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EDUCATIONAL BACKGROUND

Ph.D. Civil Engineering, Purdue University, W. Lafayette, Indiana, 1996.
M.S. Civil Engineering, Auburn University, Auburn, Alabama, 1992.
B.S. Civil Engineering, College of Engineering, Trivandrum, India, 1989.

ACADEMIC EXPERIENCE

August 2020 to present	Dinesh and Ila Paliwal Dean, College of Engineering and Computing, Miami University, Oxford, OH
July 2018 to June 2020	Vice President for Research, Rowan University, Glassboro, NJ
September 2017 - June 2018	President's Fellow, Rowan University, Glassboro, NJ
July 2015 - August 2017	Professor and Department Head, Civil and Environmental Engineering, College of Engineering, Rowan University, Glassboro, NJ
2010 – June 2015	Professor and Chair, Civil and Environmental Engineering, College of Engineering, Rowan University, Glassboro, NJ
2001-2010	Associate Professor, Civil and Environmental Engineering, College of Engineering, Rowan University, Glassboro, NJ
2002-2003	Coordinator, Honors Program, Rowan University, Glassboro, NJ
1998-2001	Assistant Professor, Civil and Environmental Engineering, College of Engineering, Rowan University, Glassboro, NJ
1996	Visiting Professor, College of Engineering, Prairie View A&M University, Prairie View, TX
1992-1995	Instructor and Research Associate, Purdue University, W. Lafayette, IN
1990-1992	Instructor and Research Associate, Auburn University, Auburn, AL

INDUSTRIAL EXPERIENCE

1999	Consultant, Fugro McClelland and Shell Oil Company, Houston, TX
1997	Research Fellow, Norwegian Geotechnical Institute, Oslo, Norway

1996 Research Engineer, Amoco Corporation, Houston, TX
1994-1995 Consultant, Northern Indiana Public Service Company, IN

LEADERSHIP EXPERIENCE

2020-present **Chief Academic Officer** for the College of Engineering and Computing, Miami University. This includes managing the budget for the division, developing new programs, maintaining accreditation and rankings of current degree programs, coordinating recruitment and admission activities nationally and internationally, managing faculty and staff within the division, promoting externally funded research, making sure 2000+ undergraduate and graduate students receive a quality education, expanding corporate outreach, fund raising and maintaining alumni relations. In addition, special efforts are being made to diversify the student body and employees while ensuring equity and inclusion.

2018-2020 **Managing the Division of Research** including $60M in externally funded research, research compliance, office of proposal development, office of graduate research services and office of technology commercialization. We also climbed the Carnegie rankings and transitioned from a Carnegie R3 to a Carnegie R2. We also grew our research awards by close to 50% from FY 2018 to FY 2019.

Reorganized the division to improve efficiencies of operation.

Changed processes and workflow to speed up approvals.

2017-2018 **Instituted funding opportunities for Diversity and Inclusion** related efforts for students, staff and faculty through Research Experience for Diversity and Inclusion (REDI) and Program for Inclusive Pedagogy and Educational reform (PIPER)

Leading diversity and inclusion efforts for campus including implicit bias training, expanding access to a diverse student body and instituting best hiring and retention practices.

2010-2017 **Leading the Revolutionizing Engineering Diversity** (RevED) grant effort

Diversified the revenue stream for the department.

Managed a $1.6 M operating budget, which includes salaries.

Built an **upward trajectory in research and grant funding**. The department has the highest departmental research funding on-campus with research expenditures around 0.8-1.3 M for FY 11-17. This year the department has $10.7 M in active funding.

Assisted in **establishing the first research center** within the College of Engineering, CREATEs.

Increased the number of URM and underserved students applying and admitted to the CEE program at Rowan by expanded **outreach to local high schools**.

Radically changed admission standards for first year and transfer students to promote diversity in the student population.

Developed Advocate and Allies Program for high school, community college, first year, and transfer students for efficient transition, retention and graduation.

Enriched students' aspirations and strengthen engineering identity by providing successful and diverse role models from industry and academia.

The CEE department has been able to **attract high quality faculty** to the department and has hired one or two new faculty members every year for the last 3 years.

Promoted faculty for national awards successfully including Sharon Keilor award, Aviation Research Award (2012), and Louis J. Pignatoro Memorial Transportation Engineering Education Award.

Enhanced the perception and understanding of diversity and equality among students, faculty and administrators to develop a collective intentionality of inclusiveness.

The faculty tenure and recontracting guidelines have been revised to include diversity and inclusion as a criterion of evaluation.

Transformed existing engineering curriculum of second and third year from a narrow sub-discipline based approach to a more inclusive, system-based approach for next generation workforce development.

Alumni outreach was expanded.

During my tenure as department chair, I assisted with **ABET accreditation** efforts during the last accreditation visit in 2012 and continue to take a lead on the accreditation effort at present.

Mentored new department chairs.

Led and mentored junior faculty in leading large grant initiatives.

Led and completed the strategic plan for the College of Engineering in 2015.

2002-2003 Increased and grew the honors program on campus including soliciting external funding, which led to the Thomas Bantivoglio gift

ENTREPRENEURIAL AND FUNDRAISING EXPERIENCE

2020-present Active solicitation of alumni, corporations and non-profits to fund college initiatives, including student support, K12 outreach, faculty support, infrastructure improvements and research

2010-2020 Active solicitation of private firms, non-profits and governmental agencies to fund faculty research

2010-2017 Enhanced the Excellence in Civil Engineering Scholarship fund to include active participation of Industrial Advisory Board Members and Alumni

2008 Commenced activities for Engineering Innovators without Borders to provide technological solutions for the developing world through development of simple devices that will enhance the quality of life

2003 Initiated fund raising for Honors program, which resulted in the $1 million Bantivoglio grant

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers
Society of Women Engineers
American Society of Engineering Education
GeoInstitute, ASCE
US Universities Council on Geotechnical Education and Research

HONORS AND AWARDS

- 2026 Civil Engineering Alumni Achievement Award, Purdue University.
- Chair, Ohio Engineering Dean's Council, 2025-present.
- Secretary, Ohio Engineering Dean's Council, 2023-2025.
- Fellow, American Society of Engineering Education.
- 2020 WEPAN Inclusive Culture and Equity Award.
- Featured in NJ.com - 8 N.J. women whose fearless stories you should know for International Women's Day, 3/8/2020.
- Co-Chair, New Jersey State Taskforce on Research, Innovation and Talent, 2019.
- New Jersey Department of Transportation Research Implementation Award, October 26, 2016.
- Distinguished Engineering Award 2013, New Jersey Alliance for Action for "Field assessment of Geotechnical Engineering Damage along the New Jersey Coast due to Hurricane Sandy".
- NSF travel grant to attend the Microgeomechanics workshop, Cambridge, England, 2005.
- AAAS-WISC travel award to establish a collaborative research partnership with University of Western Australia, Perth, Australia 2002-2003.
- NSF travel grant to attend the World Congress on Particle Technology, Sydney, Australia, 2002.
- New Jersey ASCE Educator of the Year Award, 2010.
- Best Paper Award, International Division, ASEE, 2010.

- Recipient of the Best faculty in Civil Engineering Award, Prairie View A&M University, 1996.
- Marquis Who's Who of American Women.
- Norwegian Research Council Fellow, 1997.
- Phi Kappa Phi Honor Society, Inducted in 1995.
- Phi Beta Delta Honor Society, Inducted in 1992.
- Academic Excellence Award, Auburn University, 1992.

REGIONAL & NATIONAL BOARDS

- Organizer, American Society of Engineering Education Public Policy Colloquium, 2025-present.
- Chair, Ohio Engineering Dean's Council, 2025-present.
- Secretary, Ohio Engineering Dean's Council, 2022-2025.
- Member, Ohio Engineering Dean's Council, 2020-present.
- Member, New Jersey Technology Council, 2018-2020.
- Philadelphia Science Center Advisory Board, 2018-2020.
- Member, Research and Development Council of New Jersey, 2018-2020.
- Member, Research with NJ, 2018-2020.
- Co-organizer, Annual Collaborative Network for Engineering and Computing Diversity (ConECD) Conference, 2018-2020.
- Reviewer, Middle States Council of Higher Education Accreditation, 2017-present.
- Member, Sharon Keilor Award Committee for ASEE, 2015-2017.
- Division Chair, Women in Engineering Division, ASEE, 2016-2018.
- Program Chair, Women in Engineering Division, ASEE, 2014-2016.
- Editorial Board, International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship (IJSLE), 2012-2018.
- Program Chair Elect, Women in Engineering Division, ASEE, 2012-2014.
- Director at Large, Women in Engineering Division, ASEE, 2009-2012.
- Member of the Education Committee, USUCGER, 2001-present.
- Chair, Education Committee, USUCGER, 2003-2006.
- Member of the Soil Properties and Modeling Committee, Geoinstitute, 2004-present.
- Honorary member of the Golden Key International Honor society, Inducted in 2003.

RESEARCH AND EDUCATIONAL INTERESTS

Flood mitigation
Shore Protection
Micro-geomechanics
Particulate Mechanics
Earthquake engineering with particular emphasis on liquefaction
Expert systems design and fuzzy set analysis
Geotechnical analysis (slope stability, earth pressure, consolidation settlement, seepage)
Environmental geo-technology
Finite element method
Offshore Foundations
Reuse of waste material for engineering construction
Encouraging Women into Science and Engineering

Recruitment and retention of minority students
Innovative laboratory experiments for undergraduate instruction

PEER REVIEWED PUBLICATIONS.

JOURNAL PUBLICATIONS

*Indicates undergraduate student author

26 Nikolaou, S., Hashash, Y. M., Sukumaran, B., Sacks, A., Burlingame, M. J., Baxter, C., Bradshaw, A., Wooten, L., Lacy, H., Moss, C., Daraio, J. A., O'Rourke, T. D. (2020). Geotechnical Effects and a 6-Year Outlook of the 2012 Hurricane Sandy in the Eastern United States, Vol. 5, Issue 4, p.106-128. http://dx.doi.org/10.4417/IJGCH-05-04-06

25 Su, Y., Lee, S. & Sukumaran, B., "Influence of particle morphology simplification on the simulation of granular material behavior," Granular Matter (2020) 22: 19. https://doi.org/10.1007/s10035-019-0987-2

24 Hartman, H., Forin, T., Sukumaran, B., Farrell, S., Bhavsar, P., Jahan, K., Dusseau, R., Bruckerhoff, T., Cole, P., Lezotte, S., Zeppilli, D., and Macey, D. (2019), "Strategies for Improving Diversity and Inclusion in an Engineering Department," Journal of Professional Issues in Engineering Education and Practice, 04/2019, Volume 145, Issue 2.

23 Hashash, Y., Nikolaou, S., Sacks, A., and Sukumaran, B. (2014), "Sustainability and Resiliency Implications of Hurricane Sandy," *Geostrata*, January/February 2014, Vol. 18, No. 1, pp. 22-26, January/February 2014.

22 Bryson, S., Acheampong, K., Bandini, P., Bhatia, S., Dewoolkar, M., Iskander, M., Reddy, K., Streich, V., Sukumaran, B., and Culligan, P. (2013), "Diversity in Geo-Engineering," *Geostrata*, Vol. 17, No. 6, November/December 2013, pp. 38-41, November/December 2013.

21 Daouadji, A., Jrad, M., Sukumaran, B., and Hicher, P.Y. (2012), "Experimental and numerical investigation of diffuse instability in granular materials using a micro-structural model," *Géotechnique, DOI:* 10.1680/geot.10.P.121.

20 Jrad, M., Sukumaran, B. and Daouadji, A. (2012), "Experimental analyses of the behaviour of saturated granular materials during axisymmetric proportional strain paths," *European Journal of Environmental and Civil Engineering*, DOI:10.1080/19648189.2012.666900.

19 Bloom, M., Russell, M., Kustau, A., Mandayam, S., and **Sukumaran, B.** (2010), "Measurement of Porosity in Granular Particle Distributions using Adaptive Thresholding," *IEEE Transactions on Instrumentation and Measuremen*t, Vol. 59, No. 4, pp. 74-79.

18 Bloom, M., Corriveau, J., Giordano, P., Lecakes, G., Mandayam, S., and **Sukumaran, B.** (2010), "Imaging Systems and Algorithms for the Numerical Characterization of 3D Shapes of Granular Particles," *IEEE Transactions on Instrumentation and Measurement*, vol. 59, No. 9, pp. 2365-2375.

17 McGarvey, K., Panko, M.*, Hill, J.*, Biggs, M.*, Bacher, N.*, and **Sukumaran, B.** (2009), "Design of appropriate technologies for the developing world," *International Journal of Service Learning in Engineering,* Vol. 4, No. 1, pp.48-61.

16 **Sukumaran, B.,** Mehta, Y., Bryant, T., D'Intino, R., Marchese, A., Everett, J., and Gephardt, Z. (2007), "Generating entrepreneurship opportunities for the developing world through the engineering curriculum," *World Transaction in Engineering and Technology Education,* Vol. 6, No. 1, pp. 37-40.

15 Mehta, Y., and **Sukumaran, B.** (2007), "Integrating Service Learning in Engineering Clinics," *International Journal for Service learning in Engineering*, Vol. 2, No. 1, pp. 32-43, Spring 2007.

14 **Sukumaran, B.,** Ashmawy, A.K., and Mehta, Y. (2006), "A device for measuring shape and angularity of fine grained materials," *International Journal of pavements,* 5(1-2-3), 130-142.

13 Everett, J., M. Cinaglia, D. Cleary, K. Jahan, J. Orlins, **Sukumaran, B.,** Y. Mehta (2006) "Garden City: A Distributed Sharing Community", *World Transactions on Engineering and Technology Education*, 5(3):497-500.

12 Everett, J., Head, L., **Sukumaran, B.,** J. Orlins and K. Jahan (2006) "Field Experiences in Engineering Courses", *World Transactions on Engineering and Technology Education*, 4(2):269-272.

11 **Sukumaran, B.,** Jahan, K., Dorland, D., Everett, J., Kadlowec, J., Gephardt, Z., and Chin, S. (2006), "Engineering Clinics: An integration of research into the undergraduate engineering curriculum, *CUR quarterly*, Vol. 26, No. 3, pp. 115-121.

10 **Sukumaran B.** (2005), "Multipronged approach needed to recruit female students," *Engineers Australia,* Vol. 77, No. 9, pp.30-31.

9 Culligan, P., Mullen, G., **Sukumaran, B.,** Sutterer, K., and Welker, A. (2005), "Geotechnical Engineering Education – Present and the Future," *Geostrata*, November/December 2005.

8 Jahan, K., Chen, J., Mandayam, S., Krchnavek, R., Sukumaran, B., Mehta, Y., Kadlowec, J., von Lockette, P., and Polikar, R. (2004) Digital Imaging Experiences for Undergraduate Engineering Students, *World Transactions on Engineering and Technology Education,* Vol. 3, No.2, 227-230.

7 **Sukumaran, B.,** and Ashmawy, A.K. (2003), "Influence of inherent particle characteristics on hopper flow rate," *Powder Technology*, Vol 138, pp 46-50.

6 **Sukumaran, B.,** and Ashmawy, A. (2001), "Quantitative Characterization of Discrete

Particles," *Geotechnique,* Vol. 51, No. 7, pp. 619-627.

5 **Sukumaran, B.,** McCarron, W.O., Jeanjean, P., and Abouseeda, H. (1999), "Efficient Finite Element Techniques for Limit Analysis of Suction Caissons under Lateral Loads," *Computers and Geotechnics*, Vol. 24, No. 2, pp. 89-108.

4 Newell, J.A., Marchese, A.J., Ramachandran, R.P., **Sukumaran, B.,** and Harvey, R. (1999), "Multidisciplinary Design and Communication: A Pedagogical Vision," *International Journal of Engineering Education* **15** (5), 376-382, (1999).

3 Ashmawy, A.K., and **Sukumaran, B.** (1996), Discussion on "Probabilistic Analysis of Randomly Distributed Fiber-Reinforced Soil," (Ranjan, Gopal, Vasan, R.M., and Charan, H.D., ASCE Journal of the Geotechnical Engineering Division, Vol. 122, No.6, pp. 419-426), *ASCE Journal of Geotechnical Engineering*.

2 **Sukumaran, B.,** Leonards, G.A., and Fox, P.J. (1995), Discussion on "Liquefaction and Postliquefaction Behavior of Sand," (Vaid, Y.P., and Thomas, J., *ASCE Journal of the Geotechnical Engineering Division*, Vol. 121, No.2, pp. 163-173), *ASCE Journal of the Geotechnical Engineering Division*, Vol. 122, No. 6.

1 Elton, D.J., Juang, H.C., and **Sukumaran, B.** (1995), "Liquefaction Susceptibility Mapping Using Fuzzy Sets," *Soils and Foundations,* Vol. 35, No. 2, pp. 49-60.

BOOK CHAPTER

1 **Sukumaran, B.**, Jahan, K., Dorland, D., Everett, J., Kadlowec, J., Gephardt, Z., and Chin, S. (2006), "Engineering Clinics: An integration of research into the undergraduate engineering curriculum, Published in Developing and Sustaining a Research-Supportive Curriculum: A Compendium of Successful Practices, Edited by Kerry K. Karukstis, Professor of Chemistry, Harvey Mudd College and Timothy E. Elgren, Professor of Chemistry, Hamilton College.

PEER REVIEWED TECHNICAL CONFERENCE PUBLICATIONS

46 S. Thomas, C. Hurt, D. Zeppilli, N. Das, A. Daouadji, B. Sukumaran (2016), "Using a DEM Framework to study the Influence of Particle Morphology on Shear Strength," GeoChina Conference.

45 Cary, C.E., Bagriacik, A., Blake, K., Brevogel, S., Zeppilli, D., Sukumaran, B., & Daouadji, A. (2016), "Use of the SGC to Determine Compaction Characteristics of Unbound Materials," GeoChina Conference.

44 "Use of Laser Induced Breakdown Spectroscopy to Determine the Mineralogy of Aggregates," Geostructures Congress, Phoenix, AZ, February 14-17, 2016.

43 Alestalo, S., Bhatia, S., and **Sukumaran, B.** (2015) Support of Women Geotechnical Engineering Faculty: History and Initiatives. IFCEE 2015: pp. 2189-2202. doi: 10.1061/9780784479087.203

42 Cary, C.E., Kumpel, C., Bagriacik, A.*, Cohen, R.*, Clark, J.*, Lecorvaisier, M., Daouadji, A., & **Sukumaran, B.** (2014), "Suitability of the Superpave Gyratory Compactor for the Assessment of Compaction Characteristics of Unbound Materials," Accepted for publication in the Proceedings of Geomechanics from Micro to Macro, Cambridge, UK.

41 Thomas, S., Hurt, C., Cary, C.E., Barrot, D., Giordano, P., Corriveau, J., Das, N., Mandayam, S., & **Sukumaran, B.** (2014), "Characterizing and Incorporating Particle Morphology in Discrete Element Modeling," Accepted for publication in the Proceedings of Geomechanics from Micro to Macro, Cambridge, UK.

40 Cary, C.E., Kumpel, C., Bagriacik, A., Cohen, R., Clark, J., Lecorvaisier, M., Daouadji, A., & **Sukumaran, B.** (2014), "Compaction Characteristics of Subbase Material using the Superpave Gyratory Compactor," FAA Tech Transfer Conference 2014, Galloway, NJ, August 4, 2014.

39 Kumpel, C., Cary, C.E., Bagriacik. A.*, Cohen, R.*, Rossi, S.*, Yurick, C.*, Ma, Wing, H.*, Clark, J.*, Daouadji, A., and **Sukumaran**, B. (2014), "Superpave Gyratory Compactor as a Compaction Predictor Tool for Unbound Material," Proceedings of 12th ISAP Asphalt Pavement Design Conference, Raleigh, NC, June 1-5, 2014.

38 Hashash, Y., Nikolaou, S., **Sukumaran, B.**, Sacks, A., Burlingame, M., Baxter, C., Bradshaw, A., Wooten, L., Lacy, H., Moss, C., Daraio, J., O'Rourke, T. D. (2014), "Selected Effects of the 2012 Hurricane Sandy along the U.S. East Coast: A Geotechnical Perspective," Proceedings of the Geo-Congress 2014 Keynote Lectures: Geo-Characterization and Modeling for Sustainability, pp. 28-52, (doi: http://dx.doi.org/10.1061/9780784413289.002).

37 Kumpel, C., Panko, M., McGarvey, K., Hurt, C., Melici, A.*, Rossi, S.*, Yurick,C.*, Daouadji, A., and **Sukumaran, B.** (2012), "Compaction characteristics of the subbase material using the Superpave Gyratory Compactor," Proceedings of the TSO Workshop, 2012.

36 Daouadji, A., Jrad, M., **Sukumaran, B.**, and Darve, F. (2011), "Experimental analysis of diffuse failure in loose sands under different loading paths," ALERT Workshop, Aussois, France.

35 Thomas, S., Hurt, C., Das, N., Ashmawy, A.K., Daouadji, A., and **Sukumaran, B.** (2011), "Discrete Element Modelling methodology incorporating various aspects of particle morphology," Invited presentation at the Particle Based Methods, 2011.

34 Das, N., Thomas, S., Kopmann*, J., Donovan, C., Hurt, C., Daouadji, A., Ashmawy, A.K., and **Sukumaran, B.** (2011), "Using Surface Texture Measurements and Other Characteristics of Particle Morphology in Discrete Element Modeling, ASCE Engineering Mechanics Conference, Boston, MA, 2011.

33 Das, N., Thomas, S., Kopmann*, J., Donovan*, C., Hurt, C., Daouadji, A., Ashmawy, A.K., and **Sukumaran, B.** (2011), "Modeling granular particle shape using Discrete Elements," GeoFrontiers Conference, Dallas, TX, 2011.

32 Panko, M., McGarvey, K., Stevenson, G.*, Coffey, S.*, and **Sukumaran, B.** (2011), "Compaction of Granular Soils Using Superpave Gyratory Compactor at Higher Confining Pressures," Proceedings of the TRB annual conference, 2011.

31 McGarvey, K., Panko, M., Hurt, C., Mehta, Y., and **Sukumaran, B.** (2010), "Use of the Superpave Gyratory Compactor as a Predictor of Field Performance of Unbound Material," FAA Technology Transfer Conference, Atlantic City, April 2010.

30 **Sukumaran, B.,** McGarvey, Kevin, Hurt, C.*, Lambert, N., and Mehta, Y. (2010), "Evaluation of the Compaction Characteristics of Unbound Material using the Superpave Gyratory Compactor during Construction and Trafficking," Proceedings of the TRB annual conference, 2010.

29 Bloom, M., Kustau, A.*, Muriel, K.*, Rohmeyer, D.*, Mandayam, S., and **Sukumaran, B.** (2010), "An X-ray Computed Tomography Study of the Influence of Inherent Particle Characteristics on the Packing Density of Granular Materials," 2010 GeoFlorida Conference, FL, 2010.

28 Bloom, M., Russell, M., Kustau, A.*, Muriel, K.*, Mandayam, S., and **Sukumaran, B.** (2009), "Measurement of granular material packing," 2009 Powders and Grains Conference, Golden, CO, July 2009.

27 Bloom, M., Russell, M., Kustau, A.*, Mandayam, S., and **Sukumaran**, B. (2009), "An X-ray Computed Tomography Technique for Measurement of Packing Density in Granular Particles," 2009 IEEE International Instrumentation and Measurement Technology Conference, Singapore, May 2009.

26 Johnson, D., and **Sukumaran, B.** (2009), "Correlation of Field Performance Parameters of Unbound Material with the Superpave Gyratory Compaction Test Data," ASCE Geotechnical Special Publication on Challenges and Recent Advances in Pavement Technologies and Transportation Geotechnics, GeoHunan, August 3-6, 2009.

25 Lambert, N., Denny, K.*, **Sukumaran, B**., and Mehta, Y. (2009), "Investigation of the performance of flexible airport pavements under moving aircraft wheel loads with wander using finite element analysis," ASCE Geotechnical Special Publication on Challenges and Recent Advances in Pavement Technologies and Transportation Geotechnics, GeoHunan, August 3-6, 2009.

24 Das, N., **Sukumaran, B.**, and Ashmawy, A.K. (2008), "Modeling granular particle shape using discrete element method," Proceedings of the 1st International *FLAC/DEM* Symposium, Minneapolis, MN, August 2008.

23 Das, N., Patrick Giordano, Daniel Barrot, Shreekanth Mandayam, Ashmawy, A.K., and **Sukumaran, B.** (2008), "Discrete Element Modeling and Shape Characterization of Realistic Granular Shapes," ISOPE Annual Conference, Vancouver, BC, July 2008.

22 Johnson, D., **Sukumaran, B.,** Mehta, Y., and Willis M. (2007), "Three dimensional finite element analysis of flexible pavements to assess the effects of wander and wheel configuration," FAA Technology Transfer Conference, Atlantic City.

21 Einav, I., Dyskin, A., **Sukumaran, B.** (2006), "Intermediate scales in granular matter," IS Yamaguchi, September, 2006.

20 Barrot D., Corriveau J., Giordano P., Mandayam S., and **Sukumaran B.** (2006), "Three-dimensional shape characterization and tomographic reconstruction for granular materials," IS Yamaguchi, September, 2006.

19 **Sukumaran, B.,** Einav, I., Dyskin, A. (2006), "Qualitative Assessment of the Influence of Coordination Number on Crushing Strength using DEM," World Congress on Particle Technology, Orlando, FL, April 23-27.

18 Barrot D., Corriveau J., Giordano P., Mandayam S., and **Sukumaran B.** (2006), "Three-dimensional shape descriptors and tomographic reconstruction for granular materials," World Congress on Particle Technology, Orlando, FL, April 23-27.

17 Willis M., Johnson D., and **Sukumaran B.** (2006), "Three -dimensional finite element analyses of flexible airport pavements for the next generation of aircrafts," ASCE Airfields and Highway Pavements, Atlanta, April 2006.

16 Giordano P., Barrot D., Corriveau J., Mandayam S., and **Sukumaran B.** (2006), "Imaging Systems and Algorithms for the Numerical Characterization of 3D Shapes of Particle Aggregates," 2006 IEEE International Workshop on Imaging Systems and Techniques, Minori, Italy, April 9, 2006.

15 Barrot D., Giordano P., Mandayam S., and **Sukumaran B.** (2006), "Synthesis of Sand Particles from 3D Shape Descriptors using Tomographic Reconstruction Techniques," Geocongress, Atlanta, February 2006.

14 Giordano P., Barrot D., Mease P., Garrison K., Mandayam S. and **Sukumaran B.** (2006), "An Optical Tomography System for Characterizing 3D Shapes of Particle Aggregates," 2006 IEEE Sensors Applications Symposium, Houston, Texas, February 7-9, 2006.

13 **Sukumaran, B.,** Willis, M., and Chamala, N. (2005), "Three dimensional finite element modeling of flexible pavements, ASCE Geofrontiers conference, Austin, TX.

12 Corriveau J., Mandayam S., and **Sukumaran B.** (2005), "3-D Shape descriptors for geomaterial aggregates using multiple projective representations," ASCE Geofrontiers conference, Austin, TX.

11 Mehta, Y. A., Stevenson, J.* and **Sukumaran, B**., "Evaluation of Viscoelastic Limits of Asphalt Concrete Using Creep Test," *3rd Eurobitume-Eurasphalt Congress*, Vienna, Austria, 2004.

10 **Sukumaran, B.,** Willis, M., and Chamala, N. (2004), "Three-dimensional finite element analysis of flexible pavements," Airport Technology Conference, Atlantic City.

9 Ashmawy, A.K., **Sukumaran B.,** Hoang V. (2003), "Evaluating the Influence of Particle Shape on Liquefaction Behavior Using Discrete Element Modeling," Annual International Society of Offshore and Polar Engineering Conference, Kyushu, Japan.

8 **Sukumaran, B.,** and McCarron, W.O. (2002), "Drained and Undrained Behavior of Suction Caissons for Taut Leg Mooring Systems," Annual International Society of Offshore and Polar Engineering Conference, Kyushu, Japan.

7 **Sukumaran, B.,** and Ashmawy, A.K. (2002), "Influence of inherent particle characteristics on hopper flow rate," World Congress on Particle Technology, Sydney.

6 **Sukumaran, B.,** Vishal Kyatham, Amip Shah*, and Disha Sheth* (2002), "Suitability of using California Bearing Ratio test to Predict Resilient Modulus," Airport Technology Conference, Atlantic City.

5 **Sukumaran, B.,** and Ashmawy, A.K. (2001), "Influence of Inherent Particle Characteristics on the Strength Properties of Particulate Materials," Annual International Society of Offshore and Polar Engineering Conference, Oslo, Norway.

4 McCarron, W.O., and **Sukumaran, B.** (2000), "Ultimate Capacities of Suction Caisson and pile elements for deepwater applications," Proceedings of the International Society of Offshore and Polar Engineering Conference.

3 **Sukumaran, B.,** and Odud, Claire* (2000), "Current State of the Practice of Construction on Closed Landfill Sites," Published and presented at the Sixteenth International Conference on Solid Waste Technology and Management, Philadelphia, PA.

2 **Sukumaran, B.,** and McCarron, W.O. (1999), "Total and Effective Stress Analysis of Suction Caissons for Gulf of Mexico Conditions," Proceedings of the Offshore Technology Conference.

1 **Sukumaran, B.** (1998),"Suction Caisson Foundations - A Better Option for Deep Water Applications," Proceedings of the SWE Annual Conference, Houston, TX.

PEER REVIEWED EDUCATIONAL PUBLICATIONS

59 Lord, S., Sukumaran, B., Ingram, E., Maciejewski, A., Sweeney, J., Martin, T., LeDoux, J., London, J., and Salzman, N. (2018), "Work in progress: Progress of the NSF RED revolution," ASEE Annual Conference, Salt Lake, UT, https://peer.asee.org/31299.

58 Sukumaran, Beena; Callahan, Janet; Llewellyn, Donna C; Holloway, Beth M; Schulz, Noel N; Rajala, Sarah A; Reese, Donna (2018), "Panel discussion on the History of the Women in Engineering Division: Reflections from Past Chairs of the Division," ASEE Annual Conference, Salt Lake, UT, https://peer.asee.org/30855.

57 Forin, T., Sukumaran, B., Farrell, S., Jahan, K., Bruckerhoff, T., Lezotte S. (2018), "Revolutionizing Engineering Diversity," ASEE Annual Conference, Salt Lake, UT, https://peer.asee.org/30035.

56 Ingram, E., Sukumaran, B., Forin, T., and Litzler, E. (2017), "Increasing your projects success through coordinated communication: Research and Practice," Frontiers in Engineering Conference, Indianapolis, IN.

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12 Everett, J., Dusseau, R., Cleary, D., Jahan, K., Orlins, J., **Sukumaran, B.,** and Carlos Sun (2001), "A Civil Engineering Program Developed in the "Age" of ABET 2000," Annual ASEE Conference, June 2001, Albuquerque, New Mexico.

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10 **Sukumaran, B.,** "Innovative Experiments that Enhance Civil Engineering Concepts (2001)," ASEE Regional Conference, Rowan University, April 2001, Glassboro, NJ.

9 Jess Everett, Kauser Jahan, Linda Head, **Sukumaran, B.,** Joseph Orlins (2001), "Providing Multidisciplinary Field Experiences in an Engineering Curriculum," AWMA Annual Conference.

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5 Jahan, K., **Sukumaran, B.,** Head, L., Keil, Z.O., Ferraris, J.*, Perlis, S.*, Callahan, L.*, and Jacques, M.* (1999), "Mentoring Experiences by Faculty and Students", Proceedings of the Middle Atlantic Section Fall 1999 Regional Conference, Harrisburg, PA.

4 Jahan, K., **Sukumaran, B.,** Head, L., and Keil, Z.O. (1999), "AWE: Attracting Women into Engineering," Proceedings of the Middle Atlantic Section Fall 1999 Regional Conference, Harrisburg, PA.

3 **Sukumaran, B.** (1998),"Geo-Environmental Engineering - An Integral Part of Civil Engineering," Proceedings of the ASEE Annual Conference, Seattle, WA.

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NON-PEER REVIEWED PUBLICATIONS AND RESEARCH REPORTS

14 Hashash, Y. M. A., S. Nikolaou, B. Sukumaran, A. Sacks, M. Burlingame, C. Baxter, A. Bradshaw, L. Wooten, H. Lacy, C. Moss, J. Daraio and T. D. O'Rourke (2013). Field Reconnaissance of Geotechnical Aspects of October 2012 Hurricane Sandy along the US East Coast. GEER-032.

13 Sukumaran, B., Kumpel, C., Rossi, S., Yurick, C., and Ma, Wing Ho (2013), "Compaction characteristics of the subbase material using the Superpave Gyratory Compactor," FAA half-yearly report.

12 McGarvey, K., Panko, M., and Sukumaran, B., (2010), "Compaction characteristics of the subbase material using the Superpave Gyratory Compactor," FAA half yearly report.

11 Mease, P., Giordano, P., Mandayam, S., and Sukumaran, B. (2008), "Comparison of X-Ray and Optical Computed Tomography Methods for the Synthesis of Particle Aggregate Models," SkyScan User Meeting, 2008.

10 Sukumaran, B., and Mandayam, S. (2008), Three Dimensional Shape Characterization and modeling of angular sands," Final report to NSF.

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8 Willis, M., and Sukumaran, B. (2005), Three-dimensional finite element modeling as a tool for flexible pavement design and evaluation, Final Report to the FAA.

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6 Sukumaran, B., Kyatham, V., and Willis, M. (2003), Predictive equation for determination of resilient modulus, Report to the FAA.

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2 Sukumaran, B. (1997),"Three dimensional analyses of dams," NGI report.

1 Sukumaran, B. (1996), "Analysis of suction caissons for deep water platforms in the Gulf of Mexico," Report submitted to Amoco Worldwide Engineering & Construction.

SUPERVISED STUDENT AWARDS

8 Greggory Stevenson*, Andrew Melici*, and Alejandro Zapata*, Rowan University "Compaction of Granular Soils Using Superpave Gyratory Compactor at Higher Confining Pressures"

7 Stephen Thomas*, David Rohmeyer* and Colin Donovan* (2010), An X-ray Computed Tomography Study: The Influence of Inherent Particle Characteristics on the Packing Density of Granular Materials," Best Undergraduate Paper Award, Delaware Valley Engineer's Council, 2010.

6 Kevin McGarvey, Michael Panko*, Michael Biggs*, Jesse Hill*, Nicole Bacher* (2009), IEEE President's Change the World Competitions, Exceptional Student Humanitarian Award, 2009.

5 Kyle Denny*, Cameron Corini*, Salvatore Randazzo* (2009), "Evaluation of the Compaction Characteristics of Unbound Material using the Superpave Gyratory Compactor," Best Undergraduate Paper Award, Delaware Valley Engineer's Council, 2009.

4 James Zamorski*, Daniel Macinnes*, Nicholas Lambert* (2007), "Sand Crushing," Best Undergraduate Paper Award, Delaware Valley Engineer's Council, 2007.

3 Amip Shah*, and Disha Sheth* (2002), "Suitability of using California Bearing Ratio test to Predict Resilient Modulus," Best Undergraduate Paper Award, Delaware Valley Engineer's Council, 2002.

2 Claire Odud* (2001), "State of the practice of construction on closed landfills," Best Undergraduate Paper Award, Delaware Valley Engineer's Council, 2001.

1 Bradley Summerville* (1999), "Influence of inherent particle characteristics on the flow behavior and strength properties of granular material," Best Undergraduate Paper Award, Delaware Valley Engineer's Council, 1999.

POSTERS & PRESENTATIONS

14 Beth Ann Larson and Andrew Short (2014), Laser-Induced Breakdown Spectroscopy Analysis of Aggregates for the New Jersey Department of Transportation, Delaware Valley GeoInstitute Student Night, February 18, 2014.

13 Adam Bagriacik and Robert Cohen (2014), Suitability of the Superpave Gyratory Compactor for the Assessment of Compaction Characteristics of Unbound Materials, Delaware Valley GeoInstitute Student Night, February 18, 2014.

12 Nicole Giannelli, Samantha Kamper, Derek Yoder, Matthew Rossett (2013), Effect of Hurricane Sandy on the New Jersey Coastline, Delaware Valley GeoInstitute Student Night, February 19, 2013.

11 Wing Ho Ma, Colin Yurick and Stephen Rossi (2013), Flexible airport pavement subbase analysis, Delaware Valley GeoInstitute Student Night, February 19, 2013.

10 Stephen Thomas, Casey Hurt, Nicholas Monsu (2012), "Incorporating aspects of particle morphology in Discrete Element Modeling," Delaware Valley GeoInstitute Student Night, February 22, 2012.

9 Craig Kumpel, Andrew Melici, Colin Yurick and Stephen Rossi (2012), Flexible airport pavement subbase analysis, Delaware Valley GeoInstitute Student Night, February 22, 2012.

8 Stephen Thomas, Colin Donovan, David Rohmeyer, Michael Bloom, Beena Sukumaran and Shreekanth Mandayam (2010), "An X-ray Computed Tomography Study: The Influence of Inherent Particle Characteristics on the Packing Density of Granular Materials," Annual STEM Poster Symposium, Rowan University.

7 Mark Zielinski, Christopher Marra, Evan Forosisky, Steve Schwandt, Michael Panko, Dr. Beena Sukumaran (2010), "Engineering Innovators without Borders," Annual STEM Poster Symposium, Rowan University.

6 Panko, M., Hurt, C., Corini, C., and Stevenson, G. (2010), "Evaluation of the Compaction characteristics of unbound Material during construction and trafficking," Annual STEM Poster Symposium, Rowan University.

5 Hurt, C., and Corini, C (2010), "Compaction characteristics of the subbase material using the Superpave Gyratory Compactor," Delaware Valley GeoInstitute Student Night, February 15, 2010.

4 M. Bloom, A. Kustau*, K. Muriel*, Rohmeyer, D.*, S. Mandayam, and **B. Sukumaran** (2009), "An X-Ray Computed Tomography Technique for the Measurement of Packing Density in Granular Particles," Annual STEM Poster Symposium, Rowan University.

3 Denny, K.*, Corini, C.*, and Randazzo, S.*, Mehta, Y., and **Sukumaran, B.** (2009), "Evaluation of the Compaction Characteristics of Unbound Material using the Superpave Gyratory Compactor," Annual STEM Poster Symposium, Rowan University, April 2009.

2 Willis, M., and Chamala, N. (2004), "Three-Dimensional Finite Element Modeling of Flexible Pavements," Delaware Valley GeoInstitute Student Night, February 11, 2004.

1 McGarvey, K., Panko, M.*, Hill, J.*, Biggs, M.*, Bacher, N.*, and **Sukumaran, B**., "Design of appropriate technologies for the developing world," Annual STEM Poster Symposium, Rowan University, April 2009.

FUNDED RESEARCH AND INSTRUMENTATION GRANTS

Grants in bold funded as PI

Total funded amount both as PI and co-PI: $13,721,973

37 **Establishing Ohio as the global epicenter of quantum computing and bridging innovation. PI, Ohio Department of Higher Education, $7,000,000, 2025-2030.**

36 Impact-Based Decision Making Framework for community-based resiliency planning under extreme storm events. Co-PI, NJ Department of Community Affairs, $800,000, 2016-2018.

35 **IUSE/PFE:RED: Rethinking Engineering Diversity, Transforming Engineering Diversity (REDTED), $1,922,980, 2016-2021.**

34 MRI: Acquisition of a High Performance Computer to Integrate Data Intensive Research and Education: Bringing HPC to South Jersey," NSF, $397,024, 2014-2017.

33 **Performance of unbound layers of a flexible pavement system during aircraft loading, FAA, $70,571, PI, 2013-2015.**

32 **Laser Scanning Aggregates for Real Time Property Identification, UTRC-NJDOT, $255,067, 2013-2016.**

31 **Low Cost Portable Percussion Well Drill and Bailer, EPA-P3, $14,613, 2013-2014.**

30 **Aluminum Mat Subgrade Void detection, NAVAIR, $4,500, 2012.**

29 **Performance of unbound layers of a flexible pavement system during aircraft loading, FAA, $64,545, PI, 2011-2013.**

28 **U.S.-France Planning Visit: Study of Granular Material Crushing through Imaging and Discrete Element Modeling Simulation, NSF, $15,471, PI, 2010-2011.**

27 **NSF-MRI-R2: Acquisition of an X-ray Computed Tomography system with loading capabilities, $296,500, 2009-2012.**

26 **Sukumaran, B., and Jahan, K., "Travel Grant to the American University of Dubai," Rowan University, $2,000, 2009.**

25 **Sukumaran, B., and Mehta, Y., "Modeling of flexible pavement under moving loads," FAA, $134,578, 2009-2010.**

24 **Sukumaran, B., "Appropriate technologies for the developing world," Rowan University, $12,000, 2008-2009.**

23 **Sukumaran, B., "Modeling of flexible pavements under moving loads, FAA, $36,551, Continuation funding," 2007-2009.**

22 Mandayam, S., and **Sukumaran, B.,** "MRI: Acquisition of an Immersive Virtual Reality System for the South Jersey Technology Park at Rowan University," NSF, $392,000, 2008-2010.

21 Jahan, K., Mehta, Y., Sukumaran, B., Bhatia, K., UDOT Southern New Jersey GAMTTEP, Garrett A. Morgan Technology and Transportation Education Program, $100,000, Subcontract to Rowan University by the Millville School District, USDOT, August 2007- December 2008.

20 **Sukumaran, B., "Modeling of flexible pavements under moving loads," FAA, $54,100, Continuation funding, 2007-2008.**

19 **Sukumaran, B., "Investigation of the performance of flexible pavement systems under moving loads using finite element analyses," FAA, $57,609, 2005-2007.**

18 Frost, J.D., and Sukumaran, B., "Microgeomechanics across multiple strain scales," NSF, $76,156, 2004-2006.

17 Mandayam, S., and Sukumaran, B., "Acquisition of a Desktop, High-Resolution, Three-Dimensional X-Ray Computed Tomography (CT) System," NSF, $238,698, 2004-2007.

16 **Sukumaran, B., "Modeling of flexible pavements under moving loads," FAA, $55,306, 2003-2005.**

15 **Sukumaran, B., and Mandayam, S., "Micromechanical modeling and discrete element modeling of angular materials, National Science Foundation," $154,000, 2003-2007.**

14 Jahan, K., Chen, J., Mandayam, S., Krchnavek, R., **Sukumaran, B.,** Mehta, Y., Kadlowec, J., von Lockette, P., and Polikar, R., Imaging across the curriculum, National Science Foundation, Co-Principal Investigator, $74,998, 2003-2005.

13 **Sukumaran, B., Analyses of suction caissons, Travel grant to establish collaborative proposal with University of Western Australia, $4300, 2003.**

12 **Sukumaran, B., National Science Foundation travel grant to attend the World Congress on Particle Technology, $1,000, 2002.**

11 Tahamont, M., Lindman, J., Faison, C., **Sukumaran, B.,** and Leftwich, S. Bildner New Jersey Campus Diversity Initiative, $195,830, 2002-2006.

10 Mehta, Y., and Sukumaran, B., "Investigation of new devices for use in determining mechanistic properties and performance," Wisconsin DOT, 2002-2005, $34,681.

9 **Sukumaran, B., "Finite Element Analyses of Subgrade and Flexible Pavements, FAA, $43,424, 2001-2003.**

8 Kadlowec, J., Sukumaran, B., Cleary, D., "Visual Beams for Enhanced Learning in Statics and Solid Mechanics," Co-Principal Investigator, NSF-CCLI-EMD, $40,133, 2000-2003.

7 "Boundaries and Borderlands III: The Search for recognition and community in America," Co-Principal Investigator, AAC&U.

6 Everett, J., Cinaglia, M., Cleary, D., Jahan, K., Orlins, J., **Sukumaran, B.,** Mehta, Y., Garden City: Adopting Sooner City at Rowan University, NSF, $61,202 + $61,975 match and cost share, 2000-2003.

5 Jahan, K., **Sukumaran, B.,** Head, L., and Keil, Z.O., "AWE: Attracting Women into Engineering," EiF foundation, $26,704, 2000-2001.

4 Dusseau, R., **Sukumaran, B.,** and Cleary, D., "A Bridge to the 21st Century: A Proposal for a Strategic Engineering Partnership Between Rowan University and DRPA," Delaware River Port Authority, $998,000, 2000-2004.

3 Jahan, K., **Sukumaran, B.,** Head, L., and Keil, Z.O., "AWE: Attracting Women into Engineering," EiF foundation, $53,012, 1998-1999.

2 **Everett, J.**, L. Head, K. Jahan, B. Sukumaran, and R. Hesketh, "Field Experiences for Undergraduate Engineers", National Science Foundation, $19,927 + $19,927 match, 1999-2003.

1 **Everett, J.**, J. Chen, A. Marchese, B. Sukumaran, "Curriculum Pathfinder: A Comprehensive Guide for Students in Engineering", Rowan University, $14,493, 1999.

FULLY OR PARTIALLY FUNDED MASTER'S STUDENTS

- Brian Atkins, Finite element analysis of the Betsy Ross bridge foundation, 2001.
- David Marks, Modeling of the Betsy Ross bridge substructure, 2002.
- Jonathan Corriveau, Three-dimensional shape characterization for particle aggregates using multiple projective representations, 2003-2004
- Michael Willis, Modeling of flexible pavements under moving loads, Michael Willis, Rowan University, 2003-2004, Major Professor, Dr. Mandayam.
- Daniel Barrot, An algebraic reconstruction technique (ART) for the synthesis of three-dimensional models of particle aggregates from projective representations, 2004-2005, Major Professor, Dr. Mandayam.
- Dona Johnson, Finite Element Analysis of flexible pavements under moving loads, 2005-2007.
- Patrick Giordano, An x-ray and optical computed tomography techniques for the synthesis of particle aggregate models, 2005-2007, Major Professor, Dr. Mandayam.
- Amanda Simermeyer, Influence of Coordination Number on Crushing of Granular Media, 2006-2007.
- Nicholas Lambert, Compaction of the subbase during construction, 2007-2008.
- Kevin McGarvey, Compaction Characteristics of the subbase during construction and trafficking under heavy aircraft loading, 2008-2010
- Michael Panko, Trafficking Characteristics of the Subbase under heavy aircraft loading, 2009-2010.
- Stephen Thomas, Discrete Element Modeling of Granular Media, 2010-present.
- Casey Hurt, Performance of granular media during shear, 2010-present.
- Craig Kumpel, Performance of unbound layers of a pavement system during aircraft loading, 2011-present.
- Jared Wasserman, Influence of granular particle characteristics on hopper flow rates, 2012-present.

- Andrew Branin, Laser Induced Breakdown Spectroscopy to determine the mineralogy of aggregates, 2013-present.
- Danilo Zeppilli, Micromechanics of crushable sands, 2014-2016.

MASTER'S STUDENT THESIS

- Bless Ann Varghese, Portable tool for Laser Induced Breakdown Spectroscopy to determine the mineralogy and morphology of aggregates, 2014-2016.
- Laser Induced Breakdown Spectroscopy to determine the mineralogy of aggregates, Andrew Branin, 2013-2014.
- Investigation of Compaction Characteristics of Subbase Material Using the Superpave Gyratory Compactor, Craig Jason Kumpel, 2011-2013.
- Finite Element Analysis of flexible pavements under moving loads, Dona Johnson, 2005-2007.
- Modeling of flexible pavements under moving loads, Michael Willis, Rowan University, 2003-2004.
- Modeling of the Betsy Ross bridge substructure, David Marks, Rowan University, 2002.
- Finite element analysis of the Betsy Ross bridge foundation, Brian Atkins, Rowan University, 2001.

MASTER'S STUDENT COMMITTEES

- Vivek Jha (2009), Sensitivity Analysis and Calibration of the alligator cracking model in the mechanistic-empirical design guide using regional data.
- George Lecakes (2009), Integration of Multiple Data Types in 3-D Immersive Virtual Reality (VR) Environments.
- Nusrat Siraj (2008), "Verification of asphalt concrete performance prediction using level 2 and level 3 inputs of mechanistic empirical pavement design guide for flexible pavements of the state of New Jersey."
- Patrick Giordano (2007), **"**An x-ray and optical computed tomography techniques for the synthesis of particle aggregate models."
- Daniel Barrot (2005), "An algebraic reconstruction technique (ART) for the synthesis of three-dimensional models of particle aggregates from projective representations."
- Jonathan Corriveau (2004), "Three-dimensional shape characterization for particle aggregates using multiple projective representations."

PhD STUDENT COMMITTEE

PhD committee for Nivedita Das, University of South Florida.
External Examiner for Chairat Suparchawarote, University of Western Australia.

UNDERGRADUATE STUDENTS SUPERVISED

- Kristen Blake, Shelby Brevogel, Kyle Ebersole, Jessalynn Wright, Shear Strength of sands, Fall 2015.
- Traz Daczkowski, Edward Freisinger, Christian Heimlich, Gary Liedtka-Bizuga, Saima Mahmud, Christine Neppel, Jake Schwartz, Seth Wagner, Laser analysis of aggregates, Fall 2015.
- Andrew Short, Lauren Hillis, Kristen Blake, Drew Kinghorn and Shelby Brevogel, Flexible airport pavement compaction and shear analysis, Spring 2015.

- Saima Mahmud, Christine Neppel, Daniel Merly, Eric Jacobsen and Joshua Edwards, Laser analysis of aggregates, Spring 2015.
- Downey, Patrick J., Finch, Brian William, Frounfelker, Ryan Andrew, Guglielmo, Jessica Lee, Polizzi, Christopher Francis, Schenk, Darren Douglas, Development of a water turbine for the developing world, Engineering Innovators without Borders.
- Andrew Short, Lauren Hillis, Kristen Blake and Shelby Brevogel, Flexible airport pavement compaction and shear analysis, Fall 2014.
- Saima Mahmud, Christine Neppel, Eric Seckinger and Joshua Edwards, Laser analysis of aggregates, Fall 2014.
- Beth Ann Larson, Andrew Short, Justin Liu and Alexander Aleyan, Laser analysis of aggregates, Spring 2014.
- Adam Bagriacik, Robert Cohen and Jerrett Clark, Flexible airport pavement subbase analysis, Spring 2014.
- Jessica Guglielmo, Brittany Smith, Patrick Downey and Eric Seckinger, Soil Drill for the Developing World, Spring 2014.
- Adam Bagriacik and Robert Cohen, Flexible airport pavement subbase analysis, Fall 2013.
- Beth Ann Larson, Andrew Short and Alexander Aleyan, Laser analysis of aggregates, Fall 2013.
- Ian Baker, Brittany Smith, Patrick Downey and Eric Seckinger, Soil Drill for the Developing World, Fall 2013.
- Wing Ho Ma, Colin Yurick and Stephen Rossi, Flexible airport pavement subbase analysis, Fall 2012 and Spring 2013.
- Nicholas Cincotti, Dillon Woolley, Kyle Pillion, Influence of granular particle characteristics on hopper flow rate, Spring 2013.
- James Poole, Benjamin Lamac, A.J. Carchidi, Soil Drill for the Developing World, Spring 2013.
- Nicole Giannelli, Samantha Kamper, Derek Yoder, Matthew Rossett, Effect of Hurricane Sandy on the New Jersey Coastline, Spring 2013.
- James Poole, Ashley Davis, James Rycek, Christopher Mitchell, Jonathan Sparacio, Soil Drill for the Developing World, Fall 2012.
- Jonathan Chin, Nicholas Cincotti, Peter D'Amico, Lorin Nickle, Influence of granular particle characteristics on hopper flow rate, Fall 2012.
- Andrew Melici, Colin Yurick and Stephen Rossi, Flexible airport pavement subbase analysis, Fall 2011 and Spring 2012.
- Nicholas Monsu and Demiyan Smirnov, Granular Packing and strain measurement, Fall 2011 and Spring 2012.
- Andrew Melici, Alejandro Zapata and Greggory Stevenson, Flexible airport pavement subbase analysis, Fall 2010 and Spring 2011.
- John Kopmann and William Kettleson, Acquisition of an X-ray CT with loading capabilities, Fall 2010 and Spring 2011.
- Robert Moore, Allison Dickey and Yaggya Thapa, Soil Tiller for the developing world, Fall 2010 and Spring 2011.
- Casey Hurt, Cameron Corini, Greggory Stevenson, Flexible airport pavement subbase analysis, Spring 2010.

- Steven Thomas, John Kopmann, Colin Donovan, Acquisition of a X-ray CT with loading capabilities, Spring 2010.
- Christopher Marra, Stephen Schwandt, Mark Zielinski and Evan Forosisky, Tree climber for the developing world, Spring 2010.
- Steven Thomas, David Rohmeyer, Colin Donovan, Packing of granular media, Fall 2009.
- Casey Hurt, Cameron Corini, Greggory Stevenson, Flexible airport pavement subbase analysis, Fall 2009.
- Gabriel Posluzsny, Anthony Cavalier, Michael Kerbaugh, and Evan Forosisky, Tree climber for the developing world, Fall 2009.
- Aliaksei Kustau, Keicha Muriel, David Rohmeyer, Packing of granular media, Spring 2009.
- Kyle Denny, Salvatore Randazzo, Cameron Corini, Flexible airport pavement subbase analysis, Spring 2009.
- Michael Panko, Jesse Hill, Michael Biggs, Nicole Bacher, Grain crusher for the developing world, Spring 2009.
- Kyle Denny, Salvatore Randazzo, Cameron Corini, Flexible airport pavement subbase analysis, Fall 2008.
- Michael Panko, Jesse Hill, Michael Biggs, Luke Cuccurullo, Grain crusher for the developing world, Fall 2008.
- Aliaksei Kustau, Discrete element modeling of granular media, Fall 2008.
- Larry Henshaw, Kyle Denny, Nicholas Schaeffer, Flexible airport pavement subbase analysis, Spring 2008.
- Aliaksei Kustau, Joshua Bonzella, Omega Engineering Thermocouple project, Spring 2008.
- Tarah Coward, Nicholas Schaeffer, Alex Scriffiano, Flexible airport pavement subbase analysis, Fall 2007.
- Heather Klein, Joshua Bonzella, Kevin McGarvey, Grain crusher for the developing world, Fall 2007.
- Joshua Bonzella, Grain crusher, Spring 2007.
- James Zamorski, Daniel MacInnis, Sand Crushing, Spring 2007.
- Nicholas Schaeffer, Lawrence Henshaw, FAA airport pavement analysis, Spring 2007.
- Ryan McGowan, Joshua Bonzella, Grain crusher, Fall 2006
- James Zamorski, Daniel MacInnis, Sand Crushing, Fall 2006.
- Bradley White, FAA airport pavement analysis, Fall 2006.
- George Lecakes, 3-D imaging of sands, Spring 2006.
- Ken Marshall, FAA Project, Spring 2006.
- Jason Fogler, Yan Liu, Discrete Element modeling of particle flow, Fall 2004.
- Frank McCombs, Derek Kennedy, 3-D shape of granular media, Fall 2004.
- Douglas Schmeelk, Finite element analysis of flexible pavements under aircraft loading, Fall 2004.
- Lauren Darroch, Jason Worth, Particle Flow within a flow cone, Spring 2004.
- Gina Rossi, Kyle Skala, Frank Aureli, 3-D shape of granular media, Spring 2004.
- Lauren Darroch, Diana Garcia, DRPA Finite element modeling of the Betsy Ross bridge, Fall 2003.
- Michael Willis, Josh Davis, Scott Jurewicz, Finite element analysis of flexible pavement, Fall 2003.
- Michael Willis, Brian Nese, Finite element analysis of flexible pavement, Spring 2003.

- Aaron Gerber, Brad Smith, DRPA Finite element modeling of the Betsy Ross bridge, Spring 2003.
- Michael Willis, FAA, Finite element analysis of flexible pavement, Fall 2002.
- Caitlin Terry, Michelle D'Alessandro, Aaron Gerber, DRPA Finite element modeling of the Betsy Ross bridge, Fall 2002.
- Tom Fargnoli, Rosie Tortorice, DRPA Finite element modeling of the Betsy Ross bridge, Spring 2002.
- John Kerchner, Jill Ferraris, Entrepreneurial enterprise, Fall 2001.
- Tom Fargnoli, Rosie Tortorice, DRPA Finite element modeling of the Betsy Ross bridge, Fall 2001.
- Frank Brown, Jeremy Stevenson, DRPA Finite element modeling of the Betsy Ross bridge, Spring 2001.
- Emily Stidworthy, Tim Staszewski, John Kerchner, Field Methods in Geotechnical Engineering, Fall 2000 .
- Drew DeFinis, Christina Conroy, Soil Monitoring, Spring 2000.
- Joseph Kociuba, Brian Atkins Finite Element Modeling of Bridges, Fall 1998.

REVIEWER FOR JOURNALS, CONFERENCES, & FUNDING ORGANIZATIONS

- Journal of Computing in Civil Engineering
- Computers and Geotechnics
- Powder Technology
- GeoFrontiers, 2011
- GeoFlorida, 2010
- World Congress on Earthquake Engineering
- Canadian Journal of Geotechnical Engineering
- National Science Foundation, NEES and CMS
- National Science Foundation, STEM
- American Society of Testing and Materials Geotechnical Engineering Journal
- ASCE Journal of Geotechnical and Geoenvironmental Engineering
- WEPAN Annual Conference
- Journal of Engineering Geology
- American Society of Testing and Materials Journal
- Session Chair, World Congress on Particle Technology 2006
- Journal of Professional Issues in Engineering Education and Practice
- Geotechnique
- Journal of Materials in Civil Engineering
- Journal of STEM Education
- International Journal of Service Learning in Engineering
- National Science Foundation, CMMI

SERVICE TO THE PROFESSION

- NSF Committee of Visitors, Civil Mechanical and Manufacturing Innovation Division, 2024.
- ASEE Fellow Selection Committee, 2024-present.
- NSF CMS Ad-hoc Reviewer, 2009-2018.

- GEER Member on Effects of Hurricane Sandy on the New Jersey Coastline, 2012-2013.
- Organizing joint session of WEPAN and WIED, ASEE annual conference, 2013.
- NSF GRFP reviewer, 2010-2013.
- Reviewer, Powder Technology.
- Reviewer, GeoHunan Conference, 2011.
- Session Chair, Multi-scale characterization and modeling of soils, GeoFrontiers, 2011.
- Reviewer, Journal of STEM Education, 2010.
- Reviewer, ASCE Journal of Materials in Civil Engineering, 2010.
- Session Chair, Panel on Funding Opportunities, ASEE annual meeting, Louisville, KY, 2010.
- Director at Large, Women in Engineering Division, ASEE, 2009-present.
- Session Chair, Imaging Applications in Geotechnical Engineering, GeoFlorida, 2010.
- Reviewer, ASCE Journal of Geotechnical and Geoenvironmental Engineering
- NSF CMS Panel Reviewer, 2009.
- NSF CMS Panel Reviewer, 2008.
- NSF S-STEM Panel Reviewer, 2007.
- Advisory Member, PIRE, University of Rhode Island, 2008-present.
- Advisory Board Member, Civil Engineering Department, Villanova University, 2007-present.
- Judge, Geoinstitute Student competition, 2007
- Member, Soil Modeling Committee, GeoInstitute, 2006 – present.
- Session Chair, World Congress on Particle Technology 2006
- Session Chair, Education Panel, GeoFrontiers, 2005
- NSF CMS Career Proposal Reviewer, 2004.
- NSF NEES Site at UCLA reviewer, 2004 and 2006.
- Chair, USUCGER Education Committee, 2003-2006.
- NSF NEES Panel Reviewer, 2002.
- NSF CMS Panel Reviewer, 2002.

ROWAN UNIVERSITY COMMITTEES

- Facilitator, University Strategic Planning Sub-committee for Enhancing Access.
- Member, University Strategic Planning Sub-committee for Improving Affordability.
- Member, Faculty Learning Community on Why So Few Women and Minorities in STEM, 2013-2014.
- Facilitator, Faculty Learning Community for Department Chairs, 2013-2014.
- Member, CEE Promotion Committee, 2013.
- Member, University Tenure and Recontracting Committee, 2013-2014.
- Member, Ethics Committee, 2012-2013.
- Chair, College Promotion Committee, 2010-2011.
- Member, International Education Council, 2010.
- External Member, Promotion Committee for Sociology, 2010.
- Member, Systems Engineering Task Force, 2009-present.
- Member, Student Evaluation Form Sub-committee, 2007-2009.
- Member, Laptop Initiative, 2007-2008.
- Member, Diversity Taskforce, Middle States Accreditation Document, 2007-2008.

- Member, Student Evaluation Form Task Force, Faculty Center, 2007-present.
- Member, Academic Policies and Procedures, 2007-2009.
- Search committee, Jewelry/Metals faculty position, 2007.
- Member, Sabbatical Leave Committee, 2006-2007.
- Search committee, Provost, 2006.
- Chair, Search Committee, Civil Engineering, 2004.
- Advisory Board Member, Honors Committee and Engineering Liaison for Honors Junior/Senior Clinic, 2001-present.
- Member, Institutional Review Board, 2000-present.
- Member, Faculty Senate, 1999-2002.
- Member, Ethics Committee, 1998-1999.
- Interim Coordinator, Honors Program 2002-2003.
- Women's studies advisory board, 1998-present.
- Faculty center board, 2002-2008.
- Member, Promotion Committee, 2003-2004.
- Member, Lindback Awards Review Committee, 2002-2004.
- Member, Bildner committee.

COLLEGE OF ENGINEERING COMMITTEES

- Lead, Strategic Planning sub-committee for enhancing access and diversity, 2013-present.
- Chair, Strategic Planning Committee, College of Engineering, 2013-present.
- Chair, Hiring Committee for Part Time Technician, 2013.
- Chair, Hiring Committee for Full Time Tenure Track Instructor, 2012-2013.
- Chair, Hiring Committee for Full Time Tenure Track Faculty in Water Resources Engineering, 2011-2012.
- Member, graduate studies committee and Graduate Program Coordinator for Civil Engineering, Fall 2009.
- Discipline Manager, Junior and Senior Clinics, Spring 2009.
- Honors Liaison, Junior and Senior Clinics, 2008-2013.
- Member, International Initiatives Committee, 2006-present.
- Member, Computer Resources Committee, 2003.
- Member, College Planning Committee, 2002-2003.
- College of Engineering, Clinic Committee, 2000-2006.
- Civil Engineering accreditation committee, 1998-present.
- Member, department curriculum committee, 1998-present.
- Member, Search Committee, Civil Engineering, 1998-present.
- Member, department equipment committee, 1998-present.
- College of Engineering, Laboratory Committee, 1998

FACULTY ADVISOR

- American Society of Civil Engineers student chapter, 1998.
- Society of Women Engineers, 1998-2000.

ORGANIZER

- Women's history month, Panel discussion on perspectives of women in engineering, 1999. Panel comprised of women faculty in engineering.
- Women's history month, Panel discussion on Women of courage and vision, 2001. Panel comprised of Dr. Ann Harlan, Dr. Dianne Dorland, and Mayor Susan Bass Levin. Broadcast on Rowan radio.
- Women's history month, Panel Discussion on Influencing public policy: Women working together, 2003. Panel comprised of Hon. Gwendoline Faison, Dr. Helen Giles-Gee, Dr. Linda Head and Dr. Cynthia Line.

SERVICE TO THE COMMUNITY

- Panelist and co-organizer at the ASEE Engineering Deans Public Policy Conference, 2026.
- Presenter for early career engineering PhDs as part of the National Science Foundation (NSF) eFellows Program on Academic Leadership administered by the American Association for Engineering Education (ASEE), 2023, 2025.
- Presenter, ASEE-Acuity Insights Webinar on Creating Diverse Pathways for Future Engineers, 2024.
- Presenter, ASEE KnowlEDGE Session, Promotion and Tenure process, 2023
- Presenter, ASEE Delta Leadership Institute for new Department Chairs, 2021.
- Panelist, Junior Achievement, South Jersey Women's Future Leadership Forum, June 2, 2016.
- External Advisory Board Member, Civil Engineering Department, Bucknell University, 2016-present.
- Coordinator of outreach activities to the Science League, Washington Township High School, 2014-2015.
- External Advisory Board Member, Civil Engineering Department, Lafayette College, 2015-present.
- External Advisory Member, NSF-ADVANCE, Kettering University, 2011-present.
- Judge, First Lego League Robot Competition for Middle School students, December 2009.
- Introduction to Engineering, Washington Township Elementary school, November 2009.
- External Advisory Member, PIRE, University of Rhode Island, 2008-present.
- External Advisory Board Member, Civil Engineering Department, Villanova University, 2006-2014.
- Board member, Alice Paul Institute, 2005-2008.
- Volunteer, A brief introduction to engineering for high school seniors, Afro-American, Cultural, Technological, and Scientific Olympics, 2006.
- Attracting Women into Engineering workshop, 1999-2008. Faculty participant in the 2-week workshop for middle school girls.
- Super Engineering Saturday Volunteer, Princeton, NJ. Introduction to engineering for home schooled children. Sponsored by the Society of Women Engineers, 2000.
- Junior Achievement Volunteer, Clayton Middle School, 1998-1999.
- Logan Township elementary simple machines project.

CAREER DEVELOPMENT

- Leadership workshop, Rowan University, December, 2015.
- Women in Academia Leadership Workshop, Organized by SWE, Chicago, October, 2011.
- ADSC, Drilled Shaft Workshop, June 2008.
- Professor's Driven Pile Institute, June 2007.
- ABET Program Evaluator Training, May 2007.
- Bildner workshop participant on promoting Democracy and Diversity on NJ campuses, 2003, Rutgers University.
- Bildner workshop participant on promoting Democracy and Diversity on NJ campuses, June 21-24, 2002, Princeton University.
- NJ Project Summer Institute, June 1999.