

Ashly Cabas, Ph.D.

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EDUCATION

Ph.D. **Virginia Tech**, Civil Engineering, 2016
M.S. **Virginia Tech**, Civil Engineering, 2011
B.S. **Universidad Católica Andrés Bello**, Venezuela, Civil Engineering, 2009

ACADEMIC APPOINTMENTS

Aug. 2016 - Present **Assistant Professor**
Department of Civil, Construction, and Environmental Engineering
North Carolina State University
May 2011 - Aug. 2016 **Graduate Research Assistant**
Department of Civil, and Environmental Engineering, Virginia Tech
March 2013 **Visiting Researcher**
Institut Français des Sciences et Technologies des Transports, de
l'Aménagement et des Réseaux (IFSTTAR), Paris, France.

AWARDS AND HONORS

- 2021 New Faces in the ASCE Geo-Institute.
- 2021 NC State Impact Scholar.
- 2019-20 NSF-Enabling the Next Generation of Hazards and Disaster Researchers Fellowship.
- 2019 NCSU Women and Minorities in Engineering Program Award.
- 2018 Outstanding Reviewer, ASCE Journal of Geotech. and Geoenvironmental Engineering.
- Thank a Teacher Letter 2018 (NCSU Office of Faculty Development recognition program)
- Fellow, American Society of Civil Engineers (ASCE) Excellence in Civil Engineering Education (ExCEED), 2017.
- Winner, Annual Graduate Student Paper Competition, Earthquake Engineering Research Institute (EERI), 2014.
- Student Presentation Award, Seismological Society of America (SSA) Annual Meeting, 2014.
- 3rd Place, National Poster Competition, International Foundations Congress and Equipment Expo (IFCEE) / Geo-Congress, ASCE Geo-Institute, 2015.
- Top 6 Finalist, National Poster Competition, Geo-Congress, ASCE Geo-Institute, 2012.
- 2nd Place, Graduate Student Poster Competition, Research Day, Virginia Tech, 2012.
- Juris Vitols Academic Excellence Award, Universidad Católica Andrés Bello, 2009.
- Dean of Engineering Honor List, Department of Civil Engineering, Universidad Católica Andrés Bello, 2003-2008.

TEACHING EXPERIENCE

Assistant Professor, North Carolina State University

- CE 342: Engineering Behavior of Soils and Foundations
- CE 746: Geotechnical Earthquake Engineering
- CE 593: Dynamics of Soils and Foundations

Graduate Teaching Assistant, Virginia Tech

- CEE 3514: Introduction to Geotechnical Engineering, Fall 2010, and Spring 2011.

Undergraduate Teaching Assistant, Universidad Católica Andrés Bello

- Physics II, Spring 2006, Spring 2008, and Fall 2008.

PUBLICATIONS

*Journal Articles (*indicates advised student co-author):*

1. **Cabas, A.**, Rodriguez-Marek, A. and Green, R. (2021), Effects of Seismic Impedance Contrast and Fundamental Period on the Elastic Half-space Assumption for Site Response Analysis, *J. Geotech. Geoenviron. Eng.* (under review)
2. *Chowdhury, I.N., **Cabas, A.**, Kaklamanos, J., Kottke, A., and Nick Gregor (2021), Input Motion Selection for Site Response Analyses: Insights on Target Spectra and Variability in Intensity Measures, *Earthquake Spectra* (under review)
3. Kaklamanos, J., **Cabas, A.**, Parolai, S., and Gueguen, P. Introduction to the Special Issue on Advances in Site Response Estimation, *Bull. Seism. Soc. Am.*, (in press)
4. **Cabas, A.**, Beyzaei, C., Stuedlein, A., Franke, K., Koehler, R., Zimmaro, P., Wood, C., Christie, S., Yang, J., and *Lorenzo-Velazquez, C. (2021), [Geotechnical Lessons from the Mw 7.1 2018 Anchorage Alaska Earthquake](https://doi.org/10.1177/87552930211012013), *Earthquake Spectra*, doi:10.1177/87552930211012013
5. *Ji, C., **Cabas, A.**, Bonilla, L.F., Gelis, C., (2021) [Effects of Nonlinear Soil Behavior on Kappa \(\$\kappa\$ \): Observations from the KiK-Net Database](https://doi.org/10.1785/0120200286), *Bulletin of the Seismological Society of America* doi: <https://doi.org/10.1785/0120200286>
6. *Ramos-Sepulveda, M. and **Cabas, A.** (2021), [Site Effects on Ground Motion Directionality: Lessons Learned from Case Studies in Japan](https://doi.org/10.1016/j.soildyn.2021.106755), *ASCE Journal of Soil Dynamics and Earthquake Engineering*, Volume 147, 106755 <https://doi.org/10.1016/j.soildyn.2021.106755>
7. *Ji, C., **Cabas, A.**, Cotton, F., Pilz, M., and Bindi, D. (2020), [Within station variability in kappa: evidence of directionality effects](https://doi.org/10.1785/0120190253). *Bulletin of the Seismological Society of America* <https://doi.org/10.1785/0120190253>
8. **Cabas, A.** and Rodriguez-Marek, A. (2017), [V_s- \$\kappa_0\$ Correction Factors for Input Ground Motions used in Seismic Site Response Analysis](https://doi.org/10.1193/122315EQS188M), *Earthquake Spectra*. <https://doi.org/10.1193/122315EQS188M>
9. **Cabas, A.**, Rodriguez-Marek, A. and Bonilla, L.F. (2017), [Estimation of Site-specific Kappa \(\$\kappa_0\$ \)-consistent Damping Values at KiK-net sites to Assess the Discrepancy between Laboratory-based Damping Models and Observed Attenuation \(of seismic waves\) in the Field](https://doi.org/10.1785/0120160370), *Bull. Seism. Soc. Am.* 107 (5): 2258-2271 doi: <https://doi.org/10.1785/0120160370>

Refereed Conference Proceedings:

1. *Gann, C., *Ji, C., and **Cabas A.** (2022) Kappa-compatible Damping for Nonlinear Site Response Analysis. Proceedings from ASCE GeoCongress 2022, Charlotte, North Carolina (under review)
2. *Lorenzo, C. and **Cabas, A.** (2022) Assessment of Spatial Variability of Site Response in Japan Proceedings from ASCE GeoCongress 2022, Charlotte, North Carolina (under review)
3. *Na, K., **Cabas, A.** and Montoya, B (2022) Design of MICP treatment accounting for changes in seismic site response and liquefaction potential. Proceedings from ASCE GeoCongress 2022, Charlotte, North Carolina (under review)
4. *Ingabire-Abayo, **Cabas, A.**, Montoya, B., and Chamberlin (2022) The Effect of Variability in Grain Size Distribution and Age of Soil Deposits on Liquefaction-Induced Lateral Spreading. Proceedings from ASCE GeoCongress 2022, Charlotte, North Carolina (under review)
5. *Ji, C., **Cabas, A.**, Bonilla, L.F., and Gelis, C. (2022) The Variabilities of kappa (κ): observations from computation procedure with two KiK-net stations. Proceedings from ASCE GeoCongress 2022, Charlotte, North Carolina (under review)
6. **Cabas, A.**, *Lorenzo, C. (2021), Accounting for Site Effects to Improve Seismic Hazard Resilience for Lifeline Systems”, San Fernando Earthquake Conference – 50 years of Lifeline Engineering (Lifelines 2021), Los Angeles, February 7-10 2021 (under review)

7. **Cabas, A.**, *Ji, C., Bonilla, L.F., Gelis, C., (2021) Kappa and Material Damping: Insights from the Linear and Nonlinear Soil Behavior Regimes, 6th IASPEI / IAEE International Symposium: Effects of Surface Geology on Seismic Motion, Kyoto, Japan, March 15-17, 2021 (under review)
8. Kaklamanos, J., *Chowdhury, I., Cabas, A., Kottke, A., and Gregor, N. (2021). Sensitivity of Site Response Analyses to Input Motion Selection Protocols. Proceedings from ASCE GeoExtreme 2021 Conference, Savannah Georgia
9. *Gann, C, Chowdhury, I., **Cabas, A.**, Kaklamanos, J. (2020), Effects of Input Motions from Different Tectonic Settings on Seismic Slope Stability Analyses. Proceedings of the 17th World Conference on Earthquake Engineering, 17WCEE, Sendai, Japan - September 13th to 18th 2020.
10. **Cabas, A.**, Franke, K., Koehler, R., Stuedlein, A., Yang, J., Beyzaei, C., Pierce, I. (2020), Turning Disaster into Knowledge: Geotechnical aspects of the 2018 Mw 7.1 Anchorage Alaska Earthquake. Proceedings from ASCE GeoCongress 2020, Minneapolis, MN, February 25-28 2020, ASCE Geotechnical Special Publication.
11. *Doostmohammadibueini M., **Cabas, A.**, and Montoya, B. (2019), Assessment of Lateral Spreading Estimations through the Lens of Centrifuge Modeling. Proceedings from ASCE GeoCongress 2019, Philadelphia, PA, March 24-27 2019, ASCE Geotechnical Special Publication.
12. *Chowdhury, I., **Cabas, A.**, Kaklamanos, J., Kottke, A., Gregg, N. (2019), Hazard-consistent ground motions: Insights on selection and scaling for different tectonic, geological, and geotechnical environments. *Proceedings from the 7th International Conference on Earthquake Geotechnical Engineering*, 17-20 June 2019, Rome, Italy.
13. **Cabas, A.**, (2019). On the Use of Site-specific Probabilistic Seismic Hazard Analysis and the Attenuation Parameter κ in Hazard Assessments of Critical Facilities. *Proceedings from the Structural Mechanics in Reactor Technology (SMiRT) Conference*, August 4-9 2019, Charlotte, NC.
14. *Ingabire-Abayo, N., **Cabas, A.**, Chamberlin, E., and Montoya, B. (2019), Assessment of the Variability in Liquefaction-induced Lateral Spreading: Insights from lateral spreading observed in recent seismic events. Proceedings from the 7th International Symposium on Geotechnical Safety and Risk, December 11-13 2019.
15. **Cabas, A.**, and Rodriguez-Marek, A. (2018), Toward improving damping characterization for site response analysis, *5th Geotechnical Earthquake Engineering and Soil Dynamics Conference*, Austin, TX, June 10-13 2018.
16. *Chowdhury, I.N., and **Cabas, A.** (2018), Assessment of the Influence of the Elastic Halfspace on Site Response Estimations, *11th National Conference on Earthquake Engineering*, Los Angeles, CA, June 25-29 2018.
17. **Cabas, A.**, and Rodriguez-Marek, A. (2017). What Can We Learn from Kappa to Achieve a Better Characterization of Damping in Geotechnical Site Response Models? *Geotechnical Frontiers 2017*, Orlando, Florida, USA, March 12-15, 2017.
18. **Cabas, A.**, Rodriguez-Marek, A., and Montalva, G. (2015). V_S - κ Consistent Input Ground Motions for Site Response Analyses, Case Studies in Concepción and San Pedro, Chile. *XV Pan-American Conference on Soil Mechanics and Geotechnical Engineering*, Buenos Aires, Argentina, November 15-18, 2015.
19. **Cabas, A.** (2015). V_S - κ Correction Factors for Input Ground Motions used in Seismic Site Response Analysis. *Earthquake Engineering Research Institute (EERI) 67th Annual Meeting 2015*, Boston, MA, USA, March 31 - April 3, 2015.
20. **Cabas, A.**, Cárcamo, P., Rodriguez-Marek, A., Godfrey, B., and Olgun, G. (2014). Where to Locate the Elastic Half-Space in Site Response Analysis, A Case Study Using Site Profiles from

Charleston, SC, USA. 2nd European Conference on Earthquake Engineering and Seismology, Istanbul, Turkey, August 25-29, 2014.

Technical Reports:

1. Koehler, R.D., Franke, K.W., Beyzaei, C.Z., **Cabas, A.**, Pierce, I., Stuedlein, A., and Yang, Z., (2018), Geotechnical Engineering Reconnaissance of the 30 November 2018 M7.1 Anchorage, Alaska Earthquake, GEER report Version 1.
2. Koehler, R.D., Franke, K.W., Beyzaei, C.Z., **Cabas, A.**, Pierce, I., Stuedlein, A., and Yang, Z., (2019), Geotechnical Engineering Reconnaissance of the 30 November 2018 M7.1 Anchorage, Alaska Earthquake, GEER report Version 2.
3. **Cabas, A.**, Kaklamanos, J., Kottke, A., and Chowdhury I., (2019). Assessment of the Contribution of Input Motion Selection Procedures to Uncertainty in Ground Motion Intensity Measures. USGS Final Report AWARD NUMBER: G18AP00015.
4. Rodriguez-Marek, A., Dawood, H.M., Upadhyaya, S., and **Cabas, A.**, (2017). An empirical study of the parameterization of site response using the KiKnet array. USGS Report AWARD NUMBER: G14AP00017.

SELECTED CONFERENCE PRESENTATIONS/ABSTRACTS

1. *Ingabire Abayo, N., Chamberlin, E., **Cabas, A.**, Montoya, B (2021). Assessing the Influence of Fluvial Geomorphological Variables on Empirical Models of Liquefaction-Induced Lateral Spreading. 2021 International Foundations Conference and Equipment Expo (IFCEE) (poster presentation; **First place at National Geoposter competition**)
2. *Ingabire-Abayo, N., Chamberlin E., **Cabas, A.**, and Montoya, B. (2021). Assessing the Influence of Fluvial Geomorphological Variables on Empirical Models of Liquefaction-Induced Lateral Spreading. American Geophysical Union Annual Meeting (held virtually due to COVID19; poster presentation; **Honorable Mention at the AGU Outstanding Student Presentation Awards**)
3. *Ji, C., **Cabas, A.**, Pilz, M., and Kottke, A. (2021) Regional Attenuation Estimates for California using Coda Waves. 2021 SSA Annual Meeting (virtual poster presentation; **Travel Grant Winner**)
4. *Ji, C., **Cabas, A.**, Bonilla, L.F., and Gelis, C. (2020) Investigation of the correlation between kappa and soil nonlinearity. Eastern Section of the SSA Annual Meeting (virtual oral presentation)
5. *Singh, S., **Cabas, A.**, and Gupta, A., (2020). Quantifying Near–Surface Attenuation via Site-Specific Kappa (κ_0) to Improve High–Frequency Ground Motion Characterization in Central and Eastern United States, Oral presentation at the DOE-NRC Natural Phenomena Hazards Meeting, October 20-21 2020 [virtual meeting]
6. *Ji, C., **Cabas, A.**, Bonilla, L.F., Gelis, C., (2020) Does Nonlinear Soil Behavior Affect Kappa Estimates? Poster presentation at the 2020 SSA Annual Meeting, Albuquerque, NM, April 27-30, 2020. [cancelled due to COVID-19]
7. Kaklamanos, J., Chowdhury, I., **Cabas, A.**, Kottke, A., Gregor, N., (2020) Sensitivity of Site Response Analyses to Input Motion Selection: Lessons Learned from Seattle and Boston, Oral presentation at the 2020 SSA Annual Meeting, Albuquerque, NM, April 27-30, 2020. [cancelled due to COVID-19]
8. *Darr, E., Castro-Bolinaga, C., **Cabas, A.**, and Peszlen, I., (2020) The answer is in the roots: Development of probabilistic bank erosion analysis curve by integrating root dendrogeomorphology and flow duration curves. Poster presentation at the NC Water Resources

- Research Institute (WWRI) Annual Conference, Raleigh, NC, March 18-19 [cancelled due to COVID-19]
9. *Ramos-Sepulveda, M., and **Cabas**, A., (2020), Understanding Site Effects on Ground Motion Directionality, Poster presentation at GeoCongress 2020, Minneapolis, MN, February 25-28 2020.
 10. Franke, K. W., R. D. Koehler, C. Z. Beyzaei, A. **Cabas**, I. Pierce, A. W. Stuedlein, and Z. Yang (2019) Geotechnical Engineering Reconnaissance of the 2018 Mw 7.0 Anchorage, Alaska Earthquake, Oral presentation at the EERI Annual Meeting – Vancouver, BC, Canada
 11. Franke, K. W., R. D. Koehler, C. Z. Beyzaei, A. **Cabas**, I. Pierce, A. W. Stuedlein, and Z. Yang (2019) Geotechnical Engineering Reconnaissance of the 2018 Mw 7.0 Anchorage, Alaska Earthquake, Oral presentation at the Symposium on the 2018 M 7.1 Anchorage Earthquake, Anchorage, AK, September 24-26 2019
 12. **Cabas**, A., *Chowdhury, I., Kaklamanos, J., Kottke, A., and Gregor, N. (2019), Bridging the gap between input motion selection protocols and geotechnical engineering analyses, Oral presentation at the 2019 SSA Annual Meeting, Seattle, WA, April 23-26, 2019.
 13. *Chowdhury, I., **Cabas**, A., Kaklamanos, J., Kottke, A., and Gregor, N. (2019), Challenges and Consequences of Input Motion Selection for Subduction Zone Environments: Seattle, Washington, Poster presentation at the 2019 SSA Annual Meeting, Seattle, WA, April 23-26, 2019.
 14. *Ji, C., and **Cabas**, A, Cotton, F., Pilz, M., and Bindi, D., (2019). Within station variability and uncertainty in kappa estimations: insights from various KiK-net downhole arrays, Poster presentation at the 2019 SSA Annual Meeting, Seattle, WA, April 23-26, 2019.
 15. Koehler, R.D., Franke, K.W., Beyzaei, C.Z., **Cabas**, A., Pierce, I., Stuedlein, A., and Yang, Z., (2019), Initial observations from the GEER reconnaissance evaluation of the 2018 M7.0 Anchorage Alaska earthquake. Oral presentation at the 2019 SSA Annual Meeting, Seattle, WA, April 23-26, 2019.
 16. *Chowdhury, I., and **Cabas**, A. (2019). Ground Motion Selection for Regions Exposed to Diverse Seismic Sources. 2019 Geotechnical, Geophysical, Geoenvironmental Engineering, Technology Transfer Conference, Cary, NC, April 9-10, 2019.
 17. *Ji, C., and **Cabas**, A, Cotton, F., Pilz, M., and Bindi, D., (2019). Variability and uncertainty in near-surface attenuation estimations: effects of azimuth and earthquake type. 2019 Geotechnical, Geophysical, Geoenvironmental Engineering, Technology Transfer Conference, Cary, NC, April 9-10, 2019.
 18. *Sepulveda-Ramos, M., and **Cabas**, A. (2019). Understanding Key Ground Motion Intensity Measures for Seismic Hazard Assessment of Lifelines: Lessons Learned from Loma Prieta Earthquake. 2019 Geotechnical, Geophysical, Geoenvironmental Engineering, Technology Transfer Conference, Cary, NC, April 9-10, 2019.
 19. *Sepulveda-Ramos, M., and **Cabas**, A. (2019). Understanding Key Ground Motion Intensity Measures for Seismic Hazard Assessment of Lifelines: Lessons Learned from Loma Prieta Earthquake. Geo-Carolinas 2019, Charlotte, NC, March 4-5, 2019.
 20. *Ingabire-Abayo, N., **Cabas**, A., Montoya, B. (2019) Assessment of lateral spreading case histories from recent seismic events. Poster presentation at the NCSU Summer Undergraduate Research Symposium, Raleigh, NC, July 31st, 2018.
 21. *Ji, C., and **Cabas**, A., (2018) Investigation of the Dependence of Kappa Values on the Onset of Soil Nonlinearity as Captured by Shear Strain Index (PGV/Vs30). Poster presentation at the Seismology of the Americas (joint conference of the Latin American and Caribbean

- Seismological Commission (LACSC) and the Seismological Society of America (SSA)), Miami, FL, May 14-17, 2018.
22. **Cabas, A.**, and Rodriguez-Marek, A., (2017), Estimation of Site-Specific Kappa (κ_0)-Consistent Damping Values at Selected Stations from the KiK-net Database. Poster presentation at the 2017 SSA Annual Meeting, Denver, CO, April 18-20, 2017.
 23. *Chowdhury, I., and **Cabas, A.**, (2017), Ground Motions from the August 24, 2016 Rieti Earthquake in Italy. Poster presentation at the Geotechnical Frontiers 2017 Conference, Orlando, Florida, March 12-15, 2017. [**top 6 poster at the National Poster Competition**]
 24. **Cabas, A.**, and Rodriguez-Marek, A. (2015). Appropriate Ground Motions for Dynamic Analysis of Foundations. Poster presentation at the IFCEE/Geo-Congress 2015 Geo-Institute National Poster Competition, San Antonio, TX, USA, March 17-21, 2015. [**3rd Place Poster Competition**]
 25. **Cabas, A.**, Rodriguez-Marek, A., and Green, R. (2014). The Importance of the Elastic Half-Space Assumption in Site Response Analysis. Oral presentation at the 2014 Annual Meeting of the Seismological Society of America, Anchorage, AK, USA, April 30 - May 2, 2014. [**Best Student Presentation Award**]
 26. **Cabas, A.**, and Rodriguez-Marek, A. (2012), Ground Motions observed during the August 23rd, 2011 Mineral Virginia Earthquake. Poster presentation at the 2nd Civil and Environmental Engineering Department Research Day, Blacksburg, VA, USA, April 13, 2012. [**2nd Place at Poster Competition**]

INVITED PRESENTATIONS AND SEMINARS

1. “New Frontiers in Site Response Modeling: Reference Condition, Attenuation, and Hazard-consistent Ground Motions”, April 15 2021, [Invited seminar at *Oregon State University*] (the seminar was delivered virtually due to COVID-19)
2. “Effects of Seismic Impedance Contrast and Fundamental Period on the Elastic Half-space Assumption for Site Response Analysis”, August 20 2020 [Invited seminar at *Risk Management Solutions, Inc. RMS*, California] (the seminar was delivered virtually due to COVID-19)
3. “Rethinking Near-Surface Attenuation”, March 25 2019 [Presentation on behalf of the NCSU CNEFS in partnership with visiting professionals from Kore Hydro & Nuclear Power Company at NCSU].
4. “Seismic Risk in Central and Eastern US”. [Invited presentation at the *2018 ASCE NC Section Fall Conference*], Cary, NC, September 21st, 2018.
5. “Geotechnical Earthquake Engineering”, June 28th, 2018 [Invited webinar at *Universidad Católica Andrés Bello* in Ciudad Guayana, Venezuela]
6. “Rethinking How We Parameterize Near-surface Attenuation”, March 23rd, 2018 [Invited talk at the *University of Washington* in Seattle, WA].
7. “Research Workshop”, Guest Speaker at the 2018 We are Women in Engineering event, NC State, NC, USA, March, 1st 2018.
8. “Estimation of Site-specific Kappa (κ_0)-Consistent Damping Values: Insights on laboratory-based damping models and observed attenuation in the field”, October 24th, 2017 [Invited talk at the *University of Texas* at Austin].
9. “Research Workshop”, Guest Speaker at the 2017 We are Women in Engineering event, NC State, NC, USA, March, 2nd 2017.
10. “ V_S - κ_0 Correction Factors for Input Ground Motions used in Seismic Site Response Analysis” Guest Speaker at the technical seminar sponsored by the EERI Student Chapter at NC State, Raleigh, NC, USA, October 19th, 2016.

SPONSORED RESEARCH

<i>PIs</i>	<i>Project Title</i>	<i>Source</i>	<i>Role and Share</i>	<i>Total Amount</i>	<i>Dates</i>
Cabas, A. Pilz, M.	Site-specific Near-surface Attenuation Estimates for California using Coda Waves	Pacific Gas & Electric	PI 95%	\$60,000	5/20 – 08/21
Cabas, A. Pilz, M.	Regional and Local Attenuation Estimates in California for the Development of Nonergodic Ground Motion Models	Pacific Gas & Electric	PI 95%	\$80,000	8/21 – 8/22
Cabas, A. Kowalsky, M.	Rapid Post-Earthquake Displacement-Based Assessment Methodology for Bridges	Alaska DOT	Co-PI 50%	\$259,276	1/22 – 12/24
Cabas, A.	Next Generation Ground Motion Models: An USA-France-Germany Partnership Toward Innovation in Geotechnical Earthquake Engineering	NCSU Internationalization Seed Grant	PI 100%	\$6,000	7/20 – 6/21
Cabas, A.	Improving the Assessment of Site-specific Seismic Hazards through the Lens of Novel Attenuation Models	US Geological Survey	PI 100%	\$79,927	5/19 – 4/20
Cabas, A.	Toward Bridging Efforts in Seismic Hazard Assessments: A Multidisciplinary Collaborative Approach between NC State and the GFZ German Research Center for Geosciences	NCSU Internationalization Seed Grant	PI 100%	\$10,000	6/18 – 4/19
Cabas, A.	Improving lifelines' resiliency to seismic hazards incorporating site-specific ground motion directionality in seismic hazard assessment	NCSU Faculty Research and Professional Development program	PI 100%	\$10,000	7/18 – 6/19
Cabas, A. Kaklamanos, J.	Assessment of the Contribution of Input Motion Selection Procedures to Uncertainty in Ground Motion Intensity Measures	US Geological Survey	PI 70%	\$ 93,887	1/18 – 12/18
Cabas, A.	Building a stronger and diverse professional network to support the growth of the geotechnical earthquake engineering research group at North Carolina State University	NSF	PI 100%	\$2,210	10/17 – 4/18

PROFESSIONAL CONTRIBUTIONS**Professional Registration:**

- Licensed Engineer, Venezuelan Association of Engineers, Registration Number: 198970.

Professional Affiliations:

- American Society of Civil Engineers (ASCE)
- Geo-Institute (GI)
- Earthquake Engineering Research Institute (EERI)
- Seismological Society of America (SSA)
- Tau Beta Pi, The Engineering Honor Society
- Chi Epsilon, The Civil Engineering Honor Society
- Venezuelan Association of Engineers (CIV)

Technical Committees in Professional Organizations

- Soil Dynamics and Earthquake Engineering committee, ASCE Geo-Institute, member 2016 – present; board member; webinar coordinator (2021-present)

- Seismic Design and Performance of Bridges, Transportation Research Board AFF50 Committee, member 2018 - present
- Women in Deep Foundations committee, Deep Foundations Institute, member 2014- present

Member of the NSF-GEER team:

- Reconnaissance efforts after the M7.1 2018 Anchorage, Alaska earthquake.

Guest Editor:

- Special BSSA Issue on Advances in Site Response Estimation (March 2020-June 2021)

Conference-Session Chair [C] and Co-Chair [CC]:

- Near-surface Effects: Advances in Site Response Estimation and Its Applications at the 2020 SSA Annual Meeting [CC; cancelled due to COVID19]
- Soil Dynamics and Earthquake Engineering at GeoCongress 2020 [CC]
- Ground Motions and Site Response, ASCE Geotechnical Earthquake Engineering and Soil Dynamics V (GEESD) Conference [C]
- Soil Dynamics and Earthquake Engineering Track at GeoCongress 2020 [CC]
- Advances in Site Response Estimation: From Near-Surface Effects to Building/soil Interactions at 2020 SSA meeting [CC]
- Ground Motion Characterization, 2019 SMiRT [CC]
- PSHA Applications, 2019 SMiRT [CC]
- From source to site: Modelling and understanding of high-frequency ground motion, 2019 Seismological Society of America (SSA) Annual Meeting [CC]
- Soil Dynamics and earthquake engineering: Numerical Modeling, GeoCongress 2019 [CC]
- Advances on the Parameterization of Seismic Attenuation: Current Challenges and Opportunities, 2018 Seismology of the Americas [CC]
- Seismic Parameters 1, 2 and 3, 2017 Geotechnical Frontiers [CC]
- Closing the Gap between Laboratory-based Damping Models and Observed Attenuation of Seismic Waves in the Field, 2017 Seismological Society of America Annual Meeting [CC]

National Panels:

- *Proposal review panelist*, US Geological Survey External Grants Panel Member, (FY 2019, FY2021), NSF-CMMI ECI (2021)
- *Panelist*, National Cooperative Highway Research Program (NCHRP), 2017-2021 [proposal review and project oversight]
- USGS Atlantic and Gulf Coastal Plain Amplification Working Group, 2020-present

Reviewer for scientific journals including: Journal of Geotechnical and Geoenvironmental Engineering (ASCE), Bulletin of the Seismological Society of America (BSSA), Soil Dynamics and Earthquake Engineering, Pure and Applied Geophysics, Seismological Research Letters (SRL), Bulletin of Earthquake Engineering (BEE), Earthquake Spectra, Geophysical Journal International (GJI).

Book Chapter Reviewer:

- Geotechnical Earthquake Engineering, Second Edition, Chapter 3 on Strong Ground Motion Characterization and Prediction by Steve Kramer and Jonathan Stewart.

Reviewer for conference proceedings:

- 2020 GeoCongress, Minneapolis, MN, February 25-28, 2020
- 2019 Transportation Research Record
- 2019 GeoCongress, Philadelphia, PA, March 24-27, 2019
- ASCE Geotechnical Eqk. Eng. and Soil Dynamics V Conference, Austin, TX, June 10-13, 2018
- ASCE IFCEE Student Poster Competition, Orlando, FL, March 5-9, 2018.
- 16th World Conference on Eqk. Eng. (16WCEE), Santiago de Chile, Chile, January 9-13, 2017.
- Geotechnical Frontiers Conference, Orlando, Florida, March 12-15, 2017
- Geo-Risk 2017, Denver, CO, USA, June 4-27, 2017.
- 3rd International Conference on Performance-Based Design in Earthquake Geotechnical Engineering, Vancouver, Canada, July 16-19, 2017.
- XV Pan-American Conf. on Soil Mech. and Geot. Eng., Buenos Aires, Argentina, Nov.15-18, 2015.

- 15th World Conference on Eqk. Eng., Lisbon, Portugal, September 24-28, 2012.
- Geo-Risk 2011, Atlanta, GA, USA, June 26-28, 2011.

Professional Service On-Campus:

- Juntos Summer Academy – Future Ingenieros (July 2018)
- North Carolina School of Science and Math (NCSSM) summer experience (July 2017)
- We are Women in Engineering Event: Co-Organizer and Speaker (2017, 2018, 2019)
- Facilities and Equipment Committee, CCEE, (2016 – present)
- Diversity and Recruiting Committee, CCEE, (2016 – present)
- Undergraduate Programs Committee, CCEE, (2017 – present)

Professional Activities:

- Curator, EERI Nepal Earthquake Clearinghouse, Geotechnical Impacts (May – Dec. 2015)
- Featured in the Jan/Feb 2016 issue of Pile Buck Magazine as a Deep Foundations Institute’s Women in Deep Foundations committee member.

Professional Development:

- NSF RAPID Intensive Workshop, Seattle, WA July 2019
- Soil Structure Interaction short course, GEESD V, Austin, TX, June 10 2018.
- 2018 NSF CMMI CAREER Proposal Writing Workshop, March 25-27, 2018.
- 2018 Faculty Success Program, National Center for Faculty Development and Diversity
- *ASCE Excellence in Civil Engineering Education (ExCEED) Teaching Workshop*, June 18-23 2017.
- *NSF-sponsored Geotechnical Women Faculty – Networked and Thriving Workshop*, Washington, DC, April 10-11, 2017.
- *NSF CAREER Program Workshop*, Research Develop. Office, NCSU, Raleigh, NC, Mar. 2017.
- *Teaching Crisis Clinic*, Dr. Richard Felder and Dr. Rebecca Brent, College of Engineering, North Carolina State University, Raleigh, NC, USA, 20 Jan. 2017.
- *New Faculty Orientation Workshop*, College of Engineering and College of Science, North Carolina State University, Raleigh, NC, USA, 4-9 Aug. 2016.
- *Via Academic Preparation Program*, Dr. Jennifer L. Irish, Associate Professor, Department of Civil and Environmental Engineering, Virginia Tech, Blacksburg, VA, USA, Aug. 2014 - May 2016.
- *Summer School on Simulation and Supercomputing in the Geosciences*, Society for Industrial and Applied Mathematics (SIAM), Monterey, CA, USA, July – Aug. 2012
- *OpenSees Workshop and Seminar*. Virginia Tech. Dr. Frank McKenna, Andrew Hardyniec, John Judd, and Scott Williams. Blacksburg, VA, USA, September 27-28, 2013.
- *Short Course: Seismic Site Response Analysis with GeoMotions Suite*. GeoMotions, LLC Modeling, Software, and Training for Geotechnical Earthquake Engineering. Dr. Neven Matasovic and Gustavo A. Ordoñez. Raleigh, NC, USA, May 18-19, 2012.
- *Virginia Tech Graduate School: Graduate Teaching Assistant (GTA) Workshop*, Dr. Janet Walberg Rankin, Associate Dean, Graduate School, Virginia Tech, Blacksburg, VA, USA, Aug. 2010.

STUDENT ADVISEES

<i>Name</i>	<i>Degree</i>	<i>Date</i>	<i>Dissertation/thesis title</i>
Sugandha Singh	Ph.D. (graduated)	2020	Design Ground Motions compatible with High-frequency Energy Content in Low-to-Moderate Seismicity Regions
Ishika Chowdhury	Ph.D.	2021*	Hazard-Consistent Ground Motions for Geotechnical Earthquake Engineering Analysis
Chunyang Ji	Ph.D.	2021*	Seismic attenuation parameterization for nonergodic probabilistic seismic hazard analysis.
Kyunguk Na	Ph.D.	2022*	Characterization of Dynamic Properties of Bio-Mediated Soils using the Resonant Column and Torsional Shear Test

Cristina Lorenzo	Ph.D.	2023*	Regional Seismic Hazard Assessment: Quantifying Site Effects on Spatially Variable Ground Motions
Nancy Ingabire-Abayo	Ph.D.	2023*	Geomorphological Considerations in Lateral Spreading Estimations
Cassie Gann	Ph.D.	2024*	Quantifying multi-scale attenuation mechanisms in site response analysis
Maria E. Ramos Sepulveda	M.S.	2020	Site Effects on Ground Motion Directionality
Rajprabhu Thangappa	M.S.	2019	Scaling and spectral matching of ground motions

*Anticipated graduation date

UNDERGRADUATE TRAINING AND MENTORING

- Cassie Gann (RISE¹ student, Summer 2018, REU Fall 2019): Investigation of the Contribution of Input Motion Selection Protocols on Estimated Ground Motion Intensity Measures Relevant to Geotechnical Analyses.
- Nancy Ingabire Abayo (RISE¹ student, Summer 2018): Assessment of lateral spreading case histories from recent seismic events.
- Tristan Miller (Spring 2017): Implementation of 1D linear seismic site response analysis using modified models of minimum shear strain damping.
- Daniela Espinoza-Pulgar (Fall 2017), Visiting scholar from Universidad de Concepcion in Chile): Liquefaction triggering in subduction zones.
- Patricia Cárcamo (Spring 2014, Visiting Researcher from Universidad Austral de Chile): Implications of the Elastic Halfspace assumption in Site Response Analysis

Research Awards won by students:

- Nancy Ingabire-Abayo, Winner of Undergraduate Student Paper Award, 2018 EERI Undergraduate Student Paper Competition
- Ishika Chowdhury, top 6 submissions to the national poster competition at GeoFrontiers 2017.
- Ishika Chowdhury, Best presentation award at 2019 5th Annual Symposium in Geotechnical Engineering at NCSU.
- Maria Ramos-Sepulveda, Travel grant to present her poster at GeoCongress 2020
- Ishika Chowdhury, CCEE Thomas G. Coffey Graduate Award, Spring 2020.
- Maria Ramos-Sepulveda, CCEE Thomas W. Griffin Graduate Award, Spring 2020.
- Chunyang Ji, Student Travel Grant, 2021 Seismological Society of America Annual meeting
- Chunyang Ji, CCEE Thomas Griffin Graduate Award for Spring 2021
- Nancy Ingabire Abayo, 2nd Place CCEE 3-Minute Thesis Competition
- Cristina Lorenzo Velazquez, Honorable Mention Ford Fellowship
- Cristina Lorenzo Velazquez, NSF Graduate Research Fellowship
- Nancy Ingabire Abayo, Honorable Mention at the AGU Outstanding Student Presentation Awards
- Nancy Ingabire Abayo, First place at the National GeoPoster Competition (2021 IFCEE)

INDUSTRY EXPERIENCE

Geotechnical Project Engineer, PREGO Geotechnical Engineering, Caracas, Venezuela (2008 – 2010)

- Design of deep foundations and earth retaining structures.
- Site exploration and subsurface characterization.

¹Research Internship Summer Experience