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SUMMARY

- Currently working as tenure track associate professor of civil engineering department at the school of engineering and applied sciences (SEAS), University of the District of Columbia, Washington, DC, USA since August 2023
- Worked as a tenured associate professor of the civil engineering department at school of engineering, University of Guam, USA from October 2022 to Aug 2023 (1 year)
- Worked as an associate professor of the civil engineering department at school of engineering, University of Guam, USA from October 2021 to Aug 2023 (2 years)
- Worked as tenure track assistant professor of the civil engineering department at school of engineering, University of Guam, USA from September 2017 to Oct 2021 (4 years)
- Worked as the Chair of civil engineering department at University of Guam, USA for 3 years
- Worked as post-doctoral research associate for 2 years at University of Texas at Arlington, TX USA
- Attained PhD degree in civil engineering (geotechnical engineering)
- Attained two master's degree (geotechnical) with thesis; published several technical reports, 22 journal papers, 32 conference papers and made professional presentations at international conferences
- Worked for 3+ years as a civil (geotechnical) engineer in two reputed USA firms
- Registered professional engineer (P.E. civil) in the state of Texas, USA
- Taught several courses at undergraduate & graduate level
- Official reviewer for several esteemed international journal papers & conference proceedings

EDUCATION

2011 – 2014 Ph.D. in Civil Engineering (Geotechnical) at University of Texas at Arlington, TX USA
2007 - 2008 M.S. in Civil Engineering (Geotechnical) at San Diego State University, CA, USA
1997 - 1998 M.E. in Civil Engineering (Geotechnical) at COE Pune, India
1994 - 1997 B.S. in Civil Engineering at North Maharashtra University, India

COURSES TAKEN

Foundation Analysis & Design, In-situ Testing Methods, Soil Dynamics, Theoretical Soil Mechanics, Experimental Soil Mechanics, Unsaturated Soil Mechanics, Design of Earth Structures, Advanced Soil Mechanics, Geotechnical Explorations and Instrumentation, Finite Element Analysis of Structures, Constitutive Modeling, Mathematical Statistics-I, Statistical Methods, Earthquake Analysis of Structures.

COURSES TAUGHT

At the University of the District of Columbia (UDC):

Principles of Geotechnical Engineering & Lab (CVEN 331/332) – Fall 2023
Advance Geotechnical Engineering (CVEN 531) – Fall 2023
Advance Topics in Geotechnical Engineering (CVEN 539) – Fall 2023

At University of Guam (UOG):

Geotechnical Engineering (CEE303) – FALL 2019; SP2020; FALL2020; SP2021; FALL2021, Fall 2022
Geotechnical Engineering Lab (CEE303L) – FALL2019; SP2020; FALL2020; SP2021; FALL2021, Fall 2022

Earth Structures Design (CEE305) – SP2020; SP2021; SP2022; SP2023
 Foundation Engineering (CEE402) – FALL2020; FALL2021, Fall 2022
 Engineering Orientation (CEE100) – SP2018; FALL2018; SP2019; FALL2019; SP2021; SP2022, Fall 2022
 Engineering Statics (CEE201) – SP2019
 Civil Engineering Materials Lab (CEE304L) – FALL 2021
 Fundamentals of Transportation Engineering (CEE403) – SP2022; SP2023
 Introduction to Construction Management (CEE406) – Fall 2022
 Civil Engineering Design I & II (CEE404 & 405) – SP2021; F2021; SP2022, Fall 2022; SP2023

EXPERIENCE

2022 (October) – Present: Tenured Associate Professor of Civil Engineering, University of Guam, GU, USA

2021 (August) – Present: Associate Professor of Civil Engineering, University of Guam, GU, USA

2019 (August) – 2021 (December) & 2022 (August) – 2022 (December): Chair of Civil Engineering Department, University of Guam, USA

2017 (September) – August 2021: Assistant Professor of Civil Engineering, University of Guam, GU, USA

Grants and Research Projects:

- Principle Investigator (PI) of a research project titled “Soil Bioengineering Techniques for Restoration of Slopes: An initiative Towards Maintaining Healthy Coastal Ecosystems.” funded by The U.S. Department of Interior (DOI), Office of Insular Affairs (OIA) under Grant/Cooperative Agreement number D20AP00092, Program Title the Coral Reef & Natural Resources (CRNR-Guam-2020-6) administered by the Bureau of Statistics and Plans for Fiscal Year 2020 in the amount of \$50,120.00. *Ongoing project.*
- Principle Investigator (PI) of research project “Bio-engineering solutions to mitigate shallow landslides via quantification of root tensile strength”, funded by the National Science Foundation (NSF) under Grant Number OIA-1457769-GEC seed funding Year 5 through Guam EPSCoR for GEC Seed Funding 2019-20 in the amount of \$20,000. *Project completed.*
- Principle Investigator (PI) of a research project titled “Bio-engineering solution for shallow slope failures/landslides and erosion problems in Guam” (project # R/UOGSG19-2) funded by National Sea Grant College Program of the United States Department of Commerce, which is sponsored by the University of Guam Sea Grant (UOG-SG) from National Oceanic and Atmospheric Administration (NOAA) award # NA18OAR-4170077 funded in the amount of \$32,624, 2019-21. *Project completed.*
- Principle Investigator (PI) of a research project titled “Aerial survey and field instrumentation for investigation of landslide threat to a tropical watershed in southern Guam” funded by Guam Hydrological Survey (GHS) through Water and Environmental Research Institute in the amount of approximately \$77,808: 2018-22. *Ongoing project.*
- Co-Principle Investigator (Co-PI) of a research project titled “The geotechnical investigation of rainfall-induced landslides in the Piti-Asan watershed” funded by the department of interior (DOI), Office of Insular Affairs under its Technical Assistance Program (TAP), Program Title Coral Reef and natural resources initiative for rehabilitation and restoration of corals (CRIGU20), grant number D18AP00172 (Contract # C190600340) as administered by the Guam Bureau of Statistics and Plans in the amount of \$45,079, 2018-2020. *Project completed.*
- Principle Investigator (PI) of research project “Initiative Towards Development of a Landslide Predictive System in Guam via In-situ Monitoring of Moisture-Suction Relationship” funded by the National Science Foundation (NSF) under Grant Number OIA-1457769-GEC seed funding Year 4 through Guam EPSCoR for GEC Seed Funding 2019 in the amount of \$9,958. *Project completed.*
- Assisted the PI (Dr. Khosrowpanah) on his research project titled “Developing hydrological data for Toguan watershed management.” Grant name - CRI-GU-15, Contract # C160600440, Funded by National Oceanic and Atmospheric Administration (NOAA), 2017-2018. *Project completed.*
- Co-Principle Investigator (Co-PI) of research project titled “Fate and transport of perfluoroalkyl substances (PFAS) in the vicinity of impacted GWA drinking water production wells”, submitted to Guam Water Authority (GWA) in

the amount of \$339,581. *This project proposal is under review.*

2015 (September) – 2017 (September): Post-Doctoral/Faculty Research Associate, University of Texas at Arlington, TX, USA

- Worked as a Post Doc on remote sensing project (TxDOT project # 06944) using Unmanned Aerial Vehicle for TxDOT to develop UAV based guidelines and evaluate pavement forensics; worked on NSF funded project in area of unsaturated soil mechanics (NSF grant # 1039956) until its completion; assisted the PI (Dr. Anand Puppala) in writing research proposals for NSF, TxDOT, and guided doctoral students with research interest in area of unsaturated soil mechanics, ground improvement, and sustainability of infrastructures.

2014 (September) – 2015 (August): Staff Geotechnical Engineer, Terracon Inc, Tulsa Oklahoma, USA.

- Develop plans, specifications, and inspection reports as needed on assigned tasks to see that these items are complete, accurate, and in accordance with good engineering practice.
- Technical involvement in the resolution of design problems that include performing field investigation or inspections, detailed design work, and detailed checking of design computations done by others, or general coordination of specific design aspects into a project.
- Work closely with other disciplines on multi-discipline projects. Implement technical requirements to complete client projects by directing field staff to sample, test, and collect data and/or document on-site activities at various client sites.
- Assist in compiling the scope of work for both routine and more complex lab or field investigations to measure and sample physical and non-physical properties of soil from a geotechnical, geological, or environmental standpoint or the analysis of construction materials.

2011 – 2014 (August): Doctoral candidate in Civil Engineering, University of Texas at Arlington, Texas, USA.

- Experience with basic and advanced laboratory soil testing.
- Performed field instrumentation and monitoring using the “Bender Element Sensor” to witness sulfate heaving in chemically treated soils.
- Worked on National Science Foundation funded research project to develop standard protocol for triaxial testing of unsaturated silty sands over wider range of soil suction states including constitutive soil modeling as a part of PhD dissertation.
- Relevant research topics: Unsaturated silty sands, shear-induced stiffness, strength and volume-change behavior of unsaturated soils under triaxial conditions, dilational behavior of sands, constitutive-soil modeling using Cam-Clay, Barcelona Basic Model, and Bounding Surface-based unsaturated soil modeling.

2008 (August) – 2011 (Jan): Professional (Civil Engineer) at Kleinfelder Inc., San Diego, CA.

- Interpretation of bore logs and scheduling of laboratory testing program.
- Report preparation and laboratory testing of engineering materials such as soil, asphalt, concrete, steel, bolts, slurry seal etc.
- Hot Mix Asphalt job mix verification, QA/QC, Hot mix asphalt design for clients such as Caltrans Transportation Department, and other local agencies.

2007 – 2008: Graduate Research Assistant at San Diego State University, CA (USA).

- MS Thesis research concerns the use of granulated recycled tire rubber for the mitigation of wetting-induced expansion in swelling soils.
- Relevant topics: soil behavior, clay chemistry, mineralogy, mixture behavior, percolation, unsaturated soils.
- Taught senior-level Geotechnical Engineering Laboratory course in Dept. of Civil Engineering SDSU.
- Responsibilities: To teach and conduct experiments including Atterberg limits, sieve analyses, permeability, proctor compaction, consolidation, swell, direct shear test, unconfined compression, triaxial test, CBR., etc.

2000 – 2007: Lecturer at D. N. Patel College of Engineering, India.

- Taught theory and experimental courses to undergraduate students in civil engineering including Geotechnical Engineering, Foundation Engineering, Fluid Mechanics, and Engineering Mechanics.

- Guided senior level civil engineering undergraduate students in their senior class project.

1999 – 2000: Lecturer at Navalnagar College of Engineering, India.

- Taught theory and experimental courses to undergraduate students in civil engineering including Geotechnical Engineering, Foundation Engineering and Engineering Mechanics.
- Guided senior level civil engineering undergraduate students in their senior class project.

PUBLICATIONS (Link to google scholar: (<https://scholar.google.com/citations?user=Iy0r91oAAAAJ&hl=en>))

Thesis/Dissertation

- Response of unsaturated silty sand over a wider range of suction states using a novel double-walled triaxial testing system,” Ph.D. Dissertation, Funded by NSF grant # 1039956, University of Texas at Arlington, TX, USA.
- “Mitigation of clay swelling with granulated tire rubber: Experimental study,” MS Thesis (2008).
- “Graphical solution for sheet pile embedment,” MECE Thesis (1999).

Peer-reviewed International Journal papers

- **Patil, U.**, Valdes, J. R., and Evans, T. M. (2011). “Swell mitigation with granulated tire rubber.” *Journal of Materials in Civil Engineering* (ASCE), Vol. 23, No. 5, pp. 721-727. [http://dx.doi.org/10.1061/\(ASCE\)MT.1943.5533.0000229](http://dx.doi.org/10.1061/(ASCE)MT.1943.5533.0000229).
- **Patil, U. D.**, Hoyos, L. R., and Puppala, A. J. (2016). “Modeling essential elastoplastic features of compacted silty sand via suction-controlled triaxial testing.” *International Journal of Geomechanics*, 16(6), pp. 22, [https://doi.org/10.1061/\(ASCE\)GM.1943-5622.0000726](https://doi.org/10.1061/(ASCE)GM.1943-5622.0000726)
- **Patil, U. D.**, Puppala, A. J., and Hoyos, L. R. (2016). “Characterization of compacted silty sand using a double-walled triaxial cell with fully automated relative humidity control.” Vol. 39, No. 5, *Geotechnical Testing Journal*, ASTM, pp. 742-756, <http://dx.doi.org/10.1520/GTJ20150156>, ISSN 0149-6115.
- **Patil, U. D.**, Puppala, A. J., Hoyos, L. R., and Pedarla, A. (2017). “Modeling critical-state shear strength behavior of compacted silty sand via suction-controlled triaxial testing.” *Engineering Geology*, Vol. 231, pp. 21-33, <http://dx.doi.org/10.1016/j.enggeo.2017.10.011>.
- Bach, V. H. L., Nguyen, H. M., Puppala, A. J., Nguyen, C. M., and **Patil, U. D.** (2018). “Comparing the response of static loading tests on two model pile groups in soft clay.” *Geotechnical and Geological Engineering*, Springer International Publishing, Vol. 36 (1), pp. 13-26, <https://doi.org/10.1007/s10706-017-0298-5>
- **Patil, U. D.**, Puppala, A. J., Hoyos, L. R., and Banerjee, A. (2018). “Strength, stiffness and radial anisotropy of compacted silty sand under suction-controlled axisymmetric shearing.” *Geotechnical and Geological Engineering*, Vol. 36 (6), pp. 3945-3960, Springer International Publishing, <https://doi.org/10.1007/s10706-018-0590-z>
- **Patil, U. D.**, Hoyos, L. R., Puppala, A. J. and Bheemasetti, T. (2018). “Modeling stress-dilatancy behavior of compacted silty sand under suction-controlled axisymmetric shearing.” *Geotechnical and Geological Engineering*, Vol. 36 (6), pp. 3961-3977, Springer International Publishing, <https://doi.org/10.1007/s10706-018-0647-z>.
- Qianmi, Yu., Jiankun, Liu, **Ujwalkumar. D. Patil**, and Anand. J. Puppala (2018). “New approach for predicting particle breakage of granular material using the grey system theory.” *Journal of Materials in Civil Engineering* (ASCE), 30 (9): 04018210, pp. 1-16, [https://doi.org/10.1061/\(ASCE\)MT.1943-5533.0002395](https://doi.org/10.1061/(ASCE)MT.1943-5533.0002395)
- **Patil, U. D.**, Puppala, A. J., Morvan, M. M., and Hoyos, L. R. (2018). “Bounding surface-based modeling of compacted silty sand exhibiting suction dependent postpeak strain softening.” *International Journal for Numerical and Analytical methods in Geomechanics*, October: 2018, Vol. 42 (14), pp. 1741-1761, John Wiley & Sons Ltd, <https://doi.org/10.1002/nag.2837>
- William M. C. Whitman, Shahram Khosrowpanah, Mark A. Lander, **Ujwalkumar D. Patil**, Joseph D. Rouse (2018). “Assessment of a Dynamic Watershed via Field Studies and GIS-Based Erosion Model”, *Hydrology*, Vol. 6, No. 3, 2018, pp. 88-99. doi: 10.11648/j.hyd.20180603.12

- Sydonia Manibusan, Shahram Khosrowpanah, Mark A. Lander, Mohammad Golabi, **Ujwalkumar D. Patil**. (2019). A GIS based assessment of a dynamic watershed in Guam. *Hydrology*, Vol. 7, No. 1, 2019, pp. 1-9, doi: 10.11648/j.hyd.20190701.11
- Pedarla, A., Puppala, A. J., **Patil, U. D.**, Hoyos, L. R., and Pino, A. H. (2019). “A semi-empirical approach-based model for swell characterization of expansive clays.” *Geotechnical and Geological Engineering* (Springer), 37, pages 5371–5381, <https://doi.org/10.1007/s10706-019-00986-y>
- Qianmi Yu, Jiankun Liu, **Patil, U. D.**, Congress, Surya, S. C., and Puppala, A. J. (2019). “Two-dimensional fractal model for ultimate crushing state of coarse aggregates.” *Fractals* (World Scientific), In Press, <https://doi.org/10.1142/S0218348X19501093>.
- Shahram Khosrowpanah, Mark Alan Lander, **Ujwalkumar Dashrath Patil** (2019). “Development of the Stage Flow Relations for a Tropical Watershed.” *Hydrology*, Vol. 7, No. 3, 2019, pp. 38-45. doi: 10.11648/j.hyd.20190703.11.
- Banerjee, A., Puppala, A. J., Hoyos, L. R., Likos, W. J., and **Patil, U. D.** (2020). “Resilient modulus of expansive soils at high suction using vapor pressure control” *Geotechnical Testing Journal (ASTM)*, In Press and available online, Volume 43, Issue 3, GTJ20180255, <https://doi.org/10.1520/GTJ20180255>
- **Patil U. D.**, Hoyos, L. R., Puppala, A. J., and Congress, S. S. C. (2020). “Suction stress characteristic curves of cohesive-frictional soils from multiple suction-controlled testing methods.” *International Journal of Geomechanics*, volume 20, Issue No. 7, [https://doi.org/10.1061/\(ASCE\)GM.1943-5622.0001698](https://doi.org/10.1061/(ASCE)GM.1943-5622.0001698)
- Congress, S. S. C., Puppala, A. J., Banerjee, A., & **Patil, U. D.** (2020). “Identifying Hazardous Obstructions Within an Intersection Using Unmanned Aerial Data Analysis.” *International Journal of Transportation Science and Technology*; available online, <https://doi.org/10.1016/j.ijtst.2020.05.004>
- **Patil, U.D.**; Shelton III, A.J.; Aquino, E. (2021). “Bioengineering Solution to Prevent Rainfall-Induced Slope Failures in Tropical Soil.” *Land*, 10(3): 299. <https://doi.org/10.3390/land10030299>
- Congress, S. S. C., Puppala, A. J., Prince K., Banerjee, A., and **Patil, U. D.** (2021). “Methodology for Resloping of Rock Slope Using 3D Models from UAV-CRP Technology. *Journal of Geotech. and Geoenvironmental Eng.* Volume 147 (9), September 2021, Published online on June 18, 2021. [https://doi.org/10.1061/\(ASCE\)GT.1943-5606.0002591](https://doi.org/10.1061/(ASCE)GT.1943-5606.0002591)
- Hoyos, L. R., Dawoodi-Bilesavar, R., **Patil, U. D.**, Yepes-Heredia, J.E., Perez-Ruiz, D.D., and Cruz, J. A. (2021). “Behavior of unsaturated cohesive-frictional soils over a whole range of suction/thermo-controlled stress paths and modes of deformation.” *Soils and Rocks – An International Journal of Geotechnical and Geoenvironmental Engineering*, vol. 44 (3): e2021066621 (2021), <https://doi.org/10.28927/SR.2021.066621>
- **Patil, U. D.**, Shelton, A. J., Catahay, M., Kim, Y. S., & Congress, S. S. C. (2022). “Role of vegetation in improving the stability of a tropical hill slope in Guam.” *Environmental Geotechnics*, Volume 9, Issue 8, Pages 562-581, full text available at <https://www.icvirtuallibrary.com/doi/epdf/10.1680/jenge.21.00064>
- Yeo M-H, **Patil UD**, Chang A, King R. (2023). “Changing Trends in Temperatures and Rainfalls in the Western Pacific: Guam.” *Climate*. 2023; 11(4):81. <https://doi.org/10.3390/cli11040081>

Peer-reviewed International Conference papers

- Le, M., Pedarla, A., Chitoori, B. S., **Patil, U.**, Hoyos, L. R., Puppala, A. J., and Perrin, L. (2013). “Slope stability assessment using field moisture data for North Texas clay soil.” *Geo-Congress 2013 (ASCE); Stability and Performance of Slopes and Embankments III – Proceedings of 2013 Congress*, GSP No 231, pp. 383-393, San Diego, CA, USA, March 3-7, <https://ascelibrary.org/doi/10.1061/9780784412787.038>
- **Patil, U. D.**, Puppala, A. J., and Hoyos, L. R. (2014). “Assessment of suitable loading rate for suction-controlled triaxial testing on compacted silty sand via axis-translation technique.” *Geo-Congress 2014 Technical Papers*, GSP no. 234, pp. 1307-1316, <https://ascelibrary.org/doi/10.1061/9780784413272.127>, Atlanta, Georgia, USA, February 23-26.
- **Patil, U. D.**, Puppala, A. J., and Hoyos, L. R. (2014). “Strength/volume change behavior of compacted silty sand using a novel double-walled suction-controlled triaxial system.” *Unsaturated Soils: Research and Applications – Proceedings of the 6th Int. Conf. on Unsaturated Soils*, UNSAT 2014, Sydney, NSW, 2-4 July 2014, Vol. 2, pp.

1727-1733, [ISBN 9781138001503 - CAT# K22693](#).

- **Patil, U. D.**, Puppala, A. J., and Hoyos, L. R. (2015). "Suitable shearing rate for triaxial testing of intermediate soils under vapor induced/controlled medium to high suction range." *International Foundations Congress and Equipment EXPO* (IFCEE 2015), Geotechnical Special Publication, GSP no. 256, March 17-21, San Antonio, TX, USA, pp. 2141-2150. <http://dx.doi.org/10.1061/9780784479087.198>.
- Caballero, S., Acharya, R., Banerjee, A., Bheemasetti, T., Puppala, A., and **Patil, U.** (2016). "Sustainable slope stabilization using biopolymer-reinforced soil." *Geo-Chicago 2016*, GSP 269, Chicago, Illinois, USA, August 14-18, 2016, pp. 116-126, <https://ascelibrary.org/doi/10.1061/9780784480120.013>
- **Patil, U. D.**, Hoyos, L. R., and Puppala, A. J. (2016). "Essential features of compacted silty sand behavior via suction-controlled triaxial testing." *3rd European Conference on Unsaturated Soils – "E-UNSAT 2016,"* Vol. 9, Article # 17009, pp. 6, DOI: <http://dx.doi.org/10.1051/e3conf/20160917009>, September 12-14, 2016, Paris, France.
- **Patil, U. D.**, Hoyos, L. R., and Puppala, A. J. (2016). "Characterization of compacted silty sand via relative humidity-controlled triaxial testing system." *3rd European Conference on Unsaturated Soils – "E-UNSAT 2016,"* Vol. 9, Article # 09012, pp. 5, DOI: <http://dx.doi.org/10.1051/e3conf/20160909012>, September 12-14, 2016, Paris, France.
- Nguyen, H. M., Puppala, A. J., and **Patil, U. D.** (2016). "Multi-level O-cell Test at The Phu My Bridge in Vietnam." Accepted for publication, *The 2nd National Conference on Transport Infrastructure and Sustainable Development - TISDC 2016*, September 17-18, Da Nang City, Vietnam, Vol. 1, pp. 281-288, Construction Publisher of Vietnam, [ISBN: 978-604-82-1809-6](#)
- Nguyen, H. M., Puppala, A. J., and **Patil, U. D.**, and Bach V. H. L. (2016). "Problems of cycle head-down pile load tests in soft soil region." *Geotec Hanoi 2016: The 3rd International Conference on Geotechnics for Sustainable Infrastructure Development*, Phung (edt), Section 1: Deep Foundations, Paper no. 18, pp. 157-162, November 24-25, Hanoi, Vietnam, [ISBN 978-604-82-1821-8](#)
- Nguyen, H. M., Puppala, A. J., **Patil, U. D.**, Leila, M., and Banerjee, A. (2017). "Multi-level O-cell Tests on the instrumented bored piles in Mekong Delta." *Geo-Frontiers 2017 (ASCE) Technical Papers*, GSP 279, pp. 274–283, March 12-15, Orlando, Florida, USA, <http://dx.doi.org/10.1061/9780784480465.029>.
- **Patil, U. D.**, Banerjee, A., Puppala, A. J., and Hoyos, L. R. (2017). "Shear strength prediction of compacted silty sand at peak/critical state failure over wider suction range." *2nd Pan-American Conference on Unsaturated Soils*, GSP 301, 12th–15th November 2017, Dallas, Texas, pp. 340-349, <https://doi.org/10.1061/9780784481684.035>.
- Banerjee, A., **Patil, U. D.**, Puppala, A. J., and Hoyos, L. R. (2017). "Evaluation of Liquefaction Resistance in Silty Sand via Suction Controlled Cyclic Triaxial Tests." *2nd Pan-American Conference on Unsaturated Soils*, GSP 301, 12th–15th November 2017, Dallas, Texas, pp. 543-552, <https://doi.org/10.1061/9780784481684.055>.
- Banerjee, A., Puppala, A. J., **Patil, U. D.**, Hoyos, L. R., and Bhaskar, P. (2018). "A simplified approach to determine the response of unsaturated soils using multistage triaxial test." *Proceedings of the International Foundation Congress and Equipment Expo*, IFCEE-2018, Geotechnical Special Publication (GSP) no. 295, March 5-10, 2018, Orlando, Florida, pp. 332-342, <https://doi.org/10.1061/9780784481585.033>
- He, S., Yu, X., Gautam, S., Puppala, A. J., and **Patil, U. D.** (2018). "Resilient modulus of liquid chemical-treated expansive soils." In: Li L., Cetin B., Yang X. (eds) *Proceedings of GeoShanghai 2018 International Conference: Ground Improvement and Geosynthetics*. GSIC 2018. Springer, Singapore, May 27-30, Shanghai, China, pp. 114-120. DOI: https://doi.org/10.1007/978-981-13-0122-3_13.
- **Patil, U. D.**, Banerjee, A., Hoyos, L. R., Puppala, A. J., and Yu, X. (2018). "Suction-induced dilatancy and stiffness in compacted silty sand via triaxial testing." *Unsaturated Soils, HKUST, Proceedings of Seventh International Conference on Unsaturated Soils, UNSAT2018*, August 3-5, Hong Kong, China, Eds C.W.W. Ng, A.K. Leung, A.C.F. Chiu, C. Zhou, vol. 1, pp. 287-292.

- **Patil, U. D.**, Morvan, M., Puppala, A. J., Hoyos, L. R., and Bheemasetti, TV. (2018). “Bounding surface modeling for compacted silty sand.” *Unsaturated Soils*, HKUST, *Proceedings of Seventh International Conference on Unsaturated Soils*, UNSAT2018, August 3-5, Hong Kong, China, Eds C.W.W. Ng, A.K. Leung, A.C.F. Chiu, C. Zhou, vol. 2, pp. 941-946.
- Banerjee, A., **Patil, U. D.**, Puppala, A. J., and Hoyos, L. R. (2018). “Suction-controlled repeated load triaxial test of subgrade soil at high suction state.” *Unsaturated Soils*, HKUST, *Proceedings of Seventh International Conference on Unsaturated Soils*, UNSAT2018, August 3-5, Hong Kong, China, Eds C.W.W. Ng, A.K. Leung, A.C.F. Chiu, C. Zhou, vol. 2, pp. 667-672.
- **Ujwalkumar D. Patil**, Laureano R. Hoyos, Jairo E. Yepes, Anand J. Puppala, Surya S. C. Congress (2019). “Suction stress via thermo-servo/constant-water content ring shear testing.” 7th Asia-Pacific Conference on Unsaturated Soils, Japanese Geotechnical Society Special Publication, Volume 7, Issue 2, Pages 110-114, August 23~25, 2019, Nagoya, Japan, Eds Hiromasa Iwai; Takahiro Yoshika; Byeong-Su Kim; and Feng Zhang, available online at https://www.jstage.jst.go.jp/article/jgssp/7/2/7_v07.016/article
- Congress S. S. C., Puppala A. J., Banerjee A., Jafari, N. H., and **Patil, U. D.** (2019). “Use of Unmanned Aerial Photogrammetry for Monitoring Low-Volume Roads After Hurricane Harvey.” Transportation Research Circular E-C248, 12th International Conference on Low-Volume Roads, September 15–18, 2019, Kalispell, Montana, USA, pp. 530-543, <http://www.trb.org/Publications/Blurbs/179567.aspx>.
- **Ujwalkumar D. Patil**, Laureano R. Hoyos, Anand J. Puppala, Surya S. C. Congress, Aritra Banerjee (2019). “Suction stress characteristic curve for compacted silty sand from suction-controlled triaxial testing.” Proceedings of the XVI Pan-American Conference on Soil Mechanics and Geotechnical Engineering (XVI PCSMGE), Geotechnical Engineering in the XXI Century: Lessons learned and future challenges, N.P. López-Acosta et al. (Eds.), Pages 756-763, 17-20 November 2019, Cancun, Mexico, doi: 10.3233/STAL190109, available online at <https://ebooks.iospress.nl/publication/53320>
- Congress, S. S. C., Kumar, P., **Patil, U. D.**, Bheemasetti, T. V., & Puppala, A. J. (2020, February). Three-Dimensional Stability Analysis of Rock Slope Using Aerial Photogrammetry Data. In Geo-Congress 2020, February 25–28, 2020, Minneapolis, Minnesota: Geotechnical Earthquake Engineering and Special Topics (pp. 388-398). Reston, VA: American Society of Civil Engineers, <https://doi.org/10.1061/9780784482810.041>.
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- Mathilde Morvan, **Ujwalkumar D. Patil**, Laureano R. Hoyos, Surya S. C. Congress, and Anand J. Puppala (2020). Modelling Unsaturated Soil Response Beyond Residual Suction State via Vapor-Pressure Controlled Triaxial Testing, 4th European Conference on Unsaturated Soils (E-UNSAT 2020), Vol 195, article no. 03029, pp. 1-6, Lisbon, Portugal, October 19-21, DOI: <https://doi.org/10.1051/e3sconf/202019503029>, 2020 R. Cardoso, C. Jommi and E. Romero (Eds.).
- Congress, S. S. C., Kumar, P., Banerjee, A., Chakraborty, S., **Patil, U. D.**, & Puppala, A. J. (2020). Evaluation of Rock Slope Stability Using 3-Dimensional Data Analysis. In Tran-SET 2020 (pp. 28-33). Reston, VA: American Society of Civil Engineers. Tran-SET 2020, September 1–2, 2020, Albuquerque, New Mexico (Conference Held Virtually), Published online: January 12, 2021, DOI: <https://doi.org/10.1061/9780784483305.004>
- Congress, S. S. C., Puppala, A. J., Prince Kumar, **Patil U. D.** (2021) “Assessment of Pavement Geometric Characteristics using UAV-CRP Data.” ASCE International Conference on Transportation & Development (ICTD), June 8-10, 2021 (virtual conference), Published online: June 04, 2021. <https://doi.org/10.1061/9780784483534.029>

- Congress, S. S. C., Prince Kumar, Amit Gajurel, **Ujwalkumar D. Patil**, and Anand Puppala. (2021). “Two- and Three-Dimensional Slope Stability Analyses of Rock Cut Using Unmanned Aerial Photogrammetry Data.” The International Foundations Congress and Equipment Expo, IFCEE 2021: Geoenvironmental Engineering, Geomaterial Modeling, Transportation Geotechnics, and Case Histories, GSP 326, pp. 31-41, May 10-14, 2021, Dallas, Texas. <https://doi.org/10.1061/9780784483435.004>
- **Patil, U. D.**; Kho, G.; Lopez, V.; Jenson, J.; Lander, M. and Khosrowpanah, S. (2021). “Effect of Rainfall Infiltration on Stability of a Tropical slope from Western Pacific.” The International Foundations Congress and Equipment Expo, IFCEE 2021: From Traditional to Emerging Geotechnics, GSP 325, pp. 237-246, May 10-14, 2021, Dallas, Texas. <https://doi.org/10.1061/9780784483428.025>
- **Patil, U. D.**; Kho, G.; Catahay, M.; Lopez, V.; Khosrowpanah, S.; Jenson, J. (2021). “Effect of Antecedent Rainfall on Slope failures in Tropical Mountainous Environmental Setting.” Geo-Extreme 2021: Climatic Extremes and Earthquake Modeling, ASCE conference, November 7–10, 2021, Savannah, Georgia, GSP 329, pp. 11-20, <https://doi.org/10.1061/9780784483695.002>
- **Patil, U.D.**, Shelton III, A.J., Kim, Y.S., Aquino, E., S.S. Chandra Congress (2022). “Influence of Vegetation on the Stability of a Tropical Hill Slope Made from Low Hydraulic Conductivity Soil.” ICONHIC 2022, 3rd International Conference on Natural Hazards & Infrastructure 5-7 July 2022, Athens, Greece, technical Session “Landslides: Advanced modelling and remote sensing”, ISSN 2623-4513.
- **Patil, U. D.**, Mabagos, D., Yeo, M. H., Congress, S. S. C., Shelton, A., and Demeulenaere, E. (2023). "Improvement in Stability of a Tropical Hillslope via Mechanical Root Reinforcement". In Geo-Congress 2023: Sustainable Infrastructure Solutions from the Ground Up, held in Los Angeles, California on March 26–29, Geotechnics of Natural Hazards, Proceedings Editors Ellen Rathje, Brina Montoya, and Mark Wayne, <https://doi.org/10.1061/9780784484654.047>, 2023GSP 338, pp. 469-477.
- Patil, U.D., Yeo, M., Aquino, E., Congress, S.S.C., Demeulenaere, E. (2023). “Role of Acacia Tree Root’s Reinforcement in Hill Slope Stability”. Proceedings of the 9ICEG-9th International Congress on Environmental Geotechnics, Vol 5: Human-Induced and Natural Disaster Mitigation, pp. 436-443, 25-28 June 2023, Chania, Greece, <https://doi.org/10.53243/ICEG2023-258>.
- **Patil, U.D.**, Yeo, M. H., Demeulenaere, E., Mabagos, D., and Congress, S.S.C., (2023). “Contribution of Vetiver Grass Towards Slope Stability Via Mechanical Root Reinforcement.” 2nd International Conference on Construction Resources for Environmentally Sustainable Technologies, CREST-2023, to be held from November 20-22, 2023, Fukuoka, Japan, *Paper accepted for publication*.

SELECTED RESEARCH REPORTS

- **Patil U. D.** (2020). “Initiative Towards Development of a Landslide Predictive System in Guam via In-situ Monitoring of Moisture-Suction Relationship”, a final technical project report submitted to the University of Guam EPSCoR Program, a National Science Foundation (NSF) funded project under Grant Number OIA-1457769-GEC seed funding Year 4 through Guam EPSCoR for GEC Seed Funding 2019-20.
- **Patil U. D.** (2020). “Bio-engineering solutions to mitigate shallow landslides via quantification of root tensile strength”, final technical project report submitted to the University of Guam EPSCoR Program, a National Science Foundation (NSF) funded project under Grant Number OIA-1457769-GEC seed funding Year 5 through Guam EPSCoR for GEC Seed Funding 2019-20.
- **Patil U. D.** and Khosrowpanah, S. (2021). “The geotechnical investigation of rainfall-induced landslides in the Piti-Asan watershed”, a final technical project report submitted to the Guam Bureau of Statistics & Plans (BSP), a project funded by the department of interior (DOI), Office of Insular Affairs under its Technical Assistance Program (TAP), Program Title Coral Reef and natural resources initiative for rehabilitation and restoration of corals (CRIGU20), administered by the Guam Bureau of Statistics and Plans.
- **Patil U. D.** (2021). “Bio-engineering solution for shallow slope failures/landslides and erosion problems in Guam”, a final technical project report submitted to University of Guam Sea Grant Program, a project funded by National

Sea Grant College Program of the United States Department of Commerce, sponsored by the University of Guam Sea Grant (UOG-SG) from National Oceanic and Atmospheric Administration (NOAA).

PROFESSIONAL PRESENTATIONS

- ASCE Geo-Congress, San Diego, 2013; ASCE Geo-Congress, Atlanta, Georgia (2014); UNSAT 2014, 6th International Conference on Unsaturated Soils, Sydney, Australia; ASCE Geo-Congress, IFCEE, San Antonio, TX (2015); 9th University of Guam Regional Conference on Island Sustainability (CIS-2018), Tumon, Guam; International Tropical Islands Water Conference (virtual), Hawaii, April 12-15, 2021; International Foundations Congress & Equipment Expo (IFCEE), May 10-14, 2021, Dallas, Texas, USA.

SCHOLARSHIPS AND HONORS

- **2011- 2014** Doctoral Research STEM Assistantship, University of Texas Arlington, USA.
- **2007-08** Graduate Teaching Assistantship at San Diego State University, CA, USA.

MEMBERSHIP & LICENSES

- Member of American Society of Civil Engineers (ASCE, ID # 9475379)
- Member of International Society of Soil Mechanics Geotechnical Engineering (ISSMGE)
- Society of American Military Engineers (SAME, Membership # 380118)
- Professional Engineer, P.E. Civil (Texas, License # 122233; granted on 12/11/2015)
- Engineer-in-Training, E.I.T. (Texas, EIT # 51536)
- Active member of The Honor Society of Phi Kappa Phi (Since 2020)

COMPUTER SKILLS

- MS Office, AutoCAD, Grapher, Geo-Studio, GSTABLE, SoilVision, RocScience slide, Driven, ABAQUS, Flac 3D, Plaxis, SAP 2000, Mathcad, gINT.

PROFESSIONAL SERVICE AS A REVIEWER

Journal Articles (reviewed more than 150 international manuscripts for more than 55 Journals)

- Geotechnical Testing Journal (ASTM)
- Journal of Testing and Evaluation (ASTM)
- International Journal of Geomechanics (ASCE)
- Journal of Materials in Civil Engineering (ASCE)
- Journal of Geotechnical & Geoenvironmental Engineering (ASCE)
- Géotechnique (Ice Publishing, UK)
- International Journal for Numerical and Analytical Methods in Geomechanics (Wiley)
- Environmental Geotechnics (Ice Publishing)
- Environmental Earth Sciences (Springer)
- Geomechanics and Engineering, An International Journal (Techno Press)
- Structural Engineering and Mechanics, An International Journal (Techno Press)
- Canadian Journal of Soil Science (Canadian Science Publishing)
- Journal of Hydrology (Elsevier Journals)
- Soils and Foundations (Elsevier Journals)
- International Soil and Water Conservation Research (Elsevier Journals)
- Journal of Rock Mechanics and Geotechnical Engineering (Elsevier Journals – ScienceDirect)
- Case Studies in Construction Materials (Elsevier)
- Geotechnical and Geological Engineering (Springer)
- Bulletin of Engineering Geology and the Environment (Springer Verlag, Germany)
- Marine Georesources & Geotechnology (Taylor & Francis Group, UK)
- European Journal of Environmental and Civil Engineering (Taylor & Francis Group, UK)
- Sustainable Civil Infrastructures (Springer)

- Ships and Offshore Structures (Taylor & Francis Group, UK)
- Acta Geotechnica (Springer)
- Geomatics, Natural Hazards and Risk (Taylor & Francis Group, UK)
- Geosciences (MDPI)
- Symmetry (MDPI)
- Applied Sciences (MDPI)
- Sensors (MDPI)
- Land (MDPI)
- Remote Sensing (MDPI)
- International Journal of Environmental Research and Public Health (MDPI)
- Journal of Marine Science and Engineering (MDPI)
- Energies (MDPI)
- Measurement (Elsevier)
- International Journal of Geosynthetics and Ground Engineering (Springer)
- Arabian Journal for Science and Engineering (Springer)
- Transportation Infrastructure Geotechnology (Springer Nature)
- Advances in Civil Engineering (Hindawi)
- Advances in Materials Science and Engineering (Hindawi)
- Mathematical Problems in Engineering (Hindawi)
- Journal of Civil Engineering and Management (VGTU Journals)
- British Journal of Applied Science & Technology (Sciencedomain International)
- Open Science Journal (OSJ), Serbia
- Journal of Zhejiang University-SCIENCE A (Applied Physics & Engineering - Springer)
- Journal of Engineering Research and Reports (Sciencedomain International)
- Journal of Geological Resource and Engineering (David Publishing)

Conference Proceedings (reviewed more than 47 conference articles)

- Geo-Congress 2024 ASCE International Conference, Vancouver, British Columbia from February 25 - 28, 2024
- UNSAT 2023, 8th International Conference on Unsaturated Soils, Milos, Greece, from May 2-5, 2023
- 9th International Congress on Environmental Geotechnics (9ICEG) by ISSMGE, Chania, Greece, from 25-28 June 2023
- Geo-Congress 2023, ASCE International Conference, Las Angeles, California, USA, March 26-29, 2023
- Geo-Congress 2022, ASCE International Conference, Charlotte, North Carolina, USA, March 20-23, 2022
- Geo-Congress 2020, ASCE International Conference, Minneapolis, Minnesota, USA, February 25-28, 2020
- Geo-Congress 2019, 8th International Conference on Case Histories in Geotechnical Engineering, Philadelphia, Pennsylvania, USA, March 24-27, 2019
- GeoShanghai 2018, International Conference: May 27-30, 2018, Shanghai, China
- Transport Infrastructure and Systems (TIS 2017): Proceedings of AIIT International Congress, Rome, Italy
- PanAm-UNSAT 2017: 2nd Pan American Conference on Unsaturated Soils, 12th-15th November, Dallas, TX, USA
- Geo-Chicago 2016: Sustainability, Energy, and the Geoenvironment, August 14-18, Chicago, Illinois, USA
- IFCEE 2015 (ASCE): International Foundations Congress and Equipment EXPO, March 17-21, San Antonio, TX, USA
- UNSAT 2014: International Conference on Unsaturated Soils: July 2-4, 2014, Sydney, NSW (Australia)
- GeoShanghai 2014: International Conference on Geotechnical Engineering, May 26-28, 2014, Shanghai, China
- Geo-Congress 2014: Geo-Characterization and Modeling for Sustainability, Feb 23-26, Atlanta, Georgia, USA

OTHER RESEARCH PROPOSAL REVIEW SERVICES

Served (from 2019-2021) on the committee for Texas A & M University (College Station) to review Tran-SET Transportation Center problem statements that form the basis of funded research projects – and both a practical and technical review is critical to ensure Tran-SET is funding research to address regional transportation needs.

TECHNICAL COMMITTEE MEMBERSHIP & SERVICE

- ASCE's Geotechnical Institute (GI) Technical Committee Member: Unsaturated Soils

- ASCE's Geotechnical Institute (GI) Technical Committee Member: Soil Properties & Modeling
- Geo-Congress 2020, ASCE International Conference, Minneapolis, Minnesota, USA, February 25-28, 2020: served as Session Chair/Moderator for "Soil Properties and Modeling" section & organized technical papers review process
- Geo-Congress 2024, ASCE International Conference, Vancouver, British Columbia from February 25 - 28, 2024: serving as Co-Session Chair/Moderator for "Unsaturated Soils" section & organized technical papers review process

REFERENCES CONTACT

- **Will be provided upon request.**