Ronald S. Harichandran, Ph.D., P.E., F.ASCE

Tagliatela College of Engineering
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Education

Ph.D. in Civil Engineering — *Massachusetts Institute of Technology*, Cambridge, Massachusetts
February 1985 — Dissertation: "Space-time variation of earthquake ground motion"

M.S. in Civil Engineering — *Massachusetts Institute of Technology*, Cambridge, Massachusetts
September 1981 — Thesis: "Extremes of combined stochastic dynamic responses"

B.E. in Civil Engineering — *University of Canterbury*, Christchurch, New Zealand.
November 1979 — First Class Honors

Experience

Administrative

Vice Provost for Research, University of New Haven (April 2019-present)

Support the research and scholarly activities of faculty and students in all colleges. Oversight of the Office of Grants and Sponsored Programs, IRB approvals for human subjects research, financial conflict of interest monitoring, intellectual property and technology transfer issues, compliance with classified research and export control requirements, marketing of research image of the university, internal faculty and student research grants and awards, and the Summer Undergraduate Research Fellowship program. Established Faculty Grant Incentive Program in 2022.

Dean, University of New Haven (August 2011-present)

Chief executive officer of the Tagliatela College of Engineering, University of New Haven. The college has 70 tenure-stream and non-tenure-stream full-time faculty members organized into four departments offering 9 BS and 14 MS programs and a PhD program. Currently, about 600 undergraduate and 1700 graduate students are enrolled in the college. Demonstrated record of strong administrative leadership and management of personnel, budgets and resources. Highlights of experiences and accomplishments are listed below.

Strategic Planning and Programs

- Co-founder of the Connecticut AI Alliance, bringing together a group including 16 academic institutions and six community organizations and nonprofit agencies that will collaborate with the goal of establishing Connecticut as a premier hub for artificial intelligence, innovation, and application.
- Developed the college's strategic plan, vision and mission statements.
- Facilitated launch of the Connecticut Institute of Technology in May 2020 to coalesce interdisciplinary programs and research, enhance marketing and promote excellence.
- Supported the designation of the university in 2019 as a Center of Academic Excellence in Cyber Operations by the National Security Agency. The university is one of only 21 institutions in the country to have this designation.

- Established college-wide focus areas in cybersecurity, wireless communications, renewable energy, sustainability, and data science to create foci for faculty hiring and curriculum development.
- Led development and implementation of college-wide technical communications program spanning seven BS programs through all four years; and development of four integrated e-learning modules to support instruction in technical communication.
- Led development of entrepreneurial minded learning initiatives in the college, including 18 e-learning modules and integration into engineering courses, to establish a brand. Over 85 engineering faculty at 54 universities around the country have integrated these modules into their courses.
- Launched Women in Engineering program with external gifts.
- Established a university-wide Entrepreneurship and Innovation program and a shared Department of Entrepreneurship and Innovation in partnership with the College of Business.
- Facilitated study abroad program for engineering students at the university campus in Prato, Italy.
- Served on leadership team to launch MS in Data Science program in San Francisco, California with approvals from NEASC, the CT Office of Higher Education and the California Bureau for Private Postsecondary Education.
- Promoted launch of new PhD in Engineering and Applied Science, MS in Biomedical Engineering, MS in Chemical Engineering, a fully online MS in Environmental Engineering, MS in Civil Engineering, MS in Construction Engineering and Management, MS in Chemistry, MS in Data Science, and interdisciplinary MS in Information Science programs.
- Promoted establishment of accelerated BS+MS programs to improve graduate program enrollments.
- Established joint academic programs with a few Chinese universities and one Indian university.

Accreditation and Assessment

- Coordinated ABET accreditation of seven engineering and computer science programs, NSA Cyber Operations designation of Cybersecurity & Networks and Computer Science programs, and ACS accreditation of chemistry program.
- Supported approval of new PhD in Engineering and Applied Science by New England Commission of Higher Education.
- Led assessment of integrated e-learning modules program.
- Supported approval of MS in Data Science in San Francisco by the New England Commission of Higher Education and the California Bureau of Private Postsecondary Education.

Student Success

- Grew undergraduate enrollment by 50% to over 800 students and graduate enrollment by 100% to over 600 students during first three years as dean. Current undergraduate enrollment is about 600 and graduate enrollment is about 1400.
- Helped interview and screen students for the NSF Scholarship for Service program.
- Established peer-to-peer and student-to-alumni mentoring programs to improve retention and career advancement and secured support from Lockheed Martin for this.
- Facilitated creation of remedial chemistry courses for weaker students.
- Facilitated growth of industry-sponsored capstone design projects across the college that help with career placement. Also coordinated capstone design projects across all programs to grow interdisciplinary projects. Established annual Capstone Design Expo to showcase student work.

Faculty Management and Development

- Hired dozens of faculty and staff members, established a faculty mentoring program, executed annual reviews, reappointment, tenure and promotion actions, and made raise recommendations.
- Supported faculty to attend national teaching workshops and present research at conferences.
- Assisted Provost with university-wide faculty workload expectations and criteria that were approved

by the faculty in Spring 2017.

- Led development and adoption of unified tenure and promotion criteria for the college.
- Established an innovative shared Department of Engineering and Applied Science Education to foster interdisciplinary education, and research and scholarship in engineering education.

Diversity, Equity and Inclusion Initiatives

- Facilitated creation of college's Diversity, Equity and Inclusion Statement.
- Established a Diversity, Equity and Inclusion Committee of faculty, staff and students.
- Facilitated diversity, equity and inclusion training for faculty.
- Facilitated conduct of diversity, equity and inclusion audit of undergraduate programs in college.
- Secured Bronze Level recognition of the college by the Diversity Recognition Program of the American Society of Engineering Education.

Support of Research

- Stimulated faculty research and scholarship; three faculty members in the college received NSF Early CAREER Awards since 2019 and one transferred it from another institution in 2024.
- Secured start-up funds for new faculty hires.
- Provided research assistants to junior tenure-track faculty.
- Supported equipment purchases through corporate and earmark funds.
- Supported students to participate in research and present their findings.

Facilities Improvements

- Championed and facilitated establishment of an academic Makerspace, a Cyber Forensics Research and Education Laboratory, an Integrated Materials Discovery Lab, and a Polymer Materials Lab, and conducted dedication ceremonies.
- Oversaw major renovation of the engineering building to establish new laboratories and upgrade existing laboratories.

Outreach and Development

- Worked with the President and the Advancement Office to secure two endowed chair and one endowed professorship positions in 2022 and 2023.
- Nurtured alumni and corporate relationships and solicited funds to support college.
- Launched college newsletter, alumni Hall of Fame, and college alumni dinners.
- Led academic partnership between the university and the Grade 6-12 Engineering and Science University Magnet School to stimulate middle and high school student interest in STEM fields.
- Facilitated deployment of the TEAM Summer Camp developed by Georgia Tech with sponsorship from Sikorsky Aircraft Corporation for grade 10-12 high school students.

Chairperson, Michigan State University (August 1995-July 2011)

Chief executive officer of the Department of Civil and Environmental Engineering at Michigan State University. The department had 24 tenure-stream faculty members and 13 academic specialists and support staff. Faculty specialties encompassed construction materials, environmental engineering, hydrology and water resources engineering, geo-engineering, pavement engineering, structural engineering, and transportation engineering. About 350 undergraduate students and 90 graduate students were enrolled in the program. Highlights of experiences and accomplishments include the following:

- Strong record of administrative leadership and management of personnel, budgets and resources resulting in three reappointments to the position.
- Strongly promoted research and scholarship. The annual external research expenditure grew from about $3 million when I became chair to $5.8 million when I left.

- Published first formal strategic plan for the department in 1998.
- Hired 19 faculty and 9 staff members, negotiated start-up packages, conducted annual performance reviews, allocated raises, and acted on many reappointment, tenure and promotion cases.
- Led successful ABET accreditation of the B.S. program in civil engineering three times. Facilitated creation of B.S. program in environmental engineering.
- Secured $6 million to build laboratory facilities and establish scholarships/fellowships.
- Spearheaded construction of the 12,200 sq. ft. Civil Infrastructure Laboratory, including a state-of-the-art Structural Fire Testing facility.
- Facilitated establishment of the first National Center for Pavement Preservation supported by the state of Michigan and the Federal Highway Administration.
- Established the Michigan Transportation Research Board and serving as its inaugural chairperson.
- Facilitated study abroad and research partnerships with universities in Russia, China and Turkey.
- Launched integrated technical communication program in 1999.
- Launched department alumni newsletter, website, and Distinguished Alumni Award. Established and coordinated annual alumni dinner, centennial celebration, laboratory and center dedications.

Academic

Full, Assoc. & Asst. Professor
September 1984 to July 2011
Department of Civil and Environmental Engineering
Michigan State University, East Lansing, Michigan

- Known internationally for work on earthquake ground motion modeling, structural engineering, and pavement analysis
- Strong funding and publication record, with funding from a wide variety of sources
- Excellent teaching and service record

Visiting Professor
January to March 2011
Department of Civil and Environmental Engineering
University of Auckland, Auckland, New Zealand

Visiting Professor
October to December 2010
Department of Civil Engineering
Columbia University, New York, New York

Visiting Fellow
January to May 1994
Department of Structural Engineering
University of New South Wales, Sydney, Australia

Research Assistant
September 1980 to August 1984
Department of Civil Engineering
Massachusetts Institute of Technology, Cambridge, Massachusetts

Industrial

Research Engineer
November 1979 to August 1980
Structural Division
Central Laboratories, Lower Hutt, New Zealand

Affiliations

Professional Engineer State of Michigan, License Number 6201033594. Issued: 04/01/1988.

Professional Societies American Society of Civil Engineers, Fellow
American Society of Engineering Education, Member

Awards, Honors & Boards

Co-Founder
2025
Connecticut AI Alliance. An alliance of 18 universities and a growing number of non-profits.

Elected Member
2014-present
Connecticut Academy of Science and Engineering, CT.

Best Paper Award
June 2018
Second Place, Best Paper Category: Teaching, Entrepreneurship Division, American Society of Engineering Education.

Board Member
2014-2017
United Way of Greater New Haven, New Haven, CT.

Withrow Exceptional Service Award
2011
College of Engineering, *Michigan State University*, East Lansing, Michigan.

Advisory Board Member
2003-2011
National Center for Pavement Preservation, East Lansing, Michigan.

ASCE Department Heads Council Executive Committee
2003 to 2010
American Society of Civil Engineers. Elected Chair (2008-10), Secretary (2006-08), Member (2003-10).

Executive Leadership Academy
2009 to 2010
Michigan State University, East Lansing, Michigan.
Included participation in one-week Leadership Development Program at the Center for Creative Leadership, Greensboro, NC.

Michigan Transp. Research Board
2005 to 2010
State of Michigan. Elected founding chair (2005-10).

ASCE BOK II Committee
2005 to 2007
American Society of Civil Engineers.

Fellow
2005
American Society of Civil Engineers.

CIC Academic Leadership Fellow
1996 to 1997
Michigan State University, East Lansing, Michigan,
on behalf of the Committee on Institutional Cooperation.

Teacher-Scholar Award
1992
Michigan State University, East Lansing, Michigan.

Commonwealth Scholarship
1981
University of Waterloo, Ontario, Canada (Declined).
(Scholarship covering PhD tuition, travel and living costs and awarded competitively to citizens of Commonwealth countries.)

University Junior Scholarship
1975
University Grants Committee, New Zealand.
(Nationally competitive scholarship to attend any university.)

Publications

Reviewed Archival Journals and Special Issues

Education

1. Harichandran, R. S., Erdil, N. O., and Li, C. (Under preparation). "Learning indices to assess student achievement of program outcomes."
2. Breitinger, F., Tully-Doyle, R., Przyborski, K., Beck, L., and Harichandran, R. S. (2021). "First year students' experience in a Cyber World course – an evaluation." *Education and Information Technologies*, 26(1), 1069–1087.
3. Harichandran, R. S., Erdil, N. O., Carnasciali, M-I., Nocito-Gobel, J., and Li, Q. (2018). "Developing an entrepreneurial mindset in engineering students using integrated e-learning modules." *Advances in Engineering Education*, 7(1).

Structural Engineering

4. Harichandran, R. S., Baiyasi, M. I., and Nossoni, G. (2017). "Freeze-thaw durability of concrete columns wrapped with FRP and subject to corrosion-like expansion." *Journal of Materials in Civil Engineering*, ASCE, 29(1).
5. Nossoni, G., Harichandran, R. S., and Baiyasi, M. I. (2015). "Rate of reinforcement corrosion and stress concentration in concrete columns repaired with bonded and unbonded FRP wraps." *Journal of Composites for Construction*, ASCE, 19(5).
6. Nossoni, G., Harichandran, R. S. (2014). "Electrochemical-mechanistic model for concrete cover cracking due to corrosion initiated by chloride diffusion." *Journal of Materials in Civil Engineering,* ASCE, 26(6).
   Nossoni, G., Harichandran, R. S. (2015). Closure to: "Electrochemical–mechanistic model for concrete cover cracking due to corrosion initiated by chloride diffusion." *Journal of Materials in Civil Engineering, ASCE,* 27(6).
7. Nossoni, G., Harichandran, R. S. (2012). "Current efficiency in accelerated corrosion testing of concrete." *Corrosion, NACE,* 68(9), 801–809.
8. Zhang, G., Harichandran, R.S., and Ramuhalli, P. (2012). "An automatic impact-based delamination detection system for concrete bridge decks." *NDT & E International*, 45(1), 120–127.
9. Zhang, G., Harichandran, R.S., and Ramuhalli, P. (2012). "Automatic delamination detection of concrete bridge decks using impact signals." 17(6), *Journal of Bridge Engineering*, ASCE, 951–954.
10. Gong, A., and Harichandran, R. S. (2012). "Wood–cement particleboard: impact behavior and potential application in crash barriers." *Journal of Materials in Civil Engineering*, ASCE, 24(1), 134–140.
11. Iqbal, S., and Harichandran, R. S. (2011). "Capacity reduction and fire load factors for LRFD of steel columns exposed to fire." *Fire Safety Journal*, 46, 234–242.
12. Zhang, G., Harichandran, R.S., and Ramuhalli, P. (2011). "Application of noise cancelling and damage detection algorithms in NDE of concrete bridge decks using impact signals." *Journal of Nondestructive Evaluation*, 30(4), 259–274.
13. Iqbal, S., and Harichandran, R.S. (2010). "Capacity reduction and fire load factors for LRFD of steel members exposed to fire." *Journal of Structural Engineering*, ASCE, 136(12), 1554–1562.
14. Nossoni, G., and Harichandran, R. S. (2010). "Improved repair of concrete structures using polymer concrete patch and FRP overlay." *Journal of Materials in Civil Engineering*, ASCE, 22(4), 314–322.

15. Bahn, B. Y., and Harichandran, R. S. (2008). "Flexural behavior of reinforced concrete beams strengthened with CFRP sheets and epoxy mortar." *Journal of Composites for Construction*, ASCE, 12(4), 387–395.

16. Hong, S., and Harichandran, R. S. (2005). "Sensors to monitor CFRP/concrete bond in beams using electrochemical impedance spectroscopy." *Journal of Composites for Construction*, ASCE, 9(6), 515–523.

17. Harichandran, R. S. (2001). Discussion of "Concrete bridge decks reinforced with fiber-reinforced polymer bars," by T. E. Bradberry. *Transportation Research Record*, 1770, 102.

18. Harichandran, R. S., and Ye, B. (1993). "A method of deriving parallel algorithms for direct integration in structural dynamics." *Computing Systems in Engineering*, 4(4–6), 415–420.

19. Harichandran, R. S. (1991). "Stiffness reduction factor for LRFD of columns." Technical Note, *Engineering Journal*, AISC, 28(3), 129–130.

20. Zhang, Y., and Harichandran, R. S. (1990). "Implicit subdomain integration for dynamic analysis of large-scale structural systems." *Computer Methods in Applied Mechanics and Engineering*, 81, 57–70.

21. Zhang, Y., and Harichandran, R. S. (1989). "Eigenproperties of large-scale structures by finite element partitioning and homotopy continuation." *International Journal of Numerical Methods in Engineering*, 28, 2113–2122.

22. Zhang, Y., and Harichandran, R. S. (1989). "Eigenproperties of classically damped MDOF composite systems." *Journal of Engineering Mechanics*, ASCE, 115(7), 1515–1526.

23. Harichandran, R. S., and Zhang, Y. (1989). "Eigenproperties of nonclassically damped MDOF composite systems." *Journal of Engineering Mechanics*, ASCE, 115(7), 1527–1542.
Harichandran, R. S., and Zhang, Y. (1989). Closure to: "Eigenproperties of nonclassically damped MDOF composite systems." *Journal of Engineering Mechanics*, ASCE, 117(12), 2943–2945.

Random Vibration and Earthquake Engineering

24. Tarinejad, R., Ahmadi, M. T., and Harichandran, R. S. (2014). "Full-scale experimental modal analysis of an arch dam: the first experience in Iran." *Soil Dynamics and Earthquake Engineering*, 61–62, 188–196.

25. Tarinejad, R., Fatehi, R., and Harichandran, R. S. (2013). "Response of an arch dam to non–uniform excitation generated by a seismic wave scattering model." *Soil Dynamics and Earthquake Engineering*, 52, 40–54.

26. Chen, M.-T., and Harichandran, R. S. (2001). "Response of an earth dam to spatially varying earthquake ground motion." *Journal of Engineering Mechanics*, ASCE, 127(9), 932–939.

27. Kang, J., and Harichandran, R. S. (1999). "Nonlinear random vibration of FRP plates using high-order shear theory." *Journal of Engineering Mechanics*, ASCE, 125(9), 1081–1088.

28. Chen, M.-T., and Harichandran, R. S. (1998). "Statistics of the von Mises stress response for structures subjected to random excitations." *Shock and Vibration*, 5, 13–21.

29. Harichandran, R. S., and Naja, M. (1997). "Random vibration of laminated composite plates with material non-linearity." *International Journal of Non-Linear Mechanics*, 32(4), 707–720.

30. Harichandran, R. S., Hawwari, A., and Sweidan, B. N. (1996). "Response of long-span bridges to spatially varying ground motion." *Journal of Structural Engineering*, ASCE, 122(5), 476–484.

31. Harichandran, R. S. (1993). "An efficient, adaptive algorithm for large-scale random vibration analysis." *Earthquake Engineering and Structural Dynamics*, 22(2), 151–165.

32. Harichandran, R. S., and Hawwari, A. (1992). "Non-linear random vibration of filamentary composites." *Computing Systems in Engineering*, 3(1–4), 469–475.

33. Harichandran, R. S. (1992). "Random vibration under propagating excitation: closed-form solutions." *Journal of Engineering Mechanics*, ASCE, 118(3), 575–586.

34. Harichandran, R. S. (1991). "Estimating the spatial variation of earthquake ground motion from dense array recordings." *Structural Safety*, 10(1–3), 219–233.

35. Harichandran, R. S., and Wang, W. (1990). "Response of indeterminate two-span beam to spatially varying seismic excitation." *Earthquake Engineering and Structural Dynamics*, 19(2), 173–187.

36. Harichandran, R. S., and Wang, W. (1988). "Response of simple beam to spatially varying earthquake excitation." *Journal of Engineering Mechanics*, ASCE, 114(9), 1526–1541.

37. Harichandran, R. S. (1987). "Stochastic analysis of rigid foundation filtering." *Earthquake Engineering and Structural Dynamics*, 15(7), 889–899.

38. Harichandran, R. S. (1987). "Correlation analysis in space-time modeling of strong ground motion." Technical Note, *Journal of Engineering Mechanics*, ASCE, 113(4), 629–634.

39. Harichandran, R. S., and Vanmarcke, E. (1986). "Stochastic variation of earthquake ground motion in space and time." *Journal of Engineering Mechanics*, ASCE, 112(2), 154–174.
Harichandran, R. S., and Vanmarcke, E. (1987). Closure to: "Stochastic variation of earthquake ground motion in space and time." *Journal of Engineering Mechanics*, ASCE, 113(8), 1271–1273.

Pavement Engineering

40. Haider, S. W., Harichandran, R. S., and Dwaikat, M. B. (2012). "Impact of systematic axle load measurement error on pavement design using Mechanistic–Empirical Pavement Design Guide." Technical Note, *Journal of Transportation Engineering*, ASCE, 138(3), 381–386.

41. Haider, S. W., and Harichandran, R. S. (2010). "The effect of axle load measurement errors on pavement performance and design reliability." *Journal of the Transportation Research Board*, 2160(1).

42. Haider, S. W., and Harichandran, R. S. (2009). "Effect of axle load spectrum characteristics on flexible pavement performance." *Journal of the Transportation Research Board*, 2095, 101–113.

43. Haider, S. W., Harichandran, R. S., and Dwaikat, M. B. (2009). "Closed-form solutions for bimodal axle load spectra and relative pavement damage estimation." *Journal of Transportation Engineering*, ASCE, 135(12), 974–983.

44. Haider, S. W., and Harichandran, R. S. (2007). "Relating axle load spectra to truck gross vehicle weights and volumes." *Journal of Transportation Engineering*, ASCE, 133(12), 696–705.

45. Chatti, K., Ji, Y., and Harichandran, R. S. (2004). "Dynamic time domain backcalculation of layer moduli, damping, and thicknesses in flexible pavements." *Journal of the Transportation Research Board*, 1869, 106–116.

46. Harichandran, R. S., Buch, N., and Baladi, G. Y. (2001). "Flexible pavement design in Michigan: transition from empirical to mechanistic methods." *Journal of the Transportation Research Board*, 1778, 100–106.

47. Kim, H.-B., Harichandran, R. S., and Buch, N. (1998). "Development of load and resistance factor design format for flexible pavements." *Canadian Journal of Civil Engineering*, 25(5), 880–885.

48. Harichandran, R. S., Mahmood, T., Raab, A., and Baladi, G. Y. (1994) "Backcalculation of pavement layer moduli, thicknesses and bedrock depth using a modified Newton method." In *Nondestructive Testing of Pavements and Backcalculation of Moduli (Second Volume)*, ASTM STP 1198, H. L. Von Quintas, A. J. Bush and G. Y. Baladi (eds.) American Society for Testing and Materials, Philadelphia,

PA, 68–82.

49. Harichandran, R. S., Mahmood, T., Raab, A., and Baladi, G. Y. (1993). "A modified Newton algorithm for backcalculation of pavement layer properties." *Transportation Research Record*, 1384, 15–22.
50. Marcondes, J. A., Burgess, G. J., Harichandran, R. S., and Snyder, M. B. (1991). "Spectral analysis of highway pavement roughness." *Journal of Transportation Engineering*, ASCE, 117(5), 540–549.
51. Harichandran, R. S., Yeh, M-S., and Baladi, G. Y. (1990). "MICH-PAVE: a nonlinear finite element program for the analysis of flexible pavements." *Transportation Research Record*, 1286, 123–131.
52. Baladi, G. Y., and Harichandran, R. S. (1989). "Asphalt mix design and the indirect test: a new horizon." In *Asphalt Concrete Mix Design: Development of More Rational Approaches*, ASTM STP 1041, W. Gartner, Jr. (ed.), American Society for Testing and Materials, Philadelphia, 86–105.
53. Harichandran, R. S., and Yeh, M-S. (1988). "Flexible boundary in finite element analysis of pavements." *Transportation Research Record*, 1207, 50–60.
54. Baladi, G. Y., Lyles, R. W., and Harichandran, R. S. (1988). "Asphalt mix design: an innovative approach." *Transportation Research Record*, 1171, 160–167.
55. Baladi, G. Y., Harichandran, R. S., and Lyles, R. W. (1988). "New relationships between structural properties and asphalt mix parameters." *Transportation Research Record*, 1171, 168–177.

Conference Proceedings—Reviewed Papers

Engineering Education

56. Erdil, N. O., Harichandran, R. S. and Gillespie, S. (2024). "Successes and challenges of college-wide mentorship programs." Proceedings, ASEE Annual Conference, 16 pp.
57. Erdil, N. O., and Harichandran, R. S. (2023). "Statistical validation of growth in the entrepreneurial mindset of students resulting from four years of interventions." Proceedings, ASEE Annual Conference, Paper 37077, 14 pp.
58. Harichandran, R. S., Erdil, N. O., and Gillespie, S. (2022). "College-wide first year and career mentorship programs." *Proceedings*, ASEE Annual Conference, Paper 37524, 13 pp.
59. Carnasciali, M-I., Erdil, N. O., Li, C., and Harichandran, R. S. (2022). "Insights provided by student feedback on integrated e-learning modules covering entrepreneurial topics." *Proceedings*, ASEE Annual Conference, Paper 37535, 11 pp.
60. Erdil, N. O, Harichandran, R. S., Carnasciali, M-I., Nocito-Gobel, J., Nossoni, G., Hadnagy, E., Levert, J., and Zhao, J. (2021). "Faculty development aimed at sustaining and enhancing entrepreneurial minded learning." *Proceedings*, ASEE Annual Conference, Paper 32835, 12 pp.
61. Carnasciali, M-I., Erdil, N. O., Li, C., and Harichandran, R. S. (2021). "Work-in-progress: Comparison of the entrepreneurial mindset of engineering faculty and undergraduate students." *Proceedings*, ASEE Annual Conference, Paper 33281, 8 pp.
62. Harichandran, R. S., Rana, A., and Erdil, N. O. (2020). "An approach to assess achievement of EML through integrated e-learning modules." *Proceedings*, ASEE Annual Conference, Paper 28812, 15 pp.
63. Carnasciali, M-I., Erdil, N. O., Harichandran, R. S., Nocito-Gobel, J., and Li, C. (2020). "Student and faculty perceptions of integrated e-learning modules aimed at developing an entrepreneurial mindset." *Proceedings*, ASEE Annual Conf., Paper 30100, 18 pp.

64. Nossoni, G., and Harichandran, R. S. (2020). "Relationship between Gen Z engineering students' personality types and topics of technical interest." *Proceedings*, ASEE Annual Conference, Paper 30811, 14 pp.

65. Harichandran, R. S., Erdil, N. O., Carnasciali, M-I., Nocito-Gobel, J., Li, C., and Rana, A. (2019). "EML indices to assess student learning through integrated e-learning modules." *Proceedings*, ASEE Annual Conf., Tampa, FL, Paper 24668, 21 pp.

66. Li. C., Harichandran, R. S., Carnasciali, M-I., Erdil, N. O., and Nocito-Gobel, J. (2019). "Assessing the growth in entrepreneurial mindset acquired through curricular and extra-curricular components." *Proceedings*, ASEE Annual Conf., Tampa, FL, Paper 25289, 15 pp.

67. Breitinger, F., Przyborski, K., Beck, L., and Harichandran, R. S. (2019). "'Cyber World' as a theme for a university-wide first-year common course." *Proceedings*, ASEE Annual Conf., Tampa, FL, Paper 25147, 13 pp.

68. Nossoni, G., Nocito-Gobel, J., and Harichandran, R. S. (2019). "Relationship between personality types and technical interest of engineering students, if any." *Proceedings*, ASEE Annual Conf., Tampa, FL, Paper 25217, 12 pp.

69. Carnasciali, M-I., Harichandran, R. S., Erdil, N. O., Nocito-Gobel, J., and Li, C. (2018). "Integrated e-learning modules for developing an entrepreneurial mindset: Direct assessment of student learning." *Proceedings, ASEE Annual Conf.*, Salt Lake City, UT, Paper 22812, 16 pp.

70. Li, C., Harichandran, R. S., Erdil, N. O., Nocito-Gobel, J., and Carnasciali, M-I. (2018). "Investigating the entrepreneurial mindset of engineering and computer science students." *Proceedings, ASEE Annual Conf.*, Salt Lake City, UT, Paper 21777, 11 pp.

71. Randi, J., Harichandran, R. S., Levert, J., and Karimi, B. (2018). "Improving senior design proposals through revision by responding to reviewer comments." *Proceedings, ASEE Annual Conf.*, Salt Lake City, UT, 22 pp.

72. Harichandran, R.S., Kench, B., McGee, S., Collura, M., Nocito-Gobel, J., and Skipton, C. (2017). "Establishment of innovative shared departments to advance interdisciplinary education." *Proceedings, ASEE Annual Conf.*, Columbus, OH, Paper 17652, 11 pp.

73. Erdil, N. O., Harichandran, R. S., Nocito-Gobel, J., Li, C., and Carnasciali, M-I. (2017). "Impact of integrated e-learning modules in developing an entrepreneurial mindset based on deployment at 25 institutions." *Proceedings, ASEE Annual Conf.*, Columbus, OH, Paper 14885, 16pp.

74. Erdil, N. O., Harichandran, R. S., Adams, D., Collura, M. A., Nocito-Gobel, J., and Simson, A. (2016). "Preliminary assessment of and lessons learned in PITCH: an integrated approach to developing technical communication skills in engineers." *Proceedings, ASEE Annual Conf.*, New Orleans, LA, Paper 14711, 21 pp.

75. Erdil, N. O., Harichandran, R. S., Carnasciali, M-I., Nocito-Gobel, J., and Li, C. (2016). "Integrating e-learning modules into engineering courses to develop an entrepreneurial mindset in students." *Proceedings, ASEE Annual Conf.*, New Orleans, LA, Paper 14885, 16 pp.

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Recent Presentations

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Grants and Gifts

External (PI or Co-PI)

National Science Foundation
Pending Award
"Building relationships in innovation and development for growth in emerging technologies (BRIDGE-Tech)," with co-PIs G. Balasubramanian and C. Standish. Collaborative EPIIC proposal with five institutions, $400,000 to each institution.

Davis Educational Foundation
July 2025 to June 2027
"PITCH 2.0: Development of Technical Communication Skills in the Age of AI" with co-PIs: D. Adams, V. Behzadan, K. Horvat, J. Levert, A. Rusu, N. Shetty. $169,387.

Henry Luce Foundation
January to December 2025
"Women in Engineering program," with J. Barone (Development Officers), S. Gillespie, and L. Austin. $100,000.

Lockheed Martin Aerospace Co.
July 2024 to June 2025
"Support for acquisition of metal 3-D printer," with J. Barone (Development Officers). $40,000.

US Department of Education
June 2023 to May 2026
"University of New Haven Center for Consumer Protection and Cybersecurity Project," $326,000. Congressionally Directed Community Projects Fund.

Lockheed Martin Aerospace Co.
November 2022 to June 2023
"Equipment in support of advanced manufacturing," with J. Barone (Development Officer), $50,000.

US Department of Education
June 2022 to May 2025
"Equipment to support a center for cybersecurity," $218,000. Congressionally Directed Community Projects Fund.

Kern Family Foundation
July 2022 to June 2025
"Annual support package," with co-PIs: N. Erdil , S. Gillespie, K. Horvat, $75,000.

Lockheed Martin Aerospace Co.
July 2020 to June 2024
"Lockheed Martin-UNewHaven student mentorship program," with R. Reaback and J. Barone(Development Officers). $140,000.

National Science Foundation
August 2019 to July 2025
"University of New Haven CyberCorps Scholarship for Service (SFS): Super Cyber Operatives (SCOs)," with I. Baggili (PI) and L. Page (co-PI). $4,004,073.

Kern Family Foundation
January 2018 to August 2020
"Integrated e-learning modules: Dissemination & enhancement," with co-PIs: N. Erdil , M-I. Carnasciali, J. Nocito-Gobel, and C. Li. $95,500.

Connecticut Innovations
January 2018 to December 2019
"Developing entrepreneurial talent for Connecticut," with co-PIs: M-I. Carnasciali, N. Erdil, J. Nocito-Gobel and C. Li. $47,750.

Davis Educational Foundation
January 2018 to December 2019
"Development of the 'CyberWorld' common course at the University of New Haven," with F. Breitinger (PI), and co-PIs: K. Pryzyborski, I. Baggili, G. McGee, C. Smith, E. Guy-Serge. $103,125.

Lockheed Martin Aerospace Co.
September 2017 to August 2020
"Support for University Makerspace," with M-I. Carnasciali and R. Reaback (Development Officer). $76,000.

Kern Family Foundation
February 2015 to August 2021

"Developing entrepreneurial thinking in engineering students by utilizing integrated online modules and experiential learning opportunities," with co-PIs: M-I. Carnasciali, J. Nocito-Gobel, N. Erdil and C. Li. $875,424.

Kern Family Foundation
June 2014 to May 2015

"Developing entrepreneurial thinking in engineering students by utilizing integrated online modules and a leadership cohort," with co-PIs: M-I. Carnasciali and J. Nocito-Gobel. $200,000.

Connecticut Innovations
January 2014 to December 2016

"Engineer & Entrepreneur-in-Residence program," with C. Martinez (PI) and C. Allen (co-PI). $43,316.

Sikorsky Aircraft
April 2013 to August 2013

"Team-based engineering and manufacturing (TEAM) networked summer camp," with M-I. Carnasciali and A. Thompson. $35,500.

Davis Educational Foundation
July 2012 to July 2015

"Project to integrate technical communication habits," with co-PIs: M. Collura, J. Nocito-Gobel, N. Erdil, J. Saris, and A. Esmailpour. $185,500.

US Dept. of Energy and CT Energy Finance and Investment Authority
August 2012 to present

"Solar thermal testing laboratory," with A. Montazer (PI) and R. Gorthala (co-PI). $170,000.

Michigan Dept. of Transp.
October 2010 to September 2013

"Implementation of sustainable and green design and construction practices for bridges," with A. Korkmaz (PI) and M. Syal (co-PI)I. $99,819.

Michigan Dept. of Transp.
October 2009 to December 2012

"Development and validation of deterioration models for concrete bridge decks," with R. Burgueño (PI). $299,747.

Michigan Dept. of Transp.
October 2007 to September 2010

"Strand debonding at ends of pretensioned beams," with R. Burgueño (PI). $199,740.

Michigan Dept. of Transp.
October 2007 to May 2009

"Characterization of traffic for the new M-E pavement design guide in Michigan." with N. Buch (PI), and co-PIs: K. Chatti, and S. Haider. $146,618.

Michigan Dept. of Transp.
October 2006 to June 2010

"ECR bridge decks: damage detection and assessment of remaining service life for various overlay repair options," with co-PIs: R. Burgueño and P. Ramuhalli. $334,908.

Michigan Dept. of Transp.
2005 to 2010

"Bridges and structures research center administration." $78,585.

Michigan Dept. of Transp.
January 2005 to January 2007

"Identification of causes and development of strategies for relieving structural distress in bridge abutments," with R. Burgueño (PI), N. Buch and G. Abu-Lebdeh. $234,777.

Michigan Dept. of Transp.
October 2004 to September 2007

"Improved shallow depth patches for concrete structures," with R. Burgueño (co-PI). $160,095.

Federal Highway Administration
September 2003 to August 2004

"Support for the start-up of the National Center for Pavement Preservation," with L. Galehouse (co-PI). $75,000.

Federal Highway Administration
September 2003 to August 2004

"Marketing plan for the National Center for Pavement Preservation," with L. Galehouse (co-PI). $50,000.

Foundation for Pavement Preservation
August 2003 to August 2012
"Support for the National Center for Pavement Preservation." $415,000.

Michigan Dept. of Transp.
February 2001 to August 2003
"Sensors to monitor bond in concrete bridges rehabilitated with FRP." $114,814.

Michigan Dept. of Transp.
May 2000 to May 2002
"Development of a computer program for dynamic backcalculation of flexible-pavement layer moduli," with K. Chatti (PI). $138,939.

Michigan Dept. of Transp.
January 1997 to June 2000
"Polymer composite jackets for column repair." $194,981.

National Science Foundation
October 1997 to September 1999
"Low frequency characterization of coherency functions for spatially varying earthquake ground motion," with E. Heredia-Zavoni (co-PI) from the Universidad Nacional Autónoma de México. $39,178 (funding for co-PI provided by CONACyT, Mexico).

National Science Foundation
October 1997 to September 1999
"Response of earth dams to spatially varying ground motion." $106,945.

Michigan Dept. of Transp.
September 1996 to August 1999
"Improvement of MICHPAVE and MICHBACK," with co-PIs: N. Buch and G. Y. Baladi. $125,069.

Michigan Dept. of Transp.
September 1996 to September 1999
"Calibration of MICHPAVE's rut and fatigue distress models and development of an overlay design procedure in MICHBACK," with N. Buch (PI) and G. Y. Baladi (co-PI). $116,427.

Federal Highway Administration
November 1991 to May 1993
"Impact behavior of fiber-reinforced composite materials/structures for use in roadside safety applications." *Eisenhower Graduate Fellowship* for Binshan Ye. $38,493.

Michigan Dept. of Transp. and UMTRI
May 1991 to April 1994
"Reduction of rutting under heavy vehicle loads," with G. Y. Baladi (PI). $226,436.

National Science Foundation
September 1990 to August 1993
"Efficient numerical techniques for dynamic analysis of large-scale structures on vector and parallel computers." $48,000.

Swanson Analysis Systems, Inc.
March 1990 to March 1991
"Expanding the random vibration capabilities of ANSYS." $13,015.

National Science Foundation
January 1987 to September 1989
"Space-time variation of strong ground motion and its effect on structures." $64,754.

Michigan Dept. of Transp.
March 1986 to September 1988
"Development of a computer program for design of pavement systems consisting of layers of bound and unbound materials," with G. Y. Baladi (co-PI). $81,416.

Federal Highway Administration
October 1985 to September 1987
"Integrated material and structural design method for flexible pavements," with G. Y. Baladi (PI) and R. W. Lyles (co-PI). $246,659.

Internal (PI)

Michigan State University
July 1995 to June 1998
"Shear reinforcement of wood beams with polymer composite materials," with F. H. Hatfield (co-PI). *Research Excellence Fund*, Composite Materials and Structures Center. $66,897.

Michigan State University
July 1990 to June 1993
"Nonlinear random vibration analysis of structural systems made of composite materials." *Research Excellence Fund*, Composite Materials and Structures Center, Michigan State University. $62,931.

Michigan State University
July to December 1990
"Professional short course on designing steel structures using the new LRFD specifications," with F. J. Hatfield (co-PI). *All University Lifelong Education Grant*. $7,147.

General Electric Corporation
June to August 1989
"Instructional and research utilization of the random vibration capabilities of ANSYS." *Faculty Development Grant*, administered by the Case Center, Michigan State University. $10,005.

Michigan State University
July 1987 to June 1988
"Dynamic analysis of combined equipment-structure systems." *All University Research Initiation Grant*. $5,000.

Michigan State University
July 1985 to December 1986
"Response of structures to real and simulated spatially varying seismic excitations." *Division of Engineering Research*. $6,665.

Michigan State University
January to December 1985
"Effect of the spatial variation of earthquake ground motion on the response of structures." *All Univ. Research Initiation Grant*. $6,000.

Courses Taught

Michigan State University

Undergraduate
Junior and Senior
Structural Analysis
Matrix Structural Analysis
Design of Steel Structures
Design of Concrete Structures
Structural System Design
Cost and Optimization Engineering

Graduate
Structural Dynamics
Advanced Mechanics for Civil Infrastructure
Advanced Structural Steel Design
Reliability-Based Design in Civil Engineering
Random Vibration of Structural and Mechanical Systems
Research Framework for Civil and Environmental Engineering

Mentoring

Doctoral Dissertations
Zhang, G. (2010). "Delamination detection of concrete bridge decks using acoustic signatures." Co-adviser: P. Ramuhalli.

Iqbal, S. (2010). "Capacity reduction and fire load factors for LRFD

of steel members exposed to fire."

Gong, A. (2005). "Wood-cement particleboard: improved manufacturing, material characterization, and potential application in concrete crash barriers."

Galishnikova, V. (2004). "Decomposition and consecutive dynamic condensation methods for static and dynamic analysis of single layer lattice plates."

Baiyasi, M. I. (2000). "Repair of corrosion-damaged columns using FRP wraps."

Kang, J. (1998). "Nonlinear random vibration of FRP laminated plates using higher-order shear theory."

Chen, M.-T. (1995). "Response of an earth dam to spatially varying earthquake ground motion."

Naja, M. (1993). "Nonlinear random vibration of composite laminated plates."

Mahmood, T. (1993). "Backcalculation of pavement layer properties from deflection data." Co-adviser: Gilbert Y. Baladi.

Hawwari, A. (1992). "Suspension bridge response to spatially varying ground motion."

Sweidan, B. (1990). "Stochastic response of deck arch bridges to correlated support excitations."

Yeh, M.-S. (1989). "Nonlinear finite element analysis and design of flexible pavements." Co-adviser: Gilbert Y. Baladi.

Master's Theses

Rana, A. (2019). "Direct assessment of entrepreneurial minded learning through integrated e-learning modules." Co-advisor: Nadiye O. Erdil.

Garatt, M. (2011). "Damage of concrete with epoxy coated reinforcement due to corrosion, freeze-thaw and fatigue with application to bridge decks."

Hong, S. (2003). "Electrochemical impedance spectroscopy based sensors for NDE of CFRP/concrete bond in beams."

Cordero-Domenech, A. (2002). "Development of a modified fiber-based beam-column element in DRAIN-2DX." Co-adviser: Amit Varma.

Anderson, J. C. (1996). "Techniques for improvement of the axisymmetric finite element model used in MICHPAVE."

Zhang, Y. (1988). "Dynamic properties of combined MDOF primary and MDOF secondary systems."

Wang, W. (1988). "Response of simple beam to spatially varying seismic excitation."

Master's Projects

Matheny, J. (2010). "Incorporating sustainability into the civil engineering curriculum at Michigan State University."

Cho, Y.-J. (1999). "P-delta analysis of building structures."

Visiting Scholar Projects

Bahn, B. Y. (2006). "Enhancement of bond anchorage with epoxy mortar for concrete beams strengthened with FRP." Visiting professor from Daejeon University, South Korea.

Tarinejad, R. (2006). "Seismic response of dams using coupled boundary and finite elements." Visiting Ph.D. student from Modares University, Iran.

Soyluk, K. (2004). "Spatially varying earthquake ground motion." Visiting professor from Gazi University, Turkey.

Undergraduate Student Projects

Sereseroz, T. (1990). "Earthquake engineering." Minority Student Summer Research Opportunity Program.

Institutional Service

University of New Haven

College of Engineering

Dean, Tagliatela College of Engineering
Advisory Board, Entrepreneurship & Innovation Program (2017-present)
Advisory Council, GalvanizeU at the University of New Haven in San Francisco, California (2013-2017)

University

Co-chair, Search Committee, Dean of Arts and Sciences (2018-19)
Search Committee, Associate VP for Graduate Admissions (2016)
Search Committee, Contracts and Grants Officer (2014-15)
Search Committee, Dean of the College of Business (2014-15)
Search Committee, Dean of the Henry C. Lee College of Criminal Justice and Forensic Science (Chair, 2011-12)
Search Committee, Vice President of Development (2014)

Michigan State University

Department of Civil & Environmental Engineering

Department Chairperson (1995-2011)
Chair of Mechanical Engineering Search Committee (2009-10)
Faculty Search Committee – Six structures positions (2007-08, 2003-04, 1999-00, 1998-99)
Faculty Search Committee – Three environmental positions (2004-05)
Faculty Search Committee – Three transportation positions (2002-03, 1999-00, 1994)
Faculty Search Committee – Construction/Structures (1995-97)
Faculty Search Committee – One pavements position (1995)
Advisory Committee (1993-95)
Chairperson Re-Appointment Review Committee (Chair 1995)
Student Grievance Hearing Board (Chair 1995)
Graduate Studies Committee (1991-95, Chair 1994-95)

College of Engineering
Strategic Planning Committee (2008)
Dean of Engineering Search Committee (Chairperson 1998-99)
Search Committee for the Director of the Division of Engineering Computing Services (1996)
Computer Services Task Force to review the Division of Engineering Computing Services (1995)
Ad Hoc CQI/Curriculum Committee (1995)
Case Center Advisory Committee (1988-1995, Chairperson 1992-93)
Ad Hoc Committee to review CPS 131 (1994)
Mathematics/Engineering Calculus Curriculum Committee (1991)
Awards and Financial Aid Committee (1985-91)

University
High-Performance Computing Advisory Committee (1993-95)
Mathematics/Engineering Liaison Committee (1991-94)
Research Computing Committee (1991-93)
University Hearing Panel (1992)

Faculty Adviser
Departmental Honors College Adviser (1992-95)
Federal Highway Admin. Research Fellow Binshan Ye (1992-93)
Annual ASCE/AGC Model Bridge Contest (1990)
Finite element modeling and analysis of the ASCE/AGC concrete canoe (1992-94)
DeVlieg Fellow Scott Stowitts (1993)
McNair/Summer Research Opportunity Program student Thomas Sereseroz (1990)
North Central Conf. AISC Steel Bridge Contest (1990)
MSU Sri Lankan Student Association (2005-2011)
MSU India Club (1986-94)
MSU Television India (1990-92)
MSU South Asia Association (1990-92)

Public Service

Professional Societies & Organizations
Accreditation Reviewer for New England Commission for Higher Education (2022)
Connecticut Engineering Dean's Council (2011-present)
Member, Connecticut Technology Council Skill's Challenge Organizing Committee (2018)
Planning Committee, 2018 Engineering Deans Institute Meeting (2017-18)
Organizer, "Educating the Engineer of 2020" session, 2018 Engineering Deans Institute Meeting
Member, Undergraduate Experience Committee, American Society of Engineering Education (2014-17)
Session Chair, "Developing Technical Communication as a Professional Skill," 2014 Frontiers in Education Conf., Madrid, Spain.
Corresponding Member, ASCE Body of Knowledge Educational Fulfillment Committee (2008-10)
Accreditation Reviewer for Ministry of Higher Education, United Arab Emirates (2011, 2008, 2007)

Led organization of annual CEE Department Heads Meetings (2009-10)
Organized sessions at annual CEE Department Heads Meetings (2005-08)
Member, Accreditation Committee, Committee on Academic Prerequisites for Professional Practice, ASCE (2004-07)
Co-chair, Session on Earthquake Engineering, 9th International Conf. on Structural Safety and Reliability, Rome, Italy (2005)
NSF Site Visit Team Member, Year 7 Renewal Review for the Mid-America Earthquake Engineering Research Center, University of Illinois at Urbana-Champaign (2004)
Research and Evaluation Planning Team, Michigan Dept. of Transp. (2003-05)
Co-chair, Session on Structural Health Monitoring of FRP Strengthened Structures, 1st International Conf. on Structural Health Monitoring and Intelligent Infrastructure, Tokyo, Japan (2003)
Host, ASCE Midwest Department Heads Annual Meeting (2003)
Member, Dynamics Committee, ASCE Engineering Mechanics Division (1995-2014)
Member, Probabilistic Methods Committee, ASCE Engineering Mechanics Division (1997-2011)
Chair, Session on Structural Dynamics, 7th International Conf. on Computing in Civil and Building Engineering, Seoul, S. Korea (1997)
Steering Committee Member, Great Lakes Composites Partnership (1994-96)

Paper and Proposal Reviewer

ASEE Annual Conference (2012-present)
Journal of Engineering Mechanics, ASCE (1991-2011)
Journal of Structural Engineering, ASCE (1991-2011)
Earthquake Engineering and Structural Dynamics (1988-2011)
Engineering Structures (2004)
Smart Materials and Structures (2004)
Shock and Vibration (1999)
NSF Proposal Review Panel, Earthquake Hazard Mitigation Program (Chairperson, 1997)
Structural Engineering and Mechanics (1997)
Journal of Transportation Engineering, ASCE (1995-2011)
Engineering Journal, AISC (1993)
International Journal for Numerical Methods in Engineering (1989-90)
American Institute of Aeronautics and Astronautics (1991)
Earthquake Hazard Mitigation Program, NSF (1985-1995)
Communication and Computations Systems Program, NSF (1991)

Continuing Education

Lecture on "NEHRP Seismic Regulations" in the AISC Lecture Series on *New Ideas in Structural Steel*, held in Detroit, MI, on October 11, 1994.
Lecture on "Eccentric Braced Frames" in the AISC Lecture Series on *New Ideas in Structural Steel*, held in Detroit, MI, on May 11, 1993.
Lecture on "Braced and Unbraced Frames" in the AISC Lecture Series on *Practical Steel Design using LRFD*, held in Cascade, MI,

and Southfield, MI, on April 9 and 10 , 1991.
Co-organizer and co-lecturer at the "Professional short course on designing steel structures using the new LRFD specifications," held at Michigan State University on November 13-14, 1990.

Public Organizations Board Member, United Way of Greater New Haven (2014-2017)
School Based Building Advisory Committee, Engineering and Science University Magnet School, New Haven, CT (2011-2016)

Consultant Swanson Analysis Systems, Inc., Houston, Pennsylvania (1991)

Textbook Reviewer Prentice-Hall, Inc., Englewood Cliffs, New Jersey (1986-87, 1992-1995)
Harper-Collins Publishers, Glenview, Illinois (1993)