geology and Plate Tectonics (**EESC. 3975 SPRING'21**: 11 student)
 Introduction to Earth Science (**EESC.1101 SPRING'21**: 48 students)
- 2020 Thesis Research (**EESC. 7951G FALL'20**: 1 student)
 Field Mapping (**EESC.4010 FALL'20**: 10 students)
 Introduction to Earth Science (**EESC.1101 FALL'20**: 48 students)
 Thesis Research (**EESC. 7952G SPRING'20**: 1 student)
 Internships in Earth Sciences (**EESC. 5800 SPRING'20**: 1 student)
 Structural Geology and Plate Tectonics (**EESC. 2300 SPRING'20**: 28 student)
 Introduction to Earth Science (**EESC.1101 SPRING'20**: 37 students)
- 2019 Thesis Research (**EESC. 7951G FALL'19**: 1 student)
 Global Tectonics (**EESC.7335G SPRING'19**: 9 students)
 Internships in Earth Sciences (**EESC. 5800 SPRING'19**: 1 student)
 Igneous and Metamorphic Petrology (**EESC. 3000 SPRING'19**: 7 student)
 Structural Geology and Plate Tectonics (**EESC. 2300 SPRING'19**: 24 student)
 Seminar (**EESC. 7903G WINTER'19**: 1 student)
- 2018 Seminar (**EESC. 7902G FALL'18**: 9 students)
 Advanced Field Mapping (**EESC. 7525G FALL'18**: 3 students)
 Field Mapping (**EESC. 3850 FALL'18**: 12 students)
 Dynamic Earth (**EESC. 1010 FALL'18**: 48 students)
 Dynamic Earth (**EESC. 1010 FALL'18**: 96 students)
 Seminar (**EESC. 7902G SPRING'18**: 1 student)
 Internships in Earth Sciences (**EESC. 5800 SPRING'18**: 1 student)
- 2017 Structural Geology and Plate Tectonics (**EESC. 2300 FALL'17**: 19 student)
 Dynamic Earth (**EESC. 1010 FALL'17**: 23 students)
 Dynamic Earth (**EESC. 1010 FALL'17**: 47 students)

- Dynamic Earth (**EESC. 1010 FALL'17**: 23 students)
 Seminar (**EESC. 7903G SPRING'17**: 1 student)
 Honors thesis research (**Honors Program SPRING'17**: 1 student)
 Igneous and Metamorphic Petrology (**EESC. 3000 SPRING'17**: 7 student)
 Dynamic Earth (**EESC. 1010 SPRING'17**: 24 students)
 Dynamic Earth (**EESC. 1010 SPRING'17**: 24 students)
 Dynamic Earth (**EESC. 1010 SPRING'17**: 48 students)
- 2016 Structural Geology and Plate Tectonics (**EESC. 2300 FALL'16**: 20 student)
 Honors thesis research (**Honors Program FALL'16**: 1 student)
 Global Tectonics (**EESC.7335G SPRING'16**: 14 students)
 Dynamic Earth (**EESC. 1010 SPRING'16**: 48 students)
 Dynamic Earth (**EESC. 1010 SPRING'16**: 96 students)
 Dynamic Earth (**EESC. 1010 SPRING'16**: 96 students)
- 2015 Structural Geology and Plate Tectonics (**EESC. 2300 FALL'15**: 18 student)
 Dynamic Earth (**EESC. 1010 SPRING'15**: 96 students)
 Dynamic Earth (**EESC. 1010 SPRING'15**: 72 students)
 Dynamic Earth (**EESC. 1010 SPRING'15**: 24 students)

MENTORING

Current Students

- **Daniel N. Goldman** – UNC Chapel Hill MS project: TE and Sr-Nd isotopes systematics of apatite during rehydration of eclogites (*Fall 2021 to present, Advisor*).
- **Damian I. Donoso-Tapia** – UNC Chapel Hill Ph.D project: Record and tectonic significance of high-pressure rocks in long-lived orogens (*Fall 2021 to present, Advisor*).

Other current Students

- **Verónica Elizondo Chinchilla** – Universidad de Costa Rica Lic. project: Análisis bioestratigráfico y paleotectónico de radiolaritas intra y supra-lava del Complejo de Nicoya, en la parte central y sur de la Península de Nicoya, Costa Rica (*spring 2020 to pres., External examiner*)
- **Naoko Takahashi** – Tohoku University (Japan) PhD project: Geochemical and experimental studies of subduction zone fluids: (1) Fluid records in jadeitite, and (2) Rutile solubility in C-bearing fluids deduced by a hydrothermal diamond-anvil cell (*spring 2019 to pres., External examiner*)
- **Samantha Tramontano** – CUNY Graduate Center PhD project: Magma Evolution Preceding Arc and Hot-Spot Eruptions Following Decadal – Centennial Repose Periods (*spring 2019 to pres., External examiner*)
- **John Michael Zayac** – CUNY Graduate Center PhD project: Eruptive History, Magma Systematics, and Trigger Dynamics of Arc Volcanoes (*summer 2018 to pres., External examiner*)

Former students

- **Daniel Sullivan** – Brooklyn College MS research experience: Provenance of amphibole-rich sandstones within Late Cretaceous pelagic sequences of the Nicoya Peninsula (Costa Rica): oceanic plateau or arc-derived origin (*Spring 2021, Advisor*).
- **Hamidreza Soleymani** – CUNY Graduate Center PhD project: Microstructural characteristics of deformed quartz under non-steady conditions (*summer 2020, External examiner*)
- **Taran Bradley** – South Dakota School of Mines MS project: Near-infrared spectra of white mica in metamorphic rocks (*spring 2020, External examiner*)

- **Andrea Mason** – CUNY Graduate Center PhD project: Provenance of Tin in the Late Bronze Age Balkans: Preparation of cassiterite for Sn isotopes analysis and the Probabilistic and Spatial Analysis of Sn isotopes (*winter 2020, External examiner*)
- **Reuben Levinton** – Brooklyn College MA research experience: The Taconian ultramafic rocks from the tristate area (*spring 2019, Advisor*).
- **Dominic DeFelice** – Brooklyn College MA research experience: Analysis of the Shapes of CAIs in Chondrites Using 2D and 3D Petrography (*spring 2019, Advisor*).
- **Juliana Molchanova** – Brooklyn College MA research experience: Origin of Late Cretaceous Arc in Nicoya Complex (Costa Rica): Insights from Ar-Ar geochronology of arc-derived sediments (*spring 2019, Advisor*)
- **John N. Bigolski** – CUNY Graduate Center PhD project: The formation of fine-grained chondrule rims in unequilibrated ordinary chondrites (*summer 2017, External examiner*)
- **Ardanna Bando** – Brooklyn College MA research experience: Provenance of the Late Cretaceous – Paleocene arc-related sedimentary rocks overlaying the Nicoya large igneous province (Costa Rica): An exotic or autochthonous origin (*spring 2017, Advisor*)
- **Donna Cao** – Brooklyn College Honors Academy Senior Thesis: Secondary Effects of Climate Change - Health and Social Costs (*spring 2017, Advisor*)

GRANTS FUNDED

2020 National Science Foundation EAR 17-547 Petrology and Geochemistry – Collaborative Research: Mantle metasomatism during serpentinization in subduction zones: Insights from in-situ boron isotopes (Award No. 1951166 & 1951172), Kennet E. Flores (PI, CUNY – Brooklyn College) and Celine Martin (PI, AMNH). April 1, 2020 – March 31, 2022; **\$160,565.00 (Total Project = \$222,275.00)**

2018 National Science Foundation EAR 18-513 Major Research Instrumentation – Acquisition of an electron microprobe at the American Museum of Natural History (Award No. 1828110), James D. Webster (PI, AMNH), Kennet E. Flores (Co-PI, CUNY), Terry Plank (Co-PI, LDEO), Adrian Fiege (Co-PI, AMNH), Denton Abel (Co-PI, AMNH). September 1, 2018 – August 31, 2021; **\$980,000.00**

2015 CUNY Collaborative Incentive Research Grant (CIRG, Round 22) – Thermal and structural evolution of a long-lived accretionary orogen: A detailed thermos-chronological investigation of the Eastern Cordillera, Ecuador (Award No. 2206); Kennet E. Flores (Brooklyn College, PI), Jeffrey Marsh (Queens College, PI),. September 30, 2015 – June 30, 2016; **\$27,305.68**

PROFESSIONAL SERVICE AND SYNERGISTIC ACTIVITIES

- 2021-Pres.** Member, Petrology and High-T Geochemistry Community (PetroNET): A professional network for early-career petrologist and high-temperature geochemist
- 2020-Pres.** Committee member, Diversity, Equity and Inclusion (DEI) of the Geochemical Society
- 2019** Primary convener and chair, Frontiers of Subduction Zone and Regional Metamorphism: Fluids, Reactions, and Dynamics I, II, III (posters), and IV (posters) sessions at the 2019 Fall Meeting, American Geophysical Union
- 2018-Pres.** Ad hoc reviewer for the Centre for Research in Geological Sciences (Universidad de Costa Rica)

- 2018** National Science Foundation (NSF) Fieldwork Inspiring Expanded Leadership and Diversity (FIELD) – FIELD Institute, Colorado State University Mountain Campus, Bellvue, Colorado.
- 2016** Incorporated Research Institution for Seismology (IRIS) - The Subduction Zone Observatory Workshop, Boise, Idaho.
- 2016** Guest Scientist, Conversatorios Geológicos, Escuela Centroamericana de Geología, Universidad de Costa Rica
- 2016** Guest Scientist, A Day with the American Museum of Natural History (AMNH) and Friends of Immigrant Refugee Minors (FIRM)
- 2016** National Science Foundation (NSF) Future Directions in Tectonics Workshop, University of Wisconsin, Madison, Wisconsin.
- 2015** National Science Foundation (NSF) GeoPRISM Theoretical and Experimental Institute on Subduction Cycles and Deformation, Redondo Beach, California
- 2015** National Association of Geoscience Teachers (NAGT) and National Science Foundation (NSF) workshop for Early Career Geoscience Faculty: Teaching, Research and Managing Your Career, College of William and Mary, Williamsburg, Virginia
- 2015** Guest Scientist, Astronomy on Tap presents Cosmos: A Spacetime odyssey - Clean Room
- 2014-Pres.** Ad hoc reviewer for the National Science Foundation Tectonic, and Petrology and Geochemistry programs
- 2009-Pres.** Ad hoc reviewer for the following per-reviewed journals and book series: Earth and Planetary Science Letters (Elsevier), Lithos (Elsevier), Geoscience Frontiers (Elsevier), Journal of Metamorphic Geology (Wiley), Island Arc (Wiley), Tectonics (American Geophysical Union), International Geology Review (Taylor & Francis), American Journal of Science (Yale University), Journal of Asian Earth Sciences (Elsevier), Journal of Geological Society (Geological Society of London), International Journal of Earth Sciences (Springer), European Journal of Mineralogy (Schweizerbart), Journal of Mineralogical and Petrological Sciences (JAMS), Revista Geológica de América Central (Universidad de Costa Rica), Revista Guatemalteca de Ciencias de la Tierra (Universidad de San Carlos de Guatemala), and GSA books (Geological Society of America)

UNIVERSITY AND DEPARTMENT SERVICE

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- 2021-present** *University of North Carolina at Chapel Hill, Assistant Professor*
- 2021-present** Committee member, Graduate Admissions
- 2021-present** Committee member, EMES Seminars series
- 2015- 2021** *CUNY Brooklyn College, Assistant Professor*
- 2019-2021** Committee member, Faculty Council Committee on Admissions
- 2019-2021** Coordinator, EES programs assessment
- 2019-2021** Chair, EES Undergraduate curriculum committee
- 2019-2021** Alternate EES representative, Faculty Council

- 2019-2020** Committee member, CUNY Graduate Center Admissions Committee for the Ph.D. Program in Earth and Environmental Sciences
- 2017-2019** Committee member, EES Undergraduate curriculum committee
- 2016-2021** Committee member, EES Space committee
- 2016-2021** Doctoral faculty member, CUNY Graduate Center Ph.D. Program in Earth and Environmental Sciences
- 2015-2019** EES representative, Faculty Council
- 2016-2017** Club advisor, EES Geology Society

RESEARH INTERESTS

Fluid-rock interaction; Subduction Zone Processes; High-pressure/low-temperature Metamorphism; Petrochronology; Tectonics

PROFESSIONAL MEMBERSHIPS

American Geophysical Union (AGU), Geologic Society of America (GSA), Mineralogical Society of America (MSA), Geochemical Society, and International Association for Geoscience Diversity (IAGD).