Ali Keyvanfar, Ph.D., Associate Professor

U.S. Citizen
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PROFESSIONAL SUMMARY

Analytical, visionary professional — a 2026 Google Higher Ed Faculty AI Fellow — with nearly ten years of high-impact experience across higher education and international construction, entrepreneurship, and sustainable development consulting environments. Proven record of teaching, research, development (R&D), and community services focusing on computer-aided decision-making for sustainable construction, green materials, green architecture, and sustainable urban and infrastructure development. Architect of a scalable AI-powered formative learning ecosystem—six course-specific AI tutors serving 300–500 students with traceable, auditable, and accountable assessment data—complemented by five browser-based simulation platforms and a full suite of AI-generated course materials deployed across all instructional modalities. My scholarly work has been cited in over 3,000 academic references, including more than 100 major funded projects supported by NSF, NIH, and the European Union, reflecting its practical value and global academic influence. I bring strong business acumen, particularly in new product and service business model development, traction planning, and fundraising. An articulate communicator and collaborative leader, I am continually focused on fostering teamwork, solving complex challenges, and strengthening relationships across educational groups, community stakeholders, international partners, and peers. My recent invited engagements include a Cornell University lecture series on AI for Sustainability and an NSF AI-Ready workshop on making scientific research AI-callable.

CURRENT HIGHLIGHTS

- Fall 2026 (forthcoming): Invited Lecturer, Cornell University — Lecture Series on Artificial Intelligence for Sustainability (Ithaca, New York).
- May 2026: Selected as a 2026 Google for Education Higher Ed Faculty AI Fellow — the inaugural Higher Ed Faculty AI Fellowship cohort for North America.
- May 2026: Selected through CEDIA Fondo Avante 2026 (Ecuador) as International Instructor to deliver “Vibe Coding for Research and Education,” a 44-hour virtual program for researchers across CEDIA member universities.
- 2026: Appointed Guest Editor of Buildings (MDPI, IF 3.1) for the Special Issue “AI-Ready Data Centers as Next-Generation Buildings” (with A. Shafaghat, D. Hu, and S. Sabri; submissions through June 27).
- April 2026: Invited speaker, NSF AI-Ready TRACE Workshop — “The Missing Layer: Making Science Callable,” University of Maryland, Baltimore County.
- Feb. 2026: Invited by the UK Government Metascience Unit and the University of Sussex to provide expert assessments on the novelty of selected publications.
- Completed 10 years milestone serving as ABET Program evaluator in AEC and ETAC visits.
- September 2025: Invited to the Educators Affinity Group of the UN Association of the USA, leading a memorandum for the UN General Assembly on integrating AI and SDG literacy into higher education.
- July 2025: Invited by the Fulbright Program for the 2026–27 U.S. Scholar Award (Multi-country ASEAN Research Program).
- May 2025: Concluded an 18-month KSU partnership with the $20M GSC (IREX) and HIVER (IIE) U.S. Department of State programs, graduating 150 students who each earned a U.S. DOS Alumni Certificate.
- Since Dec. 2024: Serving on the Louisiana Board of Regents Grant Review Panel, reviewing proposals for a $20M research fund.
- 2024–2025: Designed and deployed six course-specific AI tutors serving 300–500 students, with traceable formative assessment and automated intervention triggers.

EDUCATION

Ph.D. in Civil Engineering, Specialization: Construction Management & Sustainable Design 2013
Universiti Teknologi Malaysia (MIT-collaborating campus for Sustainable Cities Research in ASEAN)
- CGPA: 4.0/4.0
- Awarded Best Ph.D. Graduation Medal

M.Sc. in Construction Management, Focus: Construction Quality Management 2009
Universiti Teknologi Malaysia
- CGPA: 3.9/4.0
- Completed a 2-year program in 15 months

B.Eng. in Civil Engineering 2004
Sanandaj IAU
- Graduated with the 2nd rank in the Class of 2004

FELLOWSHIPS

Google for Education — Higher Ed Faculty AI Fellowship 2026
Higher Ed Faculty AI Fellow — Inaugural North America Cohort
- Selected for the inaugural Google for Education Higher Ed Faculty AI Fellowship for North America, a competitive cohort of faculty advancing responsible and transformative AI integration in higher education; selected on the strength of a proposed institutional AI challenge positioned as a blueprint for institutions worldwide.

NSF Division of Civil, Mechanical, and Manufacturing Innovation Summer and Fall 2024
C-GCA Academics
- Contributed to integrating group decision-making best practices in the NSF review process, enhancing evaluation methodologies for impactful funding.

Louise McBee Institute of Higher Education, University of Georgia May 2024
Governor's Teaching Fellow (GTF)
- Developed AI integration strategies for educational environments, representing KSU as the Provost-nominated candidate. Received certification co-signed by Georgia Governor Brian Kemp.

Kennesaw State University – CACM 2023
Student Success Fellow
- Selected as the inaugural CACM Student Success Fellow. Investigated student success across CACM stakeholders through two faculty-student workshops. Administered a college-wide survey to identify gaps in course demand, best practices in scheduling, and patterns of career success among alumni. Successfully invited and hosted GDOT's internship and job fair at CACM.

CIFAL Atlanta / UN Institute of Training and Research 2020–2021
UN SDG Faculty Fellow
- Led efforts to benchmark KSU's SDG initiatives, launched an international SDG entrepreneurship program, enhanced campus-wide SDG engagement, and secured KSU's inclusion in THE Impact Rankings.

Universiti Teknologi Malaysia (UTM) 2010–2013
International Doctoral Fellowship
- Secured five research funds ($250K). Published six indexed manuscripts. Mentored three master's degree students.

ACADEMIC POSITIONS

Tenured Faculty Member, Department of Construction Management 2024–Forward
Kennesaw State University (KSU), Georgia, USA
Role:

- Lead the advancement of pedagogical innovation across all instructional modalities, including online and e-learning environments (60% workload).
- Establish a recognized interdisciplinary research lab or center with demonstrable impact for local, state, federal, and international stakeholders (20% workload).
- Serve in strategic service roles supporting academic stakeholders and contributing to revenue generation for the university (20% workload).

Key Achievements:

- Secured two PTC patents in construction-related technologies.
- Developed and publicly launched two AI-driven tools/products for risk assessment and design optimization.
- Led KSU's institutional partnership in $19 million U.S. Department of State-funded international development projects.
- Appointed to two high-level committees at the national and state levels within the construction and infrastructure sector.
- Designed and deployed six course-specific AI tutors across undergraduate, graduate, and international programs, serving 300–500 students with traceable, auditable formative assessment data.
- Built accountability architecture with student interaction logs, faculty analytics dashboards, and automated intervention triggers for at-risk students.
- Developed five browser-based simulation platforms: NEXUS-DC v3.7, BuildSim, Graduate Risk Management Simulator, Wood Construction Methods Game, and TRIP.
- Created comprehensive AI-generated course materials suite: podcasts, video lectures, study guides, flashcards, case studies, and trend analysis tools across all modalities.
- Began mentoring 1–3 KSU faculty colleagues in deploying AI tutors and AI-enhanced materials in their own courses.

Tenure-Track Faculty Member, Department of Construction Management 2019–2023
Kennesaw State University (KSU), Georgia, USA
Role:

- Delivered high-impact practices (HIP) in teaching, with a focus on developing undergraduate research-based courses across all modalities, including online and hybrid formats (60% workload).
- Initiated and led research projects with value to local, state, federal, and international audiences (20% workload).
- Provided academic and professional service at departmental, college, university, and community levels (20% workload).

Key Achievements:

- Secured $175,000 in internal and $420,000 in external research funding.
- Published 17 first/second-author articles in Q1/Q2 high-impact journals.
- Served as Lead Guest Editor for two Special Issues in Q1 journals.
- Chaired university-wide IRB for two consecutive years.
- Founded and led Diversity, Equity, and Inclusion (DEI) initiatives, strategic and action plans, and policies at the college level.
- Created and institutionalized Undergraduate Research (UR) Courses and Departmental Opportunity Programs (DOPs).
- Successfully met all tenure benchmarks in the pre-tenure review.
- Pioneered the development of three DOP graduation pathways, laying the foundation for future graduate programs, including a Construction MBA and a Development MPA within the college.

- Spearheaded KSU's Times Higher Education (THE) Impact Ranking registration initiative.

Collaborating Professor / Visiting Scholar, Center for Energy Research 2018–2019
University of California, San Diego (UC San Diego), California, USA
Role:

- Investigated technology transfer mechanisms and commercialization strategies within the domain of renewable energy and smart infrastructure.
- Engaged in international partnership building and grant acquisition efforts to support cross-border energy research initiatives.

Key Achievements:

- Designed and implemented validated partnership development service packages, resulting in over $400,000 in international fundraising revenue per program.
- Conducted applied research on the integration of solar forecasting into the smart and sustainable built environment.
- Positioned UC San Diego as a key collaborator in international energy innovation networks.

Visiting Professor, Faculty of Built Environment 2017–2019
Universidad Tecnológica Equinoccial, Quito, Ecuador
Role:

- Planned and coordinated the unveiling of the UCSD/MIT–UTE Construction Research Center.
- Formed and mentored eight faculty research groups (four in construction and four in architectural and urban studies).
- Designed and conducted interactive professional workshops (totaling 60 hours) focused on entrepreneurial research practices.

Key Achievements:

- Successfully launched the UCSD/MIT–UTE research partnership.
- Enabled the production of 20 peer-reviewed publications through research group support and capacity building.
- Initiated three university-industry service packages, enhancing UTE's engagement with local businesses and communities.
- Led high-impact research projects: Zero Energy Cooling Wall, Construction Project Death Cycle Destruction Framework, CSR App, UAV Readiness in Construction, Group Decision-Making Models.

Adjunct Associate Professor, Faculty of Built Environment 2017–2018
Universiti Teknologi Malaysia (UTM), Johor Bahru and Kuala Lumpur
Key Achievements:

- Mentored students leading to 10 peer-reviewed publications and 3 completed master's theses.
- Secured $20,000 in student scholarships through external and institutional channels.
- Initiated five joint research collaborations between UTM and UTE.

Senior Lecturer (equiv. Assistant Professor, Tenured), Construction Research Centre, Faculty of Civil Engineering 2014–2017
UTM Kuala Lumpur & Johor Bahru, Malaysia
Role:

- Delivered graduate-level instruction across master's and doctoral programs, online/e-learning formats (30% workload).
- Led high-impact, externally visible research projects (60% workload).
- Provided service and mentorship support (10% workload).

Key Achievements:

- Attained a perfect annual KPI evaluation score (100/100) in teaching, research, and service.
- Contributed to 10 award-winning research projects, instructional excellence policies, and a mentorship ecosystem.

Postdoctoral Researcher, Construction Research Centre, Faculty of Civil Engineering 2013–2014
UTM Kuala Lumpur & Johor Bahru, Malaysia
Key Achievements:

- Secured two competitive research grants totaling $150,000.
- Published three research articles and served as Guest Editor for one Special Issue.
- Completed a patent filing related to sustainable construction technology.
- Awarded Gold Medal and Jury Award by UTM for research excellence.
- Supervised and mentored three Research Assistants.

AI-POWERED FORMATIVE LEARNING ECOSYSTEM

Course-Specific AI Tutors (6 Deployed, 300–500 Students)

- CM 3400 AI Tutor (Risk & Quality Management): Undergraduate formative mentor for risk log development, risk assessment methods, quality assurance/control concepts, and QM tools. Generates personalized study guides, flashcards, and case analyses.
- CM 4512 AI Tutor (Emerging Trends in Residential Construction): AI-guided trend analysis and risk-factor identification for residential industry developments. Supports senior-level analytical decision-making.
- CM 3110 AI Tutor (Wood Construction Methods): Interactive AI mentor for construction materials, methods, code compliance, and structural systems in wood-frame construction.
- CM 6600 AI Tutor (Construction Risk Analysis & Control): Graduate-level formative mentor integrated with the NEXUS-DC simulation platform, supporting ISO 31000/PMBOK-aligned risk analysis.
- CM 6901 AI Tutor (Generative AI in Construction Management): Advanced AI tutor supporting agentic AI development, lean development methodology, AI tool creation, and startup business model validation.
- HIVER Design Thinking Bot: AI-powered innovation coach deployed to 150 U.S. Department of State–certified binational student teams from the U.S., Iraq, Egypt, and Tunisia, supporting design thinking methodology and product/service innovation for real job-site challenges.

Formative Assessment & Accountability Architecture

- Student interaction logs: Every AI tutor session recorded and visible to the instructor, enabling review of individual student engagement patterns, misconceptions, and learning trajectories.
- Faculty performance analytics dashboard: Aggregated data on student usage frequency, topic-level difficulty patterns, and cohort-wide learning trends, informing instructional adjustments in real time.
- Intervention triggers: Automated alerts that flag at-risk students based on engagement thresholds, enabling proactive faculty outreach before academic performance declines.
- Auditable and accountable: All data accessible, documented, and reviewable for accreditation evidence, continuous improvement, and institutional reporting.

Browser-Based Simulation Platforms

- NEXUS-DC v3.7: Multi-role data center lifecycle risk simulation with 8 decision points per module, covering six professional roles across three lifecycle phases. Formative assessment integrated. Deployed in CM 6600. Accompanied by 18-chapter graduate textbook (~34,500 words) co-authored with Dr. Arezou Shafaghat.
- BuildSim (formerly SiteForge): HTML5 game-based construction management simulator with drag-and-drop modules, scoring system, leaderboard, certificate generation, and comprehensive formative assessment report tab. Validation paper reformatted for ASC conference and Computers & Education submission.
- Graduate Risk Management Simulator: Aligned to ISO 31000 and PMBOK for CM 6210. Multi-scenario decision-making under uncertainty.

- Wood Construction Methods Game: Interactive learning platform for CM 3110 with game-based assessment of structural knowledge.
- TRIP (Transit Resilience Intelligence Platform): React-based NSF proposal demo for Metro Atlanta transportation resilience analysis.

AI-Generated Course Materials Suite

- AI-generated podcasts: Asynchronous audio content for course topics, deployed across multiple courses and available on KSU department page. Produced using ElevenLabs, Play.ht, and Descript.
- AI-generated video lectures: Produced using Synthesia, Pictory, and Canva AI for flipped classroom delivery across all modalities.
- AI-generated study guides and flashcards: Personalized and course-specific, generated by AI tutors based on syllabus content and student interaction patterns.
- AI-generated case studies: Industry-grounded scenario-based learning materials for undergraduate and graduate courses, reflecting real-world construction management challenges.
- AI-powered trend analysis tools: Senior-level analytical tools enabling students in CM 4512 to apply data-driven decision-making to emerging construction industry trends.

Faculty AI Mentorship & Workshops

- Currently mentoring 1–3 KSU faculty colleagues in deploying AI tutors and AI-enhanced materials in their own courses, establishing a replicable model for institutional adoption.
- Selected as International Instructor for “Vibe Coding for Research and Education: AI-Assisted Software Development for Researchers” (CEDIA Fondo Avante 2026, Ecuador) — a 44-hour virtual, project-based program training researchers across CEDIA member universities to build research instruments, educational simulations, and AI-powered analysis tools; June–October 2026.
- AI tool mentorship across platforms: ChatGPT (OpenAI) – Chatbot development, Agent building (Agentic AI), Advanced data analysis, Instructional content development, policy simulation, and formative assessment transparency; Qwen 2.5 – Visual reasoning, Conversational AI for live classroom engagement and reflective journaling; DeepSeek – Content reasoning, Agentic AI for technical documentation and architectural code conversion; Manus – Autonomous development assistant for business development, semantic search, and APP development; STORM – Autonomous research assistant for knowledge management, semantic search, and report development; Notebook LM – Multimodal AI notebook for real-time structured lecture generation, podcast, content search; TTS & Podcast Tools – Play.ht, ElevenLabs, Descript for course podcasts; Video Creation Platforms – Synthesia, Pictory, Canva AI for flipped class content; AI for Research Taxonomy Mapping – Scite.ai, Elicit, Research Rabbit for literature mapping and citation integrity; AI for Data & Programming Instruction – GeoSpatial reasoning, Google Colab with AI, DataCamp AI for student tutorials.

SERVICES

Kennesaw State University

Associate Chair, KSU Graduate Policies and Curriculum Committee 2024–2025

- Oversaw review and development of graduate-level academic proposals and policies to ensure alignment with institutional goals and accreditation standards.
- Collaborated with the Graduate Faculty Approval Committee and the University Curriculum Executive Committee to enhance academic quality.
- Reviewed and facilitated approval of over 150 graduate-level academic proposals across various disciplines.
- Chaired the successful implementation of three university-wide graduate retention policies.

Member, KSU Curriculum Executive Committee 2024–Current

- Serve as representative of GPCC in university-level curriculum governance.

- Advocated for and supported the launch of the GPCC/UPCC Taskforce focused on reforming university-wide curriculum review workflow.

Chair, Institutional Review Board (IRB) 2021–2023

- Led KSU-IRB operations in compliance with federal regulations and ethical standards in human subjects research.
- Recruited and built a dedicated IRB support office, including staff training and operational development.
- Oversaw the review of over 700 research protocols during the term.
- Authored and implemented 10+ institutional policies related to human subjects research.
- Organized and led staff and leadership development workshops.

Chair, College Diversity, Equity, and Inclusion (DEI) Committee 2022–2023

- Developed and secured approval for a 5-year DEI Strategic and Action Plan.
- Secured over $70,000 in internal and external funds for DEI-focused curriculum development programs.
- Led multiple professional development workshops for faculty and staff.
- Integrated DEI policies into college bylaws; formalized award nomination workflows; established and recruited a functional DEI committee.

Chair, College Curriculum Committee (CCC) 2022–2023

- Oversaw curriculum proposals ensuring alignment with NAAB, ACCE, and ABET accreditation standards.
- Organized curriculum development workshops for best practices in online teaching and instructional design.
- Developed workflow for department-to-college curriculum proposal approvals.

Chair, CMD Curriculum Committee (DCC) 2021–2022

- Developed and approved three double graduation pathways (CM, MBA, MPA).
- Created three generic course shells for internship, special topics, and directed study.

Elected Member and Secretary, College Faculty Council (CFC) 2021–2024

- Advised the dean on college-level policy development and long-term academic planning.
- Led revisions to the college bylaws and facilitated faculty-wide approval.
- Supported updates to Promotion & Tenure guidelines.

Accreditation Board for Engineering and Technology (ABET)

Program Evaluator 2017–Present

Baltimore, Maryland, USA

- Conduct annual assessments of undergraduate programs in Construction Engineering, Construction Management, and related disciplines at U.S. and international institutions.
- Received two formal recognition letters from the ABET CEO (2019 & 2022) for excellence in accreditation evaluation service.
- Selected Accreditation Site Visits:
  - Missouri Western State University, 2026 (Visit: January 25, 2026)
  - California State Polytechnic University, Pomona, 2024 (Visit: October 15, 2023)
  - Arab Academy for Science, Technology and Maritime Transport (Cairo, Egypt), 2023 (Visit: November 7, 2022)
  - Louisiana Tech University, 2021 (Visit: January 25, 2021)
  - University of North Texas, 2020 (Visit: October 27, 2019)

Universiti Teknologi Malaysia

MIT-UTM Sustainable Cities Program, Managing Editor 2015–2016

- Oversaw editorial operations including peer review, editorial workflow, quality assurance, language proofreading, similarity checks, and copyright agreements.

TEACHING COURSES

Kennesaw State University (KSU)

- Graduate: CM6901 – Applications of Generative AI in Construction Management (2025–forward): Applies GenAI to construction management, focusing on lean development, AI tool creation, and validation. Inaugural cohort produced 18 industry-ready AI agents and startup business models. Supported by CM 6901 AI Tutor. (4 credit hours)
- Graduate: CM6600 – Construction Risk Analysis and Control (2020–current): Classic and modern risk management including risk identification, assessment, mitigation, acceptance, and transfer. QA/QC introduced. Supported by NEXUS-DC simulation platform and CM 6600 AI Tutor. (4 credit hours)
- Graduate: CM6901 – Modern Risk Management in Construction (2020–current): Directed study in modern risk management case studies. (4 credit hours)
- Undergraduate: CM3400 – Risk and Quality Management (2019–current): Risk management steps before and after signing the construction contract, risk log, risk assessment, risk response planning, risk control. QA/QC, costs of quality. Supported by CM 3400 AI Tutor. (3 credit hours)
- Undergraduate: CM4512 – Emerging Trends in Residential Construction (2019–current): Emerging trends and their management as modern risk factors. Supported by CM 4512 AI Tutor and AI-powered trend analysis tools. (3 credit hours)
- Undergraduate: CM3110 – Wood Construction Methods (current): Materials, methods, code compliance, and structural systems. Supported by CM 3110 AI Tutor and Wood Construction Methods Game. (3 credit hours)
- Undergraduate: CM3910 – Sustainable Residential Practices (2020): Sustainable construction techniques and assessment indexing systems. (3 credit hours)

UC San Diego

- Graduate/Professional: Entrepreneurship Research (2018–2019): Steps to transfer an idea to an award-winning product; designing postgraduate research for successful spin-offs.

Universiti Teknologi Malaysia (UTM)

- Graduate: Construction Project Management (2013–2017): PM history, drivers, skills, monitoring, control, problem-solving. PMBOK, PMI, AHP, ANP, Delphi, Project Complexity, Innovation Management, Dynamic Modeling.
- Graduate: Research Methodology (2016–2017): Research Design, Construct Development, Data Collection & Analysis, Report Writing. Scopus citation analysis, topic selection, R&D for new products.
- Graduate: Construction Scheduling (2016–2017): WBS, CPM, MSP/P6. Dynamic scheduling, n-D scheduling, UAV in construction.
- Undergraduate: Structure Lab (2016–2017): Standard lab tests in commercial structure and theoretical analysis of experimental error calculation.

SELECTED AWARDS

University & Institutional Honors

- Google Higher Ed Faculty AI Fellow, Google for Education — Inaugural North America Cohort, 2026.
- Fulbright U.S. Scholar Award, U.S. Fulbright Program — Multi-country ASEAN Research Program, 2026–27.
- NSF-CMMI Game Changer Academy for Advancing Research Innovation, National Science Foundation, 2024.
- Recognition Letters from the ABET Chief Executive Officer (2019 and 2022), for service as an ABET Program Evaluator.
- APEX Outstanding Research Award, Kennesaw State University, 2024
- Governor’s Teaching Fellow, Louise McBee Institute of Higher Education, University of Georgia, 2024

- CACM Distinguished International Achievement Award, Kennesaw State University, April 2024
- Featured Professor, Investigator Research Magazine, 2023
- Featured Professor, Investigator Research Magazine, 2021
- Best Ph.D. Graduate Award, Faculty of Civil Engineering (FKA), UTM, 2013
- International Doctoral Fellowship, UTM – Awarded consecutively in 2010, 2011, and 2012
- Best Paper Award, International Conference on Civil Engineering and Built Environment (CECBE), 2014.

Publisher & Editorial Recognition

- Reviewer Award, Elsevier Journal of Cleaner Production, 2016.
- Elsevier Order of Recognition, for Research Contributions to the UN SDGs, 2023
- Editor's Selected Article of the Year, Journal of Urban Planning and Development, 2022
- Most Downloaded Article of the Year, Journal of Building and Material Planning and Development, 2022

International Innovation & Research Awards

- International Gold Medal, iCAN 2020, Canada (CNRM) – KSU
- International Gold Medal & Special Award, iCAN 2017, Canada (ZEC panel) – UTM, UTE, Qatar University
- World Materials Science Grand Award, World Scientist Awards, Korea, 2016
- Order of Merit in Environmental Design, World Inventors Award Festival, Korea, 2016
- International Gold Medals (3 categories) & Special Awards, 7th CIGIF 2016, Korea (KIA, WIA, AIA)
- International Gold Medal (2 categories), 27th ITEX 2016, Malaysia (EISMS, Padfooting)
- International Gold Medals (3 categories) & PolyU Special Award, SIIF 2015, Korea (CoolingWall, Suscrete, PAWDEX)
- International Gold Medal, 26th ITEX 2015, Malaysia (Suscrete)
- National Gold Medals (2 categories), 9th MRC 2014, Malaysia (PAWDEX, Suscrete)
- Gold Medal & Jury Award, 16th INATEX 2014, Malaysia (Suscrete)
- Gold Medal & Best Innovation Award, 15th INATEX 2013, Malaysia (Palm Ecocrete)
- Green Research Award Nominee, Qatar Sustainability Awards, Qatar Green Building Council
- Special Awards in Sustainability & Construction Innovation, CIGIF 2016, Korea (nDConRep, SSUT)

CITATION METRICS AND RESEARCH RECOGNITION

- Total Citations: 3,000+
- Referenced in 2,600 documents
- h-index: 29
- i10-index: 50
- Google Scholar Profile: scholar.google.com/citations?user=nPs2iWkAAAAJ
- Scopus Author ID: 55326089900
- ORCID: orcid.org/0000-0003-0059-274X

Citations by National and International Agencies

- Cited in over 30 European Commission-funded projects, including Horizon 2020 Framework Programme research on sustainability, smart infrastructure, and urban energy systems.
- Recognized in over 14 studies supported by the National Science Foundation (NSF, USA) related to energy efficiency, building automation, and resilience planning.
- Referenced by more than 13 projects of the National Research Foundation of Korea in funded work on construction innovation and AI-driven sustainability.
- Included in multiple UK Research and Innovation (UKRI) outputs on green building strategies and performance analytics.

- Cross-referenced in studies supported by international agencies: Brazil (CAPES & CNPq), China (NSFC), Malaysia (MOSTI, MOHE), and Saudi Arabia (King Saud University, Ministry of Finance).

PROJECTS & GRANTS

- Total research funding secured: approximately $5.4M as Principal Investigator and Co-Principal Investigator across U.S. and international programs (NSF-track, U.S. Department of State, KSU, UTM/MOHE/MOSTI Malaysia, UTE Ecuador, and others).

Vibe Coding for Research and Education (CEDIA Fondo Avante 2026 Training Program) $10,000 | 2026
Role: International Instructor | Funder: CEDIA, Ecuador

IREX Global Solutions Sustainability Challenge (IREX-GSC) $950,000 | 2023–2025
Role: KSU Leading Partner/PoC | Funder: U.S. Department of State | Leading: IREX

IIE HIVER Program $2,100,000 | 2023–2025
Role: KSU Leading Partner/PoC | Funder: U.S. Department of State | Leading: IIE

One Climate Earth Confidential contract

Developing DEI-connected UR research course projects in architecture and construction management curriculum $50,000 | 2022–2027
Role: PI | Funder: KSU

A Decision Support Tool for DEI Assessment of KSU Buildings: Beyond Accessibility $18,000 | 2022–2023
Role: PI | Funder: KSU

Entrepreneurship research for sustainable construction $420,000 | 2019–2022
Role: PI | Funder: KSU and KU Bahrain

Construction-Neighborhood Social Sustainability $30,000 | 2020–2022
Role: PI | Funder: KSU

Risk and Failure of Group Decision Making in the Ecuadorian Construction $60,000 | 2017–2019
Role: PI | Funder: UTE, Ecuador

Readiness Level of Ecuador Construction Industry for UAV Applications $60,000 | 2017–2019
Role: PI | Funder: UTE, Ecuador

Underground metro construction in Quito: Investigation delay factors $60,000 | 2017–2019
Role: PI | Funder: UTE, Ecuador

Development of driver's green travel behavior assessment model $100,000 | 2015–2018
Role: Co-PI | Funder: MOSTI, Malaysia

Effect of Asymmetrical Street Aspect Ratios in Micro-Climate $10,000 | 2015–2017
Role: Co-PI | Funder: UTM, Malaysia

Innovative Construction of Floating Light-Weight Affordable House $10,000 | 2015–2017
Role: Co-PI | Funder: UTM, Malaysia

Innovative Design and Technology for Sustainable Post-Disaster Settlement $10,000 | 2015–2017
Role: PI | Funder: UTM, Malaysia

Short-term performance of waterproof concrete admixture using crystalline nanomaterial $10,000 | 2015–2017
Role: PI | Funder: UTM

Sustainable flood resilience housing development in Malaysia $20,000 | 2015–2017

Role: PI | Funder: MOHE, Malaysia

Adaptive Energy Behaviors: Design for Sustainable Energy Efficiency Behaviour $10,000 | 2015–2017
Role: PI | Funder: UTM, Malaysia

Sustainable Energy Efficient: Energy Intensity of Users Satisfaction $10,000 | 2015–2017
Role: PI | Funder: UTM, Malaysia

Malaysian Green Highway Index $150,000 | 2012–2016
Role: Co-PI | Funder: Malaysian Highway Authority

Development of Bio-Material for Strengthening Reinforced Concrete $100,000 | 2012–2016
Role: Co-PI | Funder: MOSTI, Malaysia

INVITED TALKS, PANELS & KEYNOTES

- Cornell University, Ithaca, New York — Invited Lecturer, Lecture Series on Artificial Intelligence for Sustainability (forthcoming, Fall 2026).
- Invited panelist, KSU Center for Excellence in Teaching and Learning (CETL) Pre-Tenure Faculty Success Panel, university-wide cohort (May 2026).
- Invited panelist, ASCE Construction Institute, Georgia Chapter — “Construction Technology & AI: Bridging Research & Industry Practice,” KSU Marietta Campus (May 2026).
- Invited speaker, NSF AI-Ready TRACE Workshop — “The Missing Layer: Making Science Callable,” University of Maryland, Baltimore County, & AOK Gallery, Baltimore (April 2026).
- Invited expert reviewer, UK Government Metascience Unit & University of Sussex — expert assessments on the novelty of selected publications (February 2026).
- Invited panelist, “Teaching with AI,” KSU Celebration of Teaching Day (November 2024).
- Selected participant (1 of 25 faculty nationwide), Mass Timber Construction Workshop, Michigan State University (June 2024).
- Invited conference session, “Application of Generative AI in the Built Environment,” Emory University (April 2024).
- Facilitator, campus-wide workshop on AI-driven research communication, Kennesaw State University (February 2024).

PROFESSIONAL AFFILIATIONS

- Grant proposal review panelist, Louisiana Board of Regents grants (2024–current)
- Grant proposal review panelist, MOHE/MOSTI grants, Malaysian Government (2015–current)
- Grant proposal review panelist, Czech Science Foundation (2022–current)
- Georgia Academy of Science (2023–current)
- AGC of America’s Highway Work Zone Safety Committee (2023–current)
- External examiner / PhD & master’s thesis-defense panelist, international universities (2016–current)
- Program evaluator, ABET (2017–current)
- UN Association of the USA Educators Affinity Group (2025–current)
- McGill University Sustainability Academic Network (2025–current)
- MassChallenge Venture Capital Expert Network – startup mentor (2024–current)
- Faculty Member, CMAA (2017–18)
- Associate Member, ASCE-CI (2014–18)
- Associate Member, ARCOM (2013–18)
- Journal editor, Buildings (2023–current)

- Guest Editor, Buildings (MDPI, IF 3.1) — Special Issue “AI-Ready Data Centers as Next-Generation Buildings: Lifecycle Performance, Grid Integration, and Decarbonization Pathways” (with A. Shafaghat, D. Hu, and S. Sabri; submissions through 30 June 2027)
- Invited Guest Editor, Discover Civil Engineering (Springer Nature) — Topical Collection “Generative AI in Construction: Methods, Applications, Education & Impacts” (invited July 2025; collection in development)
- Journal guest editor, Sustainability (2020–current)
- Journal associate editor, Frontiers in Built Environment (2022–current)
- Journal guest editor, ASCE Journal of Urban Planning and Development (2020–current)
- Managing Editor, MIT Malaysia Sustainable Cities Program, 2015–2016
- Conference co-editor: ICONBUILD 2015 & 2017 Indonesia; Flood Disaster Conference 2016 & SEPKA-ISEED 2016 Malaysia; ICCUE 2018 Spain
- Journal reviewer: Sustainable Cities and Society (IF: 7.587), ASCE J. Architectural Engineering (Q1), Energy Policy (IF: 6.142), Clean Technologies and Environmental Policy (IF: 3.636), Material and Design (IF: 7.991)
- Conference reviewer: Associated Schools of Construction (ASC) (2014–current)

INTERNATIONAL ENGAGEMENTS

- Loughborough University, UK: Research Co-Author – Transportation systems and resilient urban planning.
- University of Waterloo, Canada: Contributor – Green architecture and sustainability metrics.
- Hanyang University, South Korea: Workshop Presenter & Co-Researcher – Advanced material technologies.
- Griffith University, Australia: Research Contributor – Ecological urbanism and global green policy.
- University of Illinois at Chicago (UIC), USA: Co-Publication Partner – Human-centered urban planning.
- Kano University, Nigeria: Co-Researcher – Advanced material technologies.
- Suran University & University of Duhok, Iraq (IREX Partnership): Capacity building, faculty development, curriculum design, and academic governance.
- Helwan University, Egypt (HIVER Partnership): Design thinking for SDG problem-solving in urban development.
- Qatar University: Interdisciplinary research on metro systems, risk analysis, and BIM integration.
- Duy Tan University, Vietnam: Urban resilience, risk mitigation, and environmental systems.
- Centre for Environmental Sustainability and Water Security, Malaysia: Climate adaptation, water-energy nexus, infrastructure performance.
- Royal Commission for Jubail and Yanbu, Saudi Arabia: Regional planning and infrastructure development.
- ISET Tunisia (HIVER Partnership): International training and instructional development for engineering education.

SUPERVISED GRADUATE STUDENTS

- Supervised Assistantship (GTA/GRA) of 9 Master’s students at KSU — 6 in Information Technology and 3 in Construction Management.
- Supervised approximately 27 directed/independent studies at KSU in 2025 — 17–18 at the graduate level and the remainder at the undergraduate level — providing one-on-one research and project mentorship.
- Co-supervised doctoral and master’s candidates at Universiti Teknologi Malaysia (UTM): Ph.D. (Civil Engineering) — Jibrin Hassan Suleiman, Gholamreza Dehdasht, and Nasiru Zakari Muhammad; M.Sc. (Construction Management) — Muhammad Fakharie Che Pee.

- Provided doctoral research and publication mentorship at UTM to Hesam Kamyab, Mohammad Mahdi Taheri, Mostafa Rezazadeh Shirdar, Amir Reza Talaiekhozani, and Mostafa Samadi (civil and materials engineering), yielding multiple co-authored peer-reviewed publications.
- Provided comprehensive dissertation guidance, supporting students from proposal development to successful defense.
- Co-authored 30+ peer-reviewed publications with graduate students.
- Led 9 graduate student patent filings for 5 product developments.
- Delivered 10 graduate-led product innovation showcases.
- Offered career mentorship for successful placements in academic roles & industry leadership positions.

FACULTY DEVELOPMENT & INTERNATIONAL RESEARCH MENTORSHIP

- Design and lead faculty research-capacity and entrepreneurial-research development programs at international partner institutions, spanning construction, architecture, and urban studies.
- Universidad Tecnológica Equinoccial (UTE), Quito, Ecuador (2017–2019): formed and mentored eight faculty research groups — four in construction and four in architectural and urban studies — and designed and delivered approximately 60 hours of interactive professional research workshops on entrepreneurial research practices; this capacity-building enabled 20 peer-reviewed publications and seeded three university–industry service packages.
- Designed and delivered faculty research- and teaching-development workshops across partner institutions, including: GenAI for Research Fund-Raising, Design & Commercialization (UTE Ecuador, 2025); GenAI in Teaching, GenAI for Research Dissemination, and GenAI in CACM Research for Alumni Homecoming (KSU, 2024); Online, Flipped & Assessment-Based Teaching and DEI & Course Project Development (KSU, 2022); Research for Entrepreneurship (UTE Ecuador, 2019; UC San Diego, 2018); and Patent Filing (UTM, 2016).
- Invited research seminar — Joachim Herz Foundation (KSU, 2025): showcased GenAI models and eight KSU–IREX binational student research posters (with Dr. Arezou Shafaghat).
- CEDIA Fondo Avante, Ecuador (2026): selected as International Instructor for a 44-hour virtual faculty/researcher development program, “Vibe Coding for Research and Education,” delivered across CEDIA member universities (detailed under Projects & Grants).

EXAMINATION & DEFENSE PANELS

- Serve as an external examiner and evaluation-panel member on doctoral and master’s thesis and research-proposal defenses at international partner universities (2016–present), spanning construction management, civil engineering, and city & regional planning.
- Chair / Faculty-in-Charge, CM 4900 Senior Capstone Defense Panels, Department of Construction Management, Kennesaw State University (2019–present) — chair a defense panel each semester evaluating a cohort of graduating seniors (typically four per panel) on their capstone project defenses, alongside industry professional reviewers.
- External Examiner — Ms. Sania Rehman (PhD, City & Regional Planning), served across both the Research Proposal Defense (2023) and the final PhD Thesis Defense / Viva (2025): “Transit-Oriented Development Opportunities within Hyderabad City: Evidence from the 2nd Largest Settlement of Sindh Province, Pakistan” — Mehran University of Engineering & Technology (MUET), Jamshoro, Pakistan.
- External Examiner — PhD Research Proposal Defense: Mr. Ubedullah Soomro, “Informal Settlements and Livability Challenges in Urban Areas of Hyderabad, Sindh: A Socio-Economic Assessment” — PhD, City & Regional Planning, MUET, Jamshoro, Pakistan, 2026.
- External Examiner — PhD Research Proposal Defense: Ms. Komal Qureshi, “Evaluating the Implications of Urban Spatial Change on Traffic Congestion and Mobility in Hyderabad, Sindh” — PhD, City & Regional Planning, MUET, Jamshoro, Pakistan, 2026.

SELECTED PUBLICATIONS

Nasiru Zakari Muhammad, Muhd Zaimi Abd Majid, Ali Keyvanfar*, Arezou Shafaghat, Ronald McCaffer, Jahangir Mirza, Muhammad Magana Aliyu, Mujittafa Sariyyu, Experimental Investigation into Waterproofing performance of Cement Mortar incorporating Nano silicon. Buildings, 15(3), 2227.

Ibrahim, E. A., Goff, D., Keyvanfar, A., & Jonaidi, M. (2025). Assessing Post-Fire Damage in Concrete Structures: A Comprehensive Review. Buildings, 15(3), 485.

Goff, D., Nasseri, S., Jonaidi, M., Keyvanfar, A. (2025). AI-Powered Insights: Unlocking the Complexity of Bridge Degradation Factors Through Network Analysis. CSCE Winnipeg 2025 & ACMBS-IX

Jonaidi, M., Kaplan, A., & Keyvanfar, A. (2024). Innovative Approaches and Challenges in the Demolition of Large-Span Post-Tensioned Beams: Insights from a Case Study. Buildings, 14(5), 1380.

El-Itr, Z., Keyvanfar, A., Integrating Generative AI into Affordable Housing Strategies for Georgia: A Framework Proposal (2024), CITC-14

Shafaghat, A., Keyvanfar, A., et al. (2023) Special Collection on Urban Physics and COVID-19 Risk Management

Khorami, M., Keyvanfar, A., Shafaghat, A, Jonaidi (2023), Patent: Fluid Injector Aerial Vehicle, PCT/IB2023/061980

Khorami, M., Keyvanfar, A., Shafaghat, A, Jonaidi (2023), Patent: Aerial Vehicle Flying Station, PCT/IB2023/061984

Shafaghat, A., Keyvanfar, A., & Rosli, N. A. L. (2023). Urban Plaza as a School for Children: A Decision Support Tool. Architecture and Urban Planning, 19(1), 17-28.

Keyvanfar, A. (2023) Construction Risk Analysis and Control, KSU Distinguished Course Repository, 2(3) p.4

Shafaghat, A., Keyvanfar, A., & Ket, C. W. (2023). A decision support tool for evaluating wildlife corridor design using ANP. J. for Nature Conservation, 70, 126280.

Keyvanfar, A., Shafaghat, S., Majid, MZ (2022) Adaptive Behavior Satisfaction Index Analysis Framework. Int. J. of Civil Engineering, 1-20

Keyvanfar, A., Shafaghat, A., & Rosli, N. A. L. (2022). A Decision Support Toolkit for Children-Oriented Urban Outdoor Learning Environments. J. Urban Planning and Development, 148(3), 04022034.

Keyvanfar, A. & Shafaghat, A. (2022) Emerging Dimensions of UAV Technology's 3D Reconstruction Modeling in Architecture and CM. ACE, 16(48) 1-16

Shafaghat, A., Ferwati, S., & Keyvanfar, A. (2022). COVID-19-Adapted Multi-Functional Corniche Street Design Assessment Model. Sustainability, 14(17), 10940.

Keyvanfar, A., Shafaghat, A., & Awanghamat, M. A. (2022). Optimization and trajectory analysis of drone's flying for 3D modelling construction progress monitoring. Int. J. of Civil Engineering, 20(4), 363-388.

Shafaghat, A., & Keyvanfar, A. (2022) Dynamic façades design typologies, technologies, measurement techniques, and physical performances. Renewable and Sustainable Energy Reviews 167: 112647.

Keyvanfar, A. Shafaghat, A., & MSF Rosley (2022). Performance Comparison Analysis of 3D Reconstruction Modelling Software. Int. J. of Architectural Computing, 1-23.

Keyvanfar, A., et al. Multifunctional Retention Pond For Stormwater Management: ANP and GSA (2021) Ecological Indicators, 124, 107317.

Ferwati, M. S., Keyvanfar, A., et al. (2021). Quality Assessment Directory for Multi-functional Public Spaces. Architecture and Urban Planning, 17(1), 136-151.

Keyvanfar, A., et al. Sustainable Post-Disaster Settlement Assessment Model (2021) J. of Sustainability Science and Management, 16(5), 174-199.

[Additional publications: 40+ peer-reviewed articles in journals including Renewable and Sustainable Energy Reviews, Construction and Building Materials, Sustainable Cities and Society, Energy Policy, Sustainability, Ceramics International, J. Experimental Nanoscience, and others. Full list available on Google Scholar.]

LANGUAGES

- English – Fluent in writing and professional communication
- Persian (Farsi) – Fluent in writing and communication
- Kurdish – Fluent in verbal communication
- Arabic – Proficient in reading
- Spanish – Conversational (exposure, informal and cultural engagement)
- Malay (Bahasa Malaysia) – Conversational (exposure, informal and cultural engagement)