PROGRAM PERFORMANCE REVIEW

Self-Study Report

for the

MS in Civil Engineering Program

at

California State University Fullerton

April 01, 2022

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I. *DEPARTMENT/PROGRAM MISSION, GOALS AND ENVIRONMENT*

A. Program mission and goals in relation to the University

California State University Fullerton Mission Statement

California State University, Fullerton enriches the lives of students and inspires them to thrive in a global environment. We cultivate lifelong habits of scholarly inquiry, critical and creative thinking, dynamic inclusivity, and social responsibility. Rooted in the strength of our diversity and immersive experiences, we embolden Titans to become intellectual, community, and economic leaders who shape the future.

College of Engineering and Computer Science Mission Statement

We want to educate engineers and computer scientists who will graduate with state-of-the art knowledge in their chosen field and are ready to embark on careers in industry and government or proceed to acquire advanced degrees in their own or related fields.

Program Educational Objectives

The Civil and Environmental Engineering Department has established the following Program Educational Objectives (PEOs):

PEO1 Technical Skills: Graduates will be successful in multidisciplinary e engineering practice and being well integrated into the workforce.

PEO2 Professional Skills: Graduates will demonstrate professional skills necessary to be competent employees/leaders.

PEO3 Professional Attitude: Graduates will have high ethical and professional standards toward advancement of the profession and society.

The PEOs of our program naturally aligns and supports the mission of our university and college. They have not changed since last program performance review.

Table 1.1 specifically demonstrate the relationship of PEOs with the mission of university and college.

Table 1.1 Alignment of PEOs with the mission of college and university

Program Educational Objectives	University Mission	ECS College Mission
PEO1	"...enriches the live of students and inspires them to thrive..."	"…will graduate with state-of-the-art knowledge in their chosen field..."
PEO2	"…cultivate lifelong habits of …critical and creative thinking…"	"…ready to embark on careers in industry and government…"
PEO3	"We cultivate…dynamic inclusivity, and social responsibility…" "…we embolden Titans to become intellectual, community, and economic leaders..."	

Since the last PPR visit, there have been no changes to Program Educational Objectives.

B. Changes and trends in the discipline

One of the goals of the department is to prepare qualified technical manpower to support the need of the community and the nation in terms of civil engineering workforce. Moreover, obtaining master's degree in civil engineering from an ABET Accredited program such as the Civil Engineering program of CSUF is considered as one year of work experience towards the eligibility for Professional Engineer (P.E.) License application in California. This fact also adds to an increasing demand of the graduate program in civil engineering. Moreover, a specialized knowledge is required if a civil engineer is planning to work in the projects that demand specific skills in certain focus area of civil engineering. The graduate program in civil and environmental engineering provides additional skills to support the students in specialized areas of civil engineering such as structural engineering, geotechnical engineering, construction engineering and management, and water resources engineering. Nationwide infrastructure issues have put civil engineers in high demand, particularly in the transportation sector. With this in mind, the department has been working to develop curriculum in transportation engineering at the graduate level.

Recent events have highlighted the need for flexibility for our students, many of whom are working professionals. The department already holds most graduate courses in the evening to allow students to work while taking courses. Additionally, the department is planning to allow flexibility in the modality of course offerings (hybrid and online courses) where appropriate to ensure better opportunities to complete coursework.

C. Future program priorities

As discussed in I.B., increasing department offerings in the area of transportation and increasing flexibility of course offerings are the immediate priorities for the future. Along with these items, increased outreach to improve recruitment of students is a priority of the department.

D. This program is not offered in a special session self-support mode.

II. DEPARTMENT/PROGRAM DESCRIPTION AND ANALYSIS

A. Curricular changes since last review

Since the department has established a nationally recognized online MS program in Environmental Engineering, and due to a lack of student interest, the MS in Civil Engineering with a concentration in Environmental Engineering has been formally discontinued since Fall 2019.

Several new elective courses have been created by faculty based on their expertise. These include the following "Special Courses:" EGCE 421 - Bridge Engineering; EGCE 437 - River and Channel Hydraulics; EGCE 443 - Soil and Site Improvement; EGCE 462 - Transportation Systems Analysis and Planning; EGCE 464 - Pavement Analysis and Design; EGCE 472 - Construction Project Scheduling, Estimating, and Bidding; EGCE 474 - Artificial Intelligence in Construction Engineering; and EGCE 483 - Environmental System Modeling and Simulation. Once these courses have been offered two or three times, they will then be processed through the Curriculog system to become official courses in the catalog.

Otherwise, there have been no substantial curricular changes since the last program review.

B. Structure of the degree program

Applicants who have a Bachelor's degree from a regionally accredited institution with a minimum grade-point-average of 2.5 in the last 60 semester units and a good standing at the last institution attended can apply for the graduate program in civil engineering. The applications of students meeting the above requirements will be reviewed for possible admission to the graduate program in Civil Engineering and will be advanced to classified standing immediately after filing an adviser-approved study plan in the Civil and Environmental Engineering Department office. Students not meeting the above requirements may be admitted and will be required to take additional prerequisite coursework. Any student entering the M.S. degree program without a B.S. in Civil Engineering will be required to complete the advisor approved pre-requisite courses prior to beginning coursework for the master's degree. The list of pre-requisite courses depends on the undergraduate major of the students. The main objective of these courses is to prepare the students from non-civil engineering majors to attend the graduate level classes in civil and environmental engineering and to the professional license examination.

Students with non-civil engineering undergraduate degrees may be given conditional admission to the MSCE program, and they must take at least the following prerequisite courses:

- EGCE 324 - Soil Mechanics

- EGCE 325 - Structural Analysis
- EGCE 428 - Engineering Hydraulics
- EGCE 408 - Reinforced Concrete Design or EGCE 430 - Structural Steel Design

Students with non-civil engineering undergraduate degrees must have courses in Statics and Mechanics of material and must have two semesters of calculus-based college physics and mathematics through differential equations. Students must complete these classes before applying to the graduate program.

Students are expected to complete all of the prerequisite courses with a B- (2.7) or better before taking graduate courses. However, based on the student's academic background and interest, the graduate advisor may approve up to 9 units of graduate courses that can be taken while a student is completing prerequisite courses.

A student is required to complete 30 semester units of a combination of core and elective courses, approved by the graduate advisor, in addition to the required pre-requisite courses. A minimum GPA of 3.0 is required for graduation. The core and elective courses in different focus areas of civil engineering are listed below.

Focus area: Construction Engineering and Management

Core courses (15 units)

- EGCE 470 – Project Management and Construction Engineering Practices
- EGCE 534 – Advanced Construction Methods and Techniques
- EGCE 538 – Construction Methods and Equipment for Heavy Construction Engineering
- EGCE 539 – Preconstruction Design Evaluation
- EGCE 557 – Cost Estimating and Bidding Strategy

Elective courses (15 units)

- EGCE 472 – Construction Project Scheduling, Estimating, and Bidding
- EGCE 474 – Artificial Intelligence in Construction Engineering
- EGCE 551 – Procurement and Contract Management
- EGCE 5xx – Any other 500 level courses
- EGCE 4xx – Graduate Study plan approved 400 level courses
- EGCE 597 – Graduate Projects
- EGCE 598 – Thesis

Focus area: Geotechnical Engineering

Core Courses (15 units)

- EGCE 443 – Soil and Site Improvement
- EGCE 544 – Advanced Foundation Engineering
- EGCE 545 – Slope Stability and Retaining Structures
- EGCE 547 – Advanced Soil Mechanics
- EGCE 548 – Geotechnical Earthquake Engineering

Elective Courses (15 units)

- EGCE 5xx – Any other 500 level courses
- EGCE 4xx – Graduate Study plan approved 400 level courses
- EGCE 597 – Graduate Projects
- EGCE 598 – Thesis

Focus area: Structural Engineering

Core Courses (15 units)

- EGCE 411 – Structural Dynamics
- EGCE 530 – Advanced Topics in Steel Design
- EGCE 531 – Advanced Topics in Reinforced Concrete Design
- EGCE 532 – Earthquake Engineering
- EGCE 533 – Matrix Methods of Structural Analysis

Elective Courses (15 units)

- EGCE 421 – Bridge Engineering
- EGCE 461 – Advanced Construction Materials – Concrete Emphasis
- EGCE 463 – Precast and Prestressed Concrete Design
- EGCE 464 – Pavement Analysis and Design
- EGCE 493 – Design of Highrise Structural Systems
- EGCE 5xx – Any other 500 level courses
- EGCE 4xx – Graduate Study plan approved 400 level courses
- EGCE 597 – Graduate Projects
- EGCE 598 – Thesis

Focus area: Water Resources Engineering

Core Courses (15 units)

- EGCE 435 – Design of Hydraulic Structures
- EGCE 436 – Engineering Hydrology
- EGCE 437 – River and Channel Hydraulics
- EGCE 501 – Analytical Methods for the Design of Civil Engineering Systems
- EGCE 537 – Groundwater and Seepage

Elective Courses (15 units)

- EGCE 438 – Watershed Engineering and Management
- EGCE 5xx – Any other 500 level courses
- EGCE 4xx – Graduate Study plan approved 400 level courses
- EGCE 597 – Graduate Projects
- EGCE 598 – Thesis

C. Student demand for the program

Our practice-oriented graduate program is popular among students from the local region, and we also attract qualified international students to the program. The program is intended to meet the needs of students who wish to prepare for careers in areas such as construction and project management, design, and analysis of complex systems (including structures, such as tall buildings and bridges),

geotechnical engineering, water resources engineering, consulting, and research, as well as doctoral studies.

For MS in Civil Engineering program, student enrollment and graduation data are provided in Appendix A. Table 1 provides the number of student applications, number of students admitted, and the number of new enrollments. Table 2 presents student enrollment for the past five years by headcount and FTES. Table 3 includes graduation rates for the past five years. The number of degrees awarded is provided in Table 4. Data indicates over 50% of students graduate in two years. As per the program structure, students can graduate in two years if they take five courses per year on average. However, since most of our students are working professionals, they tend to take two courses per semester; therefore, they typically graduate in five semesters.

D. Enrollment trends since last program review

As per the data provided in Appendix A, the enrollment trend from Fall 2016 to Fall 2020 is relatively stable. The typical class size for our graduate program courses is about 15-20 students, and full-time faculty members teach most courses in the graduate program. The program provides advanced study within the area of civil engineering and allows students to select coursework in the areas of construction engineering and management, geotechnical engineering, structural engineering, and water resources engineering.

E. Plans for curricular changes

Department plans to offer more elective courses as needed to support students acquire the depth of knowledge required to meet the ongoing needs of various subdisciplines of civil engineering. Once a sufficient number of courses are developed in the transportation engineering area, the department plans to introduce a focus area in transportation engineering formally.

Department recently approved a modification to culminating experience requirement where students will be required to do a graduate project or thesis. This requirement will be in place of a written comprehensive exam and allow students to showcase academic knowledge learned in the program.

F. There are no Special Sessions self-support programs offered by the department/program.

III. DOCUMENTATION OF STUDENT ACADEMIC ACHIEVEMENT AND ASSESSMENT OF STUDENT LEARNING OUTCOMES

A. Program assessment plan

The department completes assessment of student learning outcomes (SLOs) through direct assessment methods in multiple courses every semester. The specific courses and timeline for completion of the assessment is discussed in section III.B below. The CEE department has created a pre-programmed MS Excel-based template that allows faculty to analyze their assessment data and proactively take actions to enhance the delivery and organization of the course to improve student learning. A snapshot of this template is provided in Figure III.1.

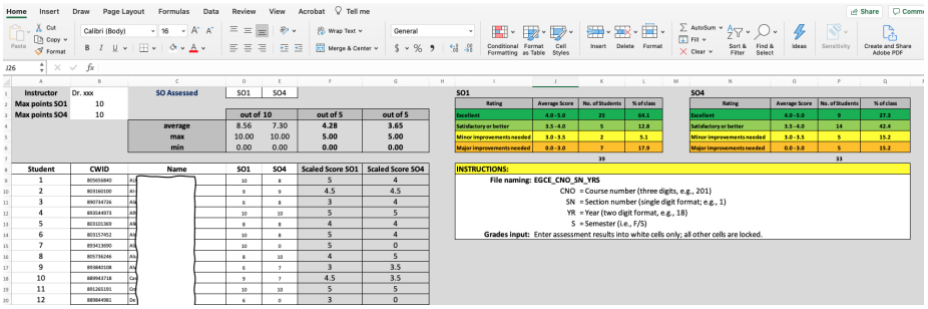

Figure III.1 MS Excel-based template for assessment data collection

Faculty members upload the assessment data to the department Dropbox folder. A MATLAB-based script is used to combine the data across multiple sections of courses for each SLO and generate plots. This automated process allows the department to review the assessment data and identify any course section that may be missing data. Assessment results are compiled by the Assessment and Continuous Improvement Committee. These results are disseminated to faculty members yearly at scheduled assessment meetings. Every year, department submits a formal assessment report that includes assessment data, assessment results and improvement action plan to the University's Assessment and Continuous Improvement Committee.

Since the last PPR, there have been no significant changes to the student learning outcomes. In Fall 2021, at the Department Faculty meeting, faculty members made minor modifications to the SLO statements' wording. Prior to Fall 2020, assessment of SLOs for graduate courses was more infrequent, thus the structure above was implemented to ensure more consistent data can be collected.

B. Student learning outcomes

The MS in Civil Engineering program has four student learning outcomes (SLOs) and they are summarized below:

SLO1. An ability to analyze and solve complex engineering problems
SLO2. An ability to design a specific component, system, or process to meet desired needs within realistic constraints
SLO3. An ability to communicate effectively with a range of audiences
SLO4. A recognition of the need to engage in life-long learning and knowledge of contemporary issues

Table III.1 summarizes the SLO assessment through the core courses in the program. Every core graduate course has one or two SLOs for which it is assessed each semester, a fact which allows us to see trends in the data easily and also allows us to intervene immediately if student achievement starts to decline below expectations.

Table III.1 – Summary of SLO assessment through the courses in the program

Student Learning Outcomes (SLO)	501	530	531	532	533	534	537	538	539	544	545	547	548	557
1. An ability to analyze and solve complex engineering problems	SP	FA			FA			FA	SP		FA		FA	
2. An ability to design a specific component, system, or process to meet desired needs within realistic constraints		FA	SP			SP	SP			SP				FA
3. an ability to communicate effectively with a range of audiences			SP					FA			FA	SP		
4. Recognition of the need to engage in life-long learning and knowledge of contemporary issues				SP		SP	SP		SP	SP			FA	FA

FA - Fall, SP- Spring

Generally, assessment data is obtained from exam questions, group or individual projects/presentations, or peer evaluations. The goal of these assignments is to assess student achievement in a particular performance indicator that has been established by the department in consultation with the faculty member(s) of the course. These items are graded by the faculty member(s) of that particular course and those grades are normalized such that they are on a scale of 0-5. For each course, faculty members develop a specific rubric for the performance indicator being assessed with that SLO. A score above 3.5 is considered satisfactory and no improvements are necessary. A score between 3-3.5 indicates minor improvements are needed. A score less than 3.0 indicates that major improvements are needed. In the event improvements are needed (student achievement is less than expected) for multiple consecutive semesters for a particular class, then the instructors of that class are to come up with a plan for improvement. If improvements are not seen in subsequent semesters, then the department may make changes to that particular course.

The methods to measure each SLO and corresponding reults for the recent assessment cycle are discussed below.

SLO1. An ability to analyze and solve complex engineering problems

Methods to measure SLO1

Direct Assessment of SLO1 is completed in multiple core courses each semester to ensure all students' learning is assessed. In total, there are seven courses (EGCE 501, 530, 533, 538, 539, 545, and 548) where assessment of SLO1 is completed. In all cases, learning is measured using embedded assessment questions asking students to analyze and solve a complex engineering problem. The assessment questions are graded by individual instructors of each course and those grades are normalized on a scale of 0-5. Overall, a weighted average of all courses is used to assess the level of attainment for SLO1. An average score of 3.5 out of 5 represents "Satisfactory" performance for the outcome and no improvement actions are necessary. In Fall 2020, assessment was completed in five courses targeting SLO1, with 122 students included. In Spring 2021, assessment was completed in two courses targeting SLO1, with 44 students included.

Summary of assessment results for SLO1

The assessment data from 122 students in Fall 2020 indicated 95% of students achieved "Satisfactory" performance and the remaining 5% of students needed improvement for the outcome. The assessment data from 44 students in Spring 2021 indicated 71% of students achieved "Satisfactory" performance and 29% of students needed improvement for the outcome. The weighted average score for Fall 2020 was 4.4, well above the 3.5 average indicating "Satisfactory" performance. The weighted average score for Spring 2021 was 4.2, well above 3.5, the established criteria of success.

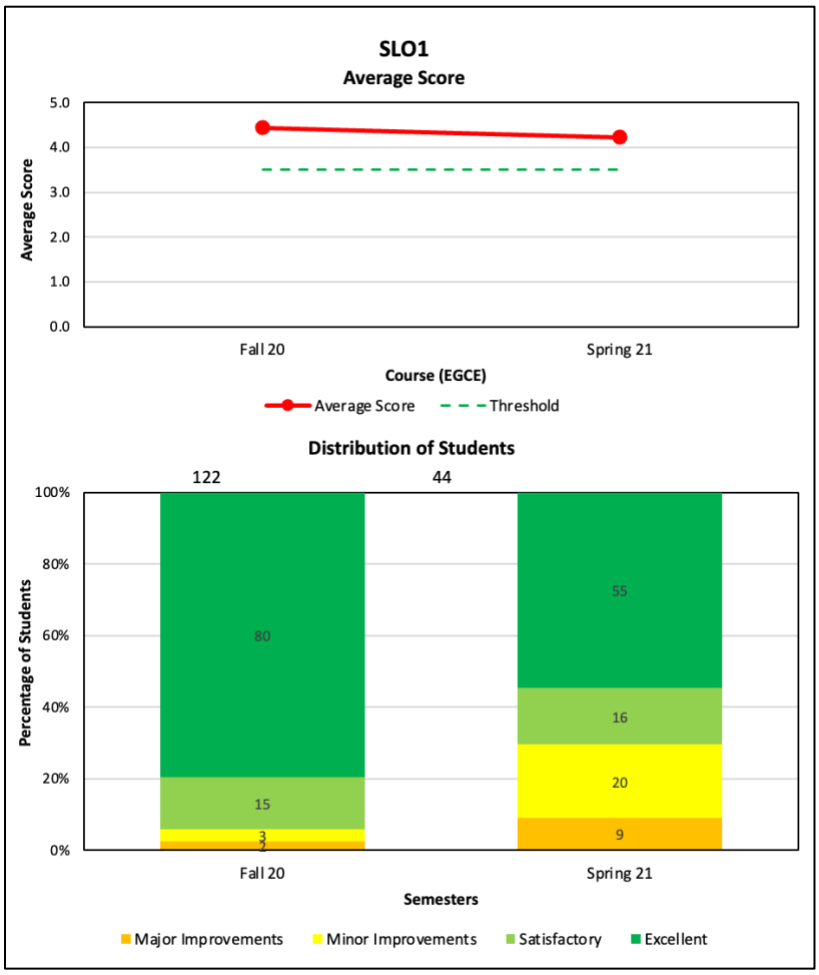

Figure III.2 SLO1 Assessment data for one assessment cycle (Fall 2020-Spring 2021)

SLO2. An ability to design a specific component, system, or process to meet desired needs within realistic constraints

Methods to measure SLO2

Direct Assessment of SLO2 is completed in multiple core courses each semester to ensure all students' learning is assessed. In total, there are six courses (EGCE 530, 531, 534, 537, 544, and 557) where assessment of SLO2 is completed. In all cases, learning is measured using embedded assessment questions asking students to design a component, system, or process within real-world constraints. The assessment questions are graded by individual instructors of each course and those grades are normalized on a scale of 0-5. Overall, a weighted average of all courses is used to assess the level of attainment for SLO2. An average score of 3.5 out of 5 represents "Satisfactory" performance for the outcome and no improvement actions are necessary. In Fall 2020, assessment was completed in two courses targeting SO2, with 57 students included. In Spring 2021, assessment was completed in four courses targeting SLO2, with 79 students included.

Summary of assessment results for SLO2

The assessment data from 57 students in Fall 2020 indicated 72% of students achieved "Satisfactory" performance and the remaining 28% of students needed improvement for the outcome. The assessment data from 79 students in Spring 2021 indicated 89% of students achieved "Satisfactory" performance and 11% of students needed improvement for the outcome. The weighted average score for Fall 2020 was 4.0, well above the 3.5 average indicating "Satisfactory" performance. The weighted average score for Spring 2021 was 4.3, well above 3.5, the established criteria of success.

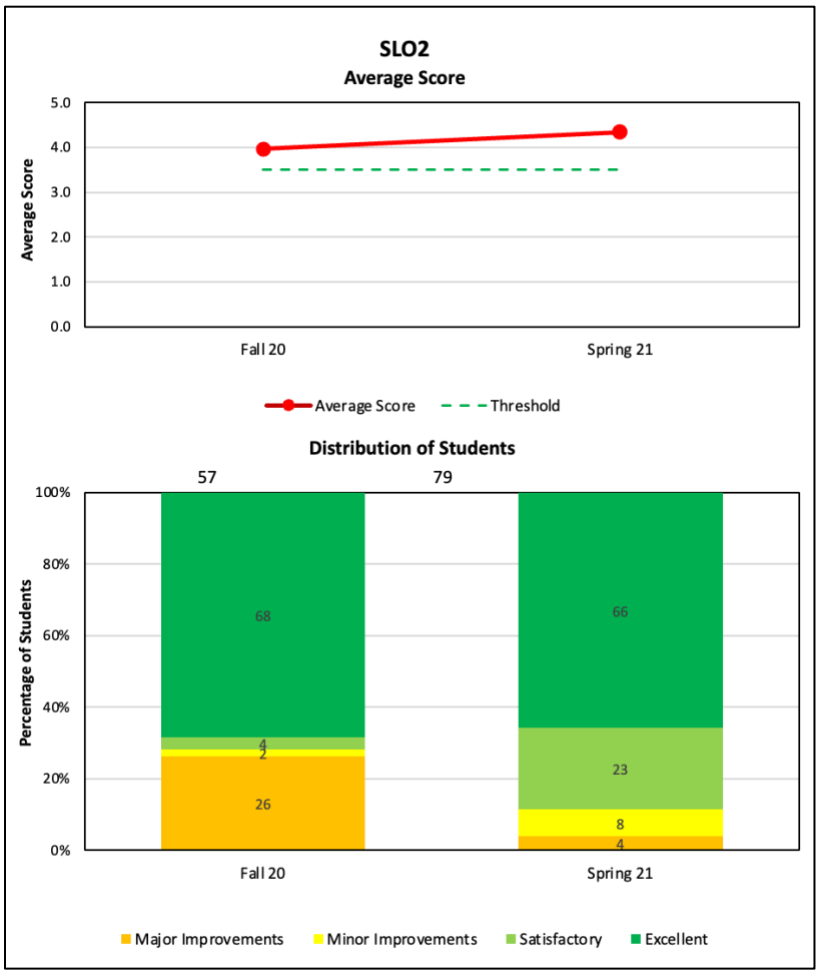

Figure III.2 SLO2 Assessment data for one assessment cycle (Fall 2020-Spring 2021)

SLO3. An ability to communicate effectively with a range of audiences

Methods to measure SLO3

Direct Assessment of SLO3 is completed in multiple core courses each semester to ensure all students' learning is assessed. In total, there are four courses (EGCE 531, 538, 545, and 547) where assessment of SLO3 is completed. In all cases, learning is measured using written reports and oral presentations asking students to effectively communicate technical engineering concepts with a range of different audiences. The assignments are graded by individual instructors of each course and those grades are normalized on a scale of 0-5. Overall, a weighted average of all courses is used to assess the level of attainment for SLO3. An average score of 3.5 out of 5 represents "Satisfactory" performance for the outcome and no improvement actions are necessary. In Fall 2020, assessment was completed in two courses targeting SLO3, with 60 students included. In Spring 2021, assessment was completed in two courses targeting SLO3, with 31 students included.

Summary of assessment results for SLO3

The assessment data from 60 students in Fall 2020 indicated 100% of students achieved "Satisfactory" performance and the remaining 0% of students needed improvement for the outcome. The assessment data from 31 students in Spring 2021 indicated 75% of students achieved "Satisfactory" performance and 25% of students needed improvement for the outcome. The weighted average score for Fall 2020 was 4.5, well above the 3.5 average indicating "Satisfactory" performance. The weighted average score for Spring 2021 was 4.3, well above 3.5, the established criteria of success.

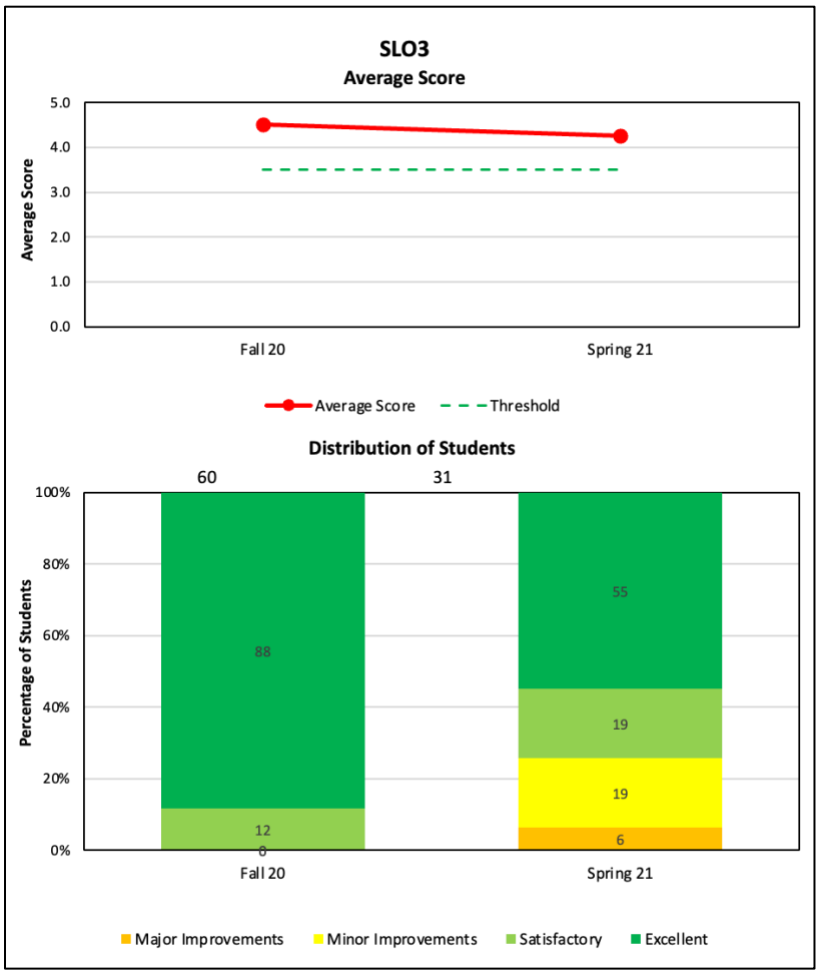

Figure III.2 SLO3 Assessment data for one assessment cycle (Fall 2020-Spring 2021)

SLO4. A recognition of the need to engage in life-long learning and knowledge of contemporary issues

Methods to measure SLO4

Direct Assessment of SLO4 is completed in multiple core courses each semester to ensure all students' learning is assessed. In total, there are seven courses (EGCE 532, 534, 537, 539, 544, 548, and 557) where assessment of SLO4 is completed. In all cases, learning is measured using embedded assessment questions asking students to recognize the need for life-long learning. The assessment questions are graded by individual instructors of each course and those grades are normalized on a scale of 0-5. Overall, a weighted average of all courses is used to assess the level of attainment for SLO4. An average score of 3.5 out of 5 represents "Satisfactory" performance for the outcome and no improvement action are necessary. In Fall 2020, assessment was completed in two courses targeting SLO4, with 50 students included. In Spring 2021, assessment was completed in five courses targeting SLO4, with 108 students included.

Summary of assessment results for SLO4

The assessment data from 50 students in Fall 2020 indicated 70% of students achieved "Satisfactory" performance and the remaining 30% of students needed improvement for the outcome. The assessment data from 108 students in Spring 2021 indicated 88% of students achieved "Satisfactory" performance and 12% of students needed improvement for the outcome. The weighted average score for Fall 2020 was 4.0, well above the 3.5 average indicating "Satisfactory" performance. The weighted average score for Spring 2021 was 4.4, well above 3.5, the established criteria of success.

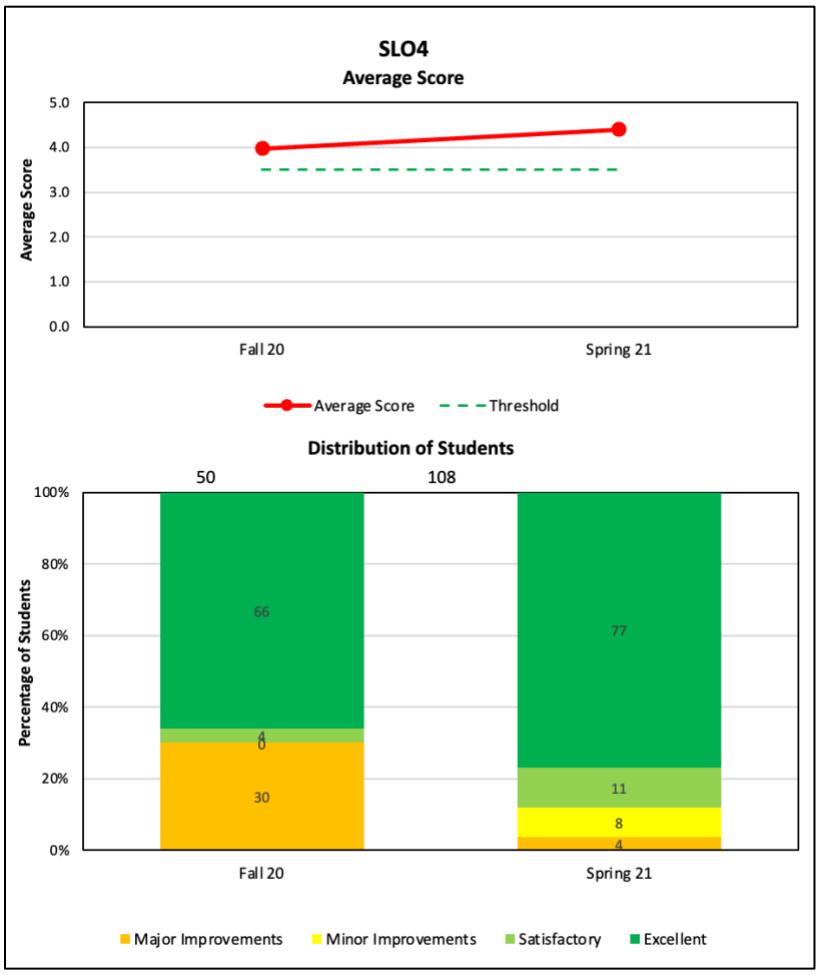

Figure III.2 SLO4 Assessment data for one assessment cycle (Fall 2020-Spring 2021)

C. Assessment results and continuous improvement

Each semester, faculty members are required to complete assessment of student learning outcomes in graduate courses. They are required to investigate and analyze the data and include potential remedies for cases in which student performance was not Satisfactory. They are encouraged to include possible future actions to improve teaching and learning practices if student performance was Satisfactory. Based on recent data, no actions were required for improvement due to student learning outcome assessment data exceeding the threshold for Satisfactory performance.

Student outcome assessment critically depends on the assessment process that can produce reliable data and is robust and efficient. As part of continuous improvement, efforts have been made to improve and establish the assessment process. The CEE department has developed an efficient cloud-based assessment

system that is straightforward and less time consuming, allowing faculty members to be engaged with the assessment process.

D. Quality indicators as evidence of effectiveness/success

The graduate program's success is recognized in the community through the achievements of students who graduated from the program. The program prepares students to be excellent team players and supports them to hone the skills needed for leading the engineering practice. Students typically acquire professional engineering licensure within 1-2 years of graduation. Several of the program's alumni hold high-level engineering and leadership positions in numerous well-recognized private and public engineering organizations. After a few years of practice, many of our alumni own and operate their engineering businesses. Some of our students choose to go for doctoral studies, and a few are currently professors at well-known universities.

IV. FACULTY

A. Program full-time equivalent faculty (FTEF)

At the time of the last program review, the department had ten tenured and tenure-track faculty members and one faculty member in FERP. The department currently has 15 tenured and tenure-track faculty members, of which seven are full professor, six are associate professor, and two are assistant professor. Since the last program review, ten additional tenure-track faculty members were hired, two faculty members retired, and four faculty members resigned.

Most recently, in 2019, the department hired two faculty members, Dr. Huda Munjy (Structural Engineering) and Dr. Xenia Wirth (Geotechnical Engineering).

Most courses in our graduate program are taught by full-time faculty members. Additionally, due to our location in Orange County, the CEE department is fortunate to have highly qualified, experienced industry professionals and experts to teach some of our classes. These industry professionals bring their practice to the classroom, complementing the strength of the department. Currently, the department has 10 part-time lecturers, who typically teach one or two classes each. A list of full-time and part-time faculty members in the six technical areas of civil engineering is shown in Table IV.1.

Table IV.1 Full-time and part-time faculty members in each technical area of civil engineering

Technical area	Full-time Faculty	Part-time Faculty
Construction Engineering	Dr. Hakob Avetisyan Dr. Deepak Sharma	Dr. Melad Hanna
Environmental Engineering	Dr. Jeff Kuo Dr. Sudarshan Kurwadkar Dr. Garrett Struckhoff	Dr. Hsueh-hwa (Andy) Lee
Geotechnical Engineering	Dr. Binod Tiwari Dr. Xenia Wirth	Dr. Pankaj Bhattarai Mr. Michael Mann
Structural Engineering	Dr. Pratanu Ghosh Dr. Uksun Kim Dr. Kristijan Kolozvari Dr. Huda Munjy Dr. David Naish	Dr. Nagi Abo-Shadi Mr. Dana De Vera
Transportation Engineering	Dr. Paulina Reina	
Water Resources Engineering	Dr. Phoolendra Mishra Dr. Prasada Rao	Dr. Yong Guo Dr. Morteza Shakeri Majd Dr. Iman Mallakpour Dr. Saeedeh Yavari-Ramshe

B. Priorities for additional faculty hires

Overall, the faculty size in the CEE department is adequate to meet the current needs. But with the growing demand for our programs, more faculty members will help strengthen and enrich student experiences. Subject to budgetary restrictions, we will continue to hire more full-time faculty members and experienced industry professionals as part-time faculty to meet demands and maintain the quality of our program.

C. Faculty role in the program

Faculty members have the authority and responsibility to keep the curriculum current, to ensure that students attain the student outcomes, and to ensure that the program is meeting its educational objectives. Full-time faculty members teach the majority of graduate level courses.

The success of the program solely depends upon a thoughtful curriculum developed and refined by the faculty members who are experts in their academic field. As per university policy, all program or course changes must originate from the program faculty. The curriculum changes include changing prerequisite requirements, adjusting course topics, developing a new course, and making changes in the program structure. Typically, any curriculum changes are first discussed at the faculty meeting. A faculty member then initiates curriculum changes via the online Curriculog system. The Curriculog system routes proposals through the Department Curriculum Committee, Department Chair, College Dean, and other appropriate university administration personnel.

Faculty members are also responsible for the success of the program by ensuring that SLOs are regularly assessed and that students are making progress towards meeting the PEOs. To achieve this goal, individual faculty members regularly assess SLOs and make adjustments to the course materials or course delivery as needed.

D. There are no Special Sessions self-support programs offered by the department/program.

V. STUDENT SUPPORT AND ADVISING

A. Student Advising

The department chair and one designated faculty who gets 3WTU release time serve as graduate advisors for the program. In conjunction with the Graduate Studies office, the Graduate Advisor supports students in completing graduate student study plans, formal advising, and grad checks. Informal advising and any specific questions related to the opportunities in their selected area of interest are answered by faculty members in their respective areas.

B. Student opportunities

All students have opportunities to conduct research with faculty members based on their interest and availability. The most common mechanisms for students to complete research are by taking EGCE 597 – Graduate Projects and EGCE 598 – Thesis. Students work with faculty members to propose a project; that proposal is approved by the faculty mentor and the department chair; and the student is given permission to enroll in either EGCE 597 or 598. Faculty members who have external research grants can partially fund students from their grants. The university provides internal funding to faculty to engage students in research. Most faculty members engage graduate students in research work. Some recent examples are listed in Table V.1 and Table V.2.

Table V.1 EGCE 597 Students and Faculty Mentors Fall 2017 – Spring 2022

Student Researcher	Faculty Mentor
Aycan Kara	Deepak Sharma
Yuanqing Lu	Xenia Wirth
Mohammad Nabi Mohtasebzada	Hakob Avetisyan
Michael Ayad	David Naish
Dallas Cummaro	David Naish
Saahil Wadhani	Hakob Avetisyan
James Harris	Xenia Wirth
Julianne Padgett	Xenia Wirth
Thulfiqar Mohammed Hussein	Xenia Wirth
Niranjan Mahamuni	Hakob Avetisyan
Shahad Alqattan	Deepak Sharma
Kresimir Antunovich	David Naish
Rohan Gadhvi	Deepak Sharma
Abishek Lad	Deepak Sharma
Yatharth Patel	Deepak Sharma
Kaustubh Sontakke	Deepak Sharma
Sunil Jayachandra	Pratanu Ghosh
Ashish Patel	Pratanu Ghosh
Shreyas Yelahanka	Pratanu Ghosh
Allison Bieda	Beena Ajmera
Amrinder Gill	Binod Tiwari
Damien Youngman	David Naish
Lovdeep Singh	Phoolendra Mishra
Vivekkumar Timbadia	Deepak Sharma

Table V.2 EGCE 598 Students and Faculty Mentors Fall 2017 – Spring 2022

Student Researcher	Faculty Mentor
Diana Fregoso-Sanchez	Xenia Wirth
Faisal Deyab	David Naish
Mohammad Alazemi	Hakob Avetisyan
Michael Jea	Sudarshan Kurwadkar
Ali Esmail	Hakob Avetisyan
Maria Marquez	Phoolendra Mishra
Kamiar Kalbasi Anaraki	Kristijan Kolozvari
Ross Miller	Kristijan Kolozvari
Rashed Al Suwaidi	Deepak Sharma
Deemah Saadeh	Deepak Sharma
Bezait Ali	Garrett Struckhoff
Jasper Cyril Abang	Kristijan Kolozvari
Quoc Hung Phan	Beena Ajmera
Samin Donyanavard	Binod Tiwari
Ahmed Aljasar	David Naish
Vanh Phonsiri	Sudarshan Kurwadkar

VI. RESOURCES AND FACILITIES

A. State support and non-state resources

All the programs in the department are funded through the state-support. The budget allocation for ECS is based on the college's student enrollment numbers. The dean of ECS then makes the appropriate allocations to each department based upon the enrollment and the department needs. Table VI.1 lists department budget for the past five years.

Table VI.1: CEE department budget from 2016-2020

Fiscal Year	Budget
2020-21	$3,535,658
2019-20	$3,228,934
2018-19	$3,064,597
2017-18	$3,113,686
2016-17	$3,280,894

Additionally, the department, with the help of ECS's development team, works to get philanthropic support from business, industry, and alumni donors. These philanthropic donations allow the department to support student projects and competitions and provide student scholarships.

B. Special facilities/equipment

Department's Computing Resources

The department provides state of the art computing resources to our students; these include high-end workstations, virtual computing labs, and a variety of professional computer software.

The department owns two computer labs (CS204 and CS 207) and open lab (E13A). All the workstations in these computer labs were recently upgraded.

CS-204 lab is a home to 40 stations featuring new Dell Precision T3620 workstations with an Intel i7 Quad-core with 16GB of RAM, 512 GB of Solid-State Hard drive, and 27-inch LCD panels. These stations feature the latest software for civil and environmental engineering including such as Ansys 2019, ArcGIS 10.5, AQT Solve Pro, AutoCAD 2019, AutoCAD Revit Architecture 2019, Etabs 9.7, HEC-RAS 4.1, Geo Studio 2018, MatLab 2019, Microsoft Office 2016, Microsoft Project 2016, Palisades Suite, Primavera, RAM Connection, RAM Structure, Rocscience suite, SAP 2000, and Staad Pro. These computers are running Windows 11 Enterprise 64 Bit as an Operating system.

CS-207 is home to 50 stations featuring new Dell Precision T3620 workstations with an Intel i7 Quad-core with 16GB of RAM, 512 GB of Solid-State Hard drive, and 27-inch LCD panels. These stations feature the latest software for civil and environmental engineering including Ansys 2019, ArcGIS 10.5, AQT Solve Pro, AutoCAD 2019, AutoCAD Revit Architecture 2019, Etabs 9.7, HEC-RAS 4.1, Geo Studio 2018, MatLab 2019, Microsoft Office 2016, Microsoft Project 2016, Palisades Suite, Primavera, RAM Connection, RAM Structure, Rocscience suite, SAP 2000, and Staad Pro. These computers are running Windows 11 Enterprise 64 Bit as an Operating system.

E-13A, a mini-open computer lab for CEE students which include 12 new Dell Precision T3620 workstation with the same hardware specification and software listed as the above labs. The department has open 24/7 access for our CEE students.

Besides these computer labs which belong to the CEE department, there are 60 computers (30 PCs and 30 Macs) in the college of ECS open lab. Our ECS Open-lab is located in CS-200 and CS-202. These computers have basic Engineering applications such as AutoCAD, MATLAB, and Solidworks. The students could utilize these open labs for their project reports and the Internet.

Operation Hours:

- Mon- Thursday: 10:00 AM - 7:00 PM
- Friday: 10:00 AM - 5:00 PM

Virtual Computing Labs:

Besides the physical labs on our campus, the CEE department worked with our central IT to create virtual computing labs so that students can work remotely from home. The hardware in the virtual computing labs are less powerful than the physical labs and therefore they do not perform as quickly.

There are **eight virtual computing labs** that CEE students can reserve and use virtually (off-campus).

- ECS CEE ArcGIS
- ECS CEE Construction Engineering
- ECS CEE Geotech Engineering
- ECS CEE Structural Engineering
- ECS CEE Water Resources
- ECS CEE Matlab
- ECS CEE Primavera
- ECS CEE Revit

Department's Laboratory Spaces

The CEE department houses laboratories for the following areas: Structural Engineering, Geotechnical Engineering, Construction Materials, Environmental Engineering, and Water Resources Engineering. Discipline-specific research is conducted in each of these laboratories in addition to the class activities discussed below.

Structural Engineering Labs are fairly large and thus are housed in three separate rooms (E-10, E-12, E-13). Geotechnical Engineering Labs are housed in two rooms (E-10c/d). Due to overlap in the areas, some geotechnical engineering equipment is housed in the Construction Materials Lab. Civil Engineering Materials Lab is housed in one room (E-10e). Due to overlap in the areas, some Civil Engineering materials equipment is housed in the Structural Engineering Lab. Environmental Engineering Labs are in E-34. These labs are mostly used for conducting research. Water Resources Engineering Lab is in E-45.

The proper maintenance of laboratory equipment is critically important for the department. As indicated Table VI.2, apart from the department budget, the department also uses the Consolidated Course Fee (CCF) to meet the maintenance and servicing needs of laboratory equipment. On a rotating basis, the department provides major upgrades for each of the major laboratories in the form of new equipment or enhanced working space. The department and college also upgrade computing resources regularly (approx. every five years).

Table VI.2: CCF funds allocated for the CEE department in the past five years

Year	Amount	Major expenses
2020-21	$111,142	• IT Hardware ($3,476) • Software and annual license renewals ($13,941) • Lab supplies and equipment ($74,542) • Lab related services ($19,183)
2019-20	$80,867	• IT Hardware ($13,923) • Software and annual license renewals ($11,211) • Lab supplies and equipment ($40,609) • Lab related services ($14,284) • Lab furniture ($840)
2018-19	$38,231	• IT Hardware ($1,918) • Software and annual license renewals ($9,138) • Lab supplies and equipment ($19,954) • Lab related services ($1,413) • Lab furniture ($5,809)
2017-18	$36,736	• IT Hardware ($6,752) • Software and annual license renewals ($13,410) • Lab supplies and equipment ($11,544) • Lab related services ($5,030)
2016-17	$36,968	• IT Hardware ($9656) • Software and annual license renewals ($8,265) • Lab supplies and equipment ($14,500) • Lab related services ($4,547)

The ECS dean invites proposal requests for large-scale facilities and equipment upgrades. These requests originate from the department and are reviewed and approved by the ECS dean and appropriate university administration. Some of the significant special projects funded by the Dean's Office over the last five years are shown in Table VI.3.

Table VI.3: List of major special projects funded by Dean's Office

Fiscal Year	Amount Awarded	Program Name
2019-20	$79,072	• Upgrades of computers in CS204 lab ($76,500) • Wall and door for E-13 ($2,572)
2018-19	$78,260	• Upgrades of computers in CS 207 computer lab
2017-18	$5,324	• Ring Shear Apparatus
2016-17	$15,000	• Structures lab reaction floor in E13
2015-16	$81,000	

The department needs to upgrade computer labs every five years and laboratory equipment needs to be maintained, calibrated, and upgraded every ten years.

C. Library resources

Pollak Library, designed to facilitate the delivery of recorded knowledge and information in support of instruction and faculty research, serves as the hub of the CSUF's information and instruction network. The library also participates in the CSUF's instruction programs and shares its commitment to lifelong learning.

Library Facilities
Pollak Library has over 500 computers available located throughout the North and South buildings. The library is also home to the Information & Learning Commons (ILC), a main hub for research activities located on Library North first floor. A service desk at the Research Center is staffed by the Reference Team (librarians and library staff), while the Student Genius Center is staffed by the Information Technology staff. Both assist users with research needs and technical support.

Innovation/Makerspace Center
Pollak Library houses the Innovation and Makerspace Center on the second floor of Library North. This center enhances creativity, innovation and talent through advanced technology such as virtual reality, augmented reality, 3D printing, Microsoft Surface Hub, Raspberry Pi, and high-end computing, (https://www.fullerton.edu/it/innovation_makerspace_center/).
In addition, a Data Visualization Center, for analyzing and displaying data, is located adjacent to the existing Innovation/Makerspace Center, (https://www.fullerton.edu/it/services/data_visualization_center/).
Wireless access and docking stations are available throughout Library North and Library South. Electronic resources for the visually disabled are also available.

Interlibrary Loan
ILLiad, a web-based interlibrary loan system, allows students and faculty to request articles, books, and other materials online. ILLiad is used when the requested materials are not in the library. Interlibrary loan staff may obtain requested items from libraries worldwide. Most materials can be borrowed free of charge. Detailed information regarding the Library's Interlibrary Loan services is maintained at the Library's Website at https://www.library.fullerton.edu/services/interlibrary-loan.php

The library also maintains reciprocal borrowing arrangements that allow CSUF students, faculty, and staff to go directly to other libraries and borrow the resources they need in person. Reciprocal arrangements exist among the sister institutions in the California State University system and with several institutions in the local area, including Biola, Cerritos College, Hope International University, Marymount College, Santiago Canyon College, and the Southern California University of Health Sciences.

Library Collections
The library has a significant collection of materials that support the study and research required by the College of Engineering and Computer Science. The library welcomes input from faculty on the selection and purchasing of resources and materials that support the curriculum and, as funds permit, the research needs of the faculty. The 23-campus California State University system now uses an integrated platform – Ex Libris Alma with the Ex Libris resource discovery system, Primo. This has provided an increased efficiency and equity for sharing of items among campuses.

Through collaboration with the California State University system as a whole, as well as local subscriptions, the library provides access to resources essential to the study of Engineering and Computer Science, such as the ACM Digital Library, IEEE Xplore, Web of Science, and others listed above.

Through an established approval plan, a Demand-Driven Acquisition (DDA) program, selections by the engineering librarian, and faculty requests, books in both print and electronic formats are added regularly.

Current monograph holdings are listed in Table VI.4:

Table VI.4 Pollak Library Print and Electronic Book Collections for Engineering and Computer Science

Category	Current Collection Holdings (Print & E)	Electronic DDA
Engineering: CN* T – TP	25,200 (17,639 & 7,561)	5,787
Chemistry: CN QD	7,633 (6,376 & 1,257)	1,047
Math & Computer Science: CN QA	20,791 (16,481 & 4,310)	4,359
Physics: CN QC	10,433 (7,958 & 2,475)	1,886
Technology: Call number TS	1,306 (1,095 & 211)	122

**Call Numbers abbreviated as* CN

The library also maintains a number of journal subscriptions relevant to Engineering and Computer Science as shown in Table VI.5.

Table VI.5 Pollak Library Journal Collections for Engineering and Computer Science

Category	Current Collection Holdings
Engineering and Computer Science	8,485
Civil Engineering	1,083
Chemistry	1,455
Math & Computer Science	5,425
Physics	2,570
Technology	310

VII. LONG-TERM PLANS

A. Summary of Long-term plans

In the long-term, the department (a) would like to establish itself as one of the top choices of graduate students in Civil & Environmental Engineering in Orange County and Southern California, (b) to continue to offer innovative courses that are in line with emerging trends in Civil Engineering, (c) explore the option of offering virtual graduate-level courses to provide flexibility to working professionals, and (d) support more local and international graduate students by providing them research or teaching opportunities in the department.

B. Long-term plan in relation to implementing university's goal and mission

The department's long-term plan listed above is directly aligned with the mission and goals of the College and the University. The first long-term plan directly aligns with University Goal 1: To ensure the preeminence of learning. The next three long-term plans align with University Goal 2: To provide high-quality programs that meet the evolving needs of our students, community, and region, and Goal 4: To create an environment where all students have the opportunity to succeed.

C. Evidences to support long-term plan

Student time to graduation and enrollment growth will serve as metrics to measure progress towards the long-term plan. All the data will be continuously collected and regularly evaluated to assess the program's status in pursuit of its goals.

D. Long-term budget plan

Through the College Dean's office, the campus funds instruction and instructional support based on the budgeted Student Faculty Ratio (SFR).

At the University level, the number of Full-Time Equivalent Faculty (FTEF) positions and related funding is determined by the Full-Time Equivalent Student (FTES) target and SFR. These values are calculated on an annual basis. There are two components to the Budgeted FTES target for the campus. The first is the Baseline FTES Target, which is established by the Chancellor's Office during each year's budget cycle. If the baseline target changes during a given year, a corresponding baseline FTEF position adjustment occurs (positive or negative). The second is the additional FTES goal set by the campus.

The College budget is based on the headcount of students and full-year FTES. The University's budgeted enrollment plan includes both "Base" FTES and "additional/over-base" FTES.

Currently the above process is the only mechanism for the department funding and therefore it is difficult to create a long-term budget plan. Lab upgrades and equipment purchase requests can only be funded when funding is made available through the Dean's office.

Over the years, the department has been successful in meeting student needs. To continue improving the program further, the University, college, and department will work together in further advancing the funding for the program.

APPENDIX A. GRADUATE DEGREE PROGRAMS

TABLE 1. Graduate Program Applications, Admissions, and Enrollments

For MS in Civil Engineering graduate degree program, Table 1 provides the number of student applications, number of students admitted, and the number of new enrollments.

TABLE 1. Graduate Program Applications, Admissions, and Enrollments

Fall	# Applied	# Admitted	# Enrolled
2016	175	95	36
2017	172	94	41
2018	182	104	39
2019	111	68	34
2020	148	81	37

TABLE 2. Graduate Program Enrollment by FTES

For MS in Civil Engineering graduate degree program, Table 2 provides student enrollment for the past five years by headcount and FTES.

TABLE 6. Graduate Program Enrollment by Headcount and FTES

Academic Year (Annualized)	Headcount	FTES	FTES per headcount
2016-2017	185	108.9	0.59
2017-2018	140	85.9	0.62
2018-2019	124	74.1	0.60
2019-2020	110	67.1	0.61
2020-2021	107	66.0	0.62

TABLE 3. Graduate Student Graduation Rates

For MS in Civil Engineering graduate degree program, Table 3 provides graduation rates for the past five years.

TABLE 3. Graduation Rates for Master's Programs

All Master's Entered in Fall:	Cohort	% Graduated in 2 years	% Graduated in 3 years	% Graduated in 4 years
2015	51	51.0%	80.4%	82.4%
2016	36	44.4%	69.4%	83.3%
2017	41	63.4%	70.7%	75.6%
2018	39	59.0%	82.1%	N/A
2019	34	55.9%	N/A	N/A

TABLE 4. Master's Degrees Awarded

For MS in Civil Engineering graduate degree program, Table 4 provides the number of degrees awarded.

TABLE 4. Graduate Degrees Awarded

College Year	Degrees Awarded
2016-2017	106
2017-2018	65
2018-2019	59
2019-2020	51
2020-2021	45

APPENDIX B. FACULTY

Table 5. Full-Time Instructional Faculty, FTEF, FTES, SFR

Table 5 provides the number of tenured faculty, number of faculty on tenure-track, number of faculty on sabbatical, number of faculty in FERP, number of full-time lecturers, and full-time faculty equivalent (FTEF) for the five recent fall terms.

Table 5. Faculty Composition

Fall	Tenured	Tenure-track	Sabbaticals at 0.5	FERP at 0.5	Full-time Lecturers	Actual FTEF
2016	6	11	0.0	0.5	0	17.0
2017	7	8	1.0	0.5	1	16.0
2018	9	5	0.0	0.5	0	14.0
2019	9	5	0.0	0.5	1	15.0
2020	11	3	0.0	0.5	2	15.1

APPENDIX C. FACULTY CURRICULUM VITAE

Table C.1 List of faculty members

Faculty Name	Full-time (FT) or Part-time (PT)
Hakob Avetisyan	FT
Pratanu Ghosh	FT
Uksun Kim	FT
Kristijan Kolozvari	FT
Sudarshan Kurwadkar	FT
Jeff Kuo	FT
Huda Ahmed-Munjy	FT
Phoolendra Mishra	FT
David Naish	FT
Melella Prasada Rao	FT
Paulina Reina	FT
Deepak Sharma	FT
Garrett Struckhoff	FT
Binod Tiwari	FT
Xenia Wirth	FT
Nagi Abo-Shadi	PT
Pankaj Bhattarai	PT
Young Guo	PT
Melad Hanna	PT
Hsueh-hwa (Andy) Lee	PT
Morteza Shakeri Majd	PT
Iman Mallakpour	PT
Michael Mann	PT
Dana De Vera	PT
Saeedeh Yavari-Ramshe	PT

1. **Name**: Hakob G. Avetisyan

2. **Education**
   Ph.D. Civil & Env. Eng./Project Mgmt. UMD, 2013
   M.S. Civil & Env Eng. OU, 2008
   M.S. Environmental Studies OU, 2008
   Ph.D. Civil Eng./Structural Mechanics NUACA (former YSUAC), 2006
   M.Eng./BS Civil Engineering (5-year) NUACA (former YSUAC), 2003

3. **Academic experience**
   California State University Fullerton, Associate Professor, 2019-present, full time
   California State University Fullerton, Assistant Professor, 2013-2019, full time
   NUACA (former YSUAC), Recitation Instructor, 2003-2005 part time

4. **Non-academic experience**
   Chilingarian Design and Construction, Project. Manager, 2003-2005, full time
   - Supervised construction of buildings
   - Developed construction plans and supervision strategies
   - Developed architectural solutions for buildings entrances and façade
   - Developed engineering solutions for soil stabilization
   - Construction scheduling and organization
   - Structural design of supports, columns, beams, and supporting walls
   - Cost estimation and bid preparation

   Vahagn and Samvel Co. Ltd, Foreman-Designer, 06-12/2002, full time
   - Developed construction plans for road construction projects
   - Supervised reconstruction work of arterial roads
   - Designed architectural solutions for entrances/sidewalks
   - Managed construction projects

   Concern-Energia CJSC, Circuit Assembler, 2000-2004, full time
   - Assembly of electronic circuit boards for electricity meters

5. **Certifications or professional registrations**
   None

6. **Current membership in professional organizations**
   Construction Management Association of America (CMAA)
   Design-Build Institute of America (DBIA)
   California Faculty Association (CFA)
   Institute for Operations Research and the Management Sciences (INFORMS)

7. **Honors and awards**
   Best Paper Award ASCE Journal of Construction Engineering and Mgmt. 2014

8. **Service activities within and outside of the institution**
   M.S. in Engineering Management

- Coordinator Spring 2020-Present

Extension and International Programs formerly University Extended Education

- Committee Member representing ECS Summer 2018-Present

Professional Society Chapter Advising

- Student Chapter CEMA Faculty Advisor Fall 2018-Present
- Student Chapter CMAA Faculty Advisor Fall 2015-Present
- Student Chapter DBIA Faculty Advisor Spring 2015-Present

Collaboration

- NSF grant Advisor for (STEM-Inc) Jun.-High Schools in OC 2014-2016

Department Committee Member and External Service

- Depart. Assessment and Continuous Improvement Committee
- Depart. ABET Committee Member
- Depart. Computer/Software Committee Member
- Depart. Faculty Search Committee Member
- Depart. Library Committee Member (Chair/Coordinator)
- Depart. Curriculum Committee Member
- Depart. Graduate Advising Committee Member
- *NSF CIS Panel Reviewer:* "NSF Civil Infrastructure Systems"
- *Session Chair:* "Sustainable Infrastr. Modeling" at INFORMS
- Peer Review for various technical journals

9. Publications and presentations from the past five years

Hakob Avetisyan, Miroslaw Skibniewski, Mohammad Mozaffarpour*, 2017. "Analyzing Sustainability of Construction Equipment in the State of California" *Frontiers of Engineering Management,* DOI 10.15302/J-FEM-2017013. *Front. Eng. Manag.* 2017, 4(2): 26–40 *Student at CSUF.

Hakob Avetisyan, Miroslaw Skibniewski, 2017. "Web-based Construction Equipment Fleet Management System: Cost-Effective Global and Local Allocation" *Frontiers of Engineering Management,* DOI 10.15302/J-FEM-2017012. *Front. Eng. Manag*. 2017, 4(1): 76–83

Ahmed al Kulabi*, **Hakob G. Avetisyan**, 2016. "Reducing Time and Cost of Construction Projects by improving the Properties of Precast Normal-Weight Wall Panels", *Procedia Engineering*, ICSDEC 2016 – Integrating Data Science, Construction and Sustainability. Elsevier, DOI: 10.1016/j.proeng.2016.04.138, Volume 145, 2016, Pages 1066–1073 *Student at CSUF.

10. Recent professional development activities

- *Graduate Ment. and Advising Mini Conf.,* Fullerton, CA Sept. 24, 2018
- *PCI Professor Seminar/Workshop,* Los Angeles, CA June 1-3, 2016

1. **Name**: Pratanu Ghosh

2. **Education:**
   Ph.D., Civil Engineering, University of Utah, 2011
   M.S., Civil Engineering, University of Windsor, 2007
   B.S., Civil Engineering, BESUS, India, 2002

3. **Academic experience:**
   California State University Fullerton, Professor, 2020-present, full time
   California State University Fullerton, Associate Professor, 2017-2020, full time
   California State University Fullerton, Assistant Professor, 2011-2017, full time

4. **Non-academic experience**:
   Consulting Engineering Services (CES), India, Assistant Engineer, 2002-2005

5. **Certifications or professional registrations**
   Engineer in Training (EIT)-Utah
   ACI Concrete Field-Testing Technician - Grade I Certification, 2009-2014

6. **Current membership in professional organizations**
   National Committee Member, Transportation Research Board (TRB)
   Associate Member of American Society of Civil Engineers (ASCE)
   American Society of Testing and Materials (ASTM)
   Council of Undergraduate Research (CUR)

7. **Honors and awards**
   Orange County Outstanding Young Engineer Award, OCEC, 02/2021
   Eminent Speaker at Indian Concrete Institute (ICI), 12/2020
   Travel Grant Award for NASA Proposal Workshop, Bowie State University, 06/2019
   Faculty Recognition Award for Exceptional Service, CSUF, 11/2017
   Faculty Recognition Award for Exceptional Teaching Effectiveness, CSUF, 10/2016
   Faculty Recognition Award -Outstanding Scholarly and Research Activities, CSUF, 03/2016
   Outstanding Faculty Advisor Award from Orange County ASCE branch, 02/2015

8. **Service activities (within and outside of the institution)**
   Guest Editor of the Special Issue Journal of MDPI, 02/2022
   Search Committee Member of AVP of Academic Affairs, 02/2022
   Chair of EE Department and CpE Program Merger ad-hoc committee, 11/2021
   Academic Senator from ECS, 2020-present
   STEM-NET Faculty Advisor of CSUF and Faculty Representative of ECS CSU Certificate Program Student Success Analytics, 2019-present
   Search Committee Member of ECS Associate Dean, 11/2019
   CUR Assessment Committee, 2019-present
   ECS at-large committee, 2018-present

Members of University Committees-General Education, Library, University Advancement, University Academic Master Plan Sub-Committee-2, 2016-present
Faculty Advisor for the ASCE Student Chapter, CSUF, 2012-present
Faculty Advisor for the Kuwait Student Club, CSUF, 2018-present
Chair of Faculty Search Committee, Chair of Department Personnel Committee (DPS) and Department Personnel Review Committee (DPRC), 2017-present
Research Coordinator and National Committee Member of Transportation Research Board (TRB) Standing Committees AFN 10 and AFN 20
Frequent reviewer of prominent concrete materials journals, 2012-present
Member of Editorial Board of the journal-Transactions of the VB - Technical University of Ostrava, Civil Engineering Series, 2015-present

9. Publications and presentations from the past five years

a. **Ghosh, P**., Ganesan, R. "Effect of w/c ratio on fresh electrical resistivity of various pumice based HPC and computation of setting time", Accepted for Publication in Materials and Structures, 2022
b. Tran, Q., **Ghosh, P.**, Lehner, P. and Konecny, P. "Determination of Time Dependent Diffusion Coefficient Aging Factor of HPC Mixtures", Key Engineering Materials, 2020, 832, pp. 11-20.
c. Modha, N. and **Ghosh, P**. "Zeolite-Based New Generation Concrete-Sustainable and Durable Solution for Nations Infrastructure", ACI Special Publication for ACI 130 and 224- Cracking and Durability in Sustainable Concrete, 2019.
d. Lehner, P., **Ghosh, P**. and Konecny, P. "Statistical Analysis of Time Dependent Variation of Diffusion Coefficient for Various Binary and Ternary Based Concrete Mixtures", Construction and Building Materials, Vol, 183, pp. 75-87, 2018.
e. Tran, Q, **Ghosh, P**., Konecny, P. and Lehner, P. " Variation of Diffusion Coefficient for Selected Binary and Ternary Concrete Mixtures Considering Concrete Aging Effect, Journal of Key Engineering Materials, Vol. 761, pp. 144-147, 2018.
f. **Ghosh, P.**, Konecny, P., Lehner, P., and Tikalsky, P. "Probabilistic Time-Dependent Sensitivity Analysis of HPC Bridge Deck" Journal of Computers and Concrete, Vol. 19, No. 3, pp. 305- 313, 2017.
g. **Ghosh, P.** and Ganesan, R. "Influence of Various SCMs on Fresh Electrical Resistivity and Computation of Setting Time", Proceedings at TRB 99th Annual meeting, 2020.
h. Tran, Q, **Ghosh, P.**, Konecny, P. and Lehner, P. "Computation of Diffusion Coefficient and its Aging Factor for Different Binary and Ternary Based Concrete Mixtures", Proceedings at Transportation Research Board 96th Annual meeting, 2017.
i. Tran, Q and **Ghosh, P.** "Influence of Supplementary Cementitious Materials on Reduction and Variation of Charge Passed", Proceedings at Transportation Research Board 95th Annual meeting, Washington D.C., 2016.

10. Professional development activities

Webinar on Online teaching: Beyond Making it Work, Pearson Publisher, 09/2020
Workshop on Canvas, Titanium, FlipGrid, FSSD from FDC, CSUF, 06/2020
Workshop on Essential for TurnitIn, FDC, CSUF, 2019
Joint Tran-SET Webinar Series: Pavement Management, LSU, 2019
FHWA Webinar Research Program & Project Performance (RPPM), 2019
Webinar for Committee Research Coordinator, TRB, 2019

1.Name: Uksun Kim

2. Education:

Ph.D. Civil & Environmental Eng. Georgia Institute of Technology 2003
M.S. Civil & Environmental Eng. Michigan State University 1999
M.S. Architectural Engineering Yonsei University, Korea 1992
B.S. Architectural Engineering Yonsei University, Korea 1990

3. Academic Experiences:

CSUF, Professor, 8/2015-present, FT
CSUF, Professor, Dept Chair, 8/2015-8/2018, FT
CSUF, Associate Professor, Dept Chair, 8/2012-8/2015, FT
CSUF, Associate Professor, 8/2011-8/2015, FT
UC San Diego, Visiting Scholar, 1/2013-5/2013, PT
CSUF, Assistant Professor, 8/2005-8/2011, FT
Georgia Inst. Of Technology, Research Scholar, 8/2004-8/2005, PT
Georgia Inst. Of Technology, Research Tech III, 5/2003-5/2004, PT
Georgia Inst. Of Technology, Grad. Res Assistant, 1/2000-5/2003, PT

4. Non-academic experiences:

Rist, Korea-Sr. Researcher, Research on Steel Structures 1992-1998 FT

5. Certification or professional registration:

a. Registered Professional Engineer (PE) in Civil Engineering;
b. Leadership in Energy and Environmental Design Accredited Professional (LEED AP).

6. Membership in professional organizations:

American Society of Civil Engineers; American Institute of Steel Construction; Precast/Prestressed Concrete Institute

7. Honors and awards:

a. Outstanding Faculty/Scholar Recognition, CSUF (2008, 2009, 2011)
b. Outstanding Engineering Educator of the Year, Orange County Engineering Council (2014)
c. Distinguished Faculty Member in ECS, CSUF (2016)

8. Service Activities:

a. Professional Societies: International Editorial Board Member (Journal of Korean Society of Steel Construction); NSF Reviewer (May 2018); Reviewer of Journal Papers
b. CEE Department: Department Chair (Aug. 2012 – Aug. 2018); MSCE Graduate Program Coordinator (2018 – present); Curriculum, Department Peer Review Committee, Faculty Search Committee, ABET Preparation, Department Personnel Committee
c. CSUF: HPRI (Health Promotion Research Institute) Steering Committee (2010 - 2014); Faculty Personnel Committee (2019 – present)

9. Publications and presentations from past five years (selected):

a. Adhikari, Asish (2017). "Seismic Behavior of Buildings with Tanks Containing Water or Various Liquids", 2017 Student Creative Activities and Research (SCAR) Day, Titan Student Union, Fullerton, CA, April 12th, 2017 (Faculty Advisor: **Kim, U.**).

b. Carolina Petinari, Lisiane Bueno, Marianne Bassani, Walker R. de Souza (2016). "Structural Behavior and Repair Scheme for 2-Span Post-Tensioned T-Beams", Summer International Research Institute 2016, ECS Quad, Fullerton, CA, July 28th, 2016 (Faculty Advisor: **Kim, U.**)

c. Giovana de Brito Silva, Yuri Henrique Ferreira Coelho, Asish Adhikari (2015). "Seismic Behavior of Buildings with Tanks Containing Various Liquids", Summer International Research Institute 2016, ECS Quad, Fullerton, CA, July 28th, 2016 (Faculty Advisor: **Kim, U.**)

d. **Kim, U.** (2015). "Nonlinear Structural Behavior of Unbonded Post-Tensioned Concrete Members and Repair Schemes with CFRP", *25th Annual KSEA (Korean-American Scientist and Engineers Association) South-Western Regional Conference*, Sheraton Carlsbad Resort & Spa, Carlsbad, CA.

e. **Kim, U.**, Yu Huang, Chakrabarti, P.R., and Kang, T.H.-K. (2014). "Modeling of Post-Tensioned one-way and two-way slabs with unbonded tendons", *Computers and Concrete*, Techno-Press, Vol. 13, No. 5, pp. 547 – 561.

f. Mashhad, Arash. (2014). "Innovative Architectural Components for Eco-friendly Housing", *22nd Annual Southern California Conference for Undergraduate Research (SCCUR 14),* California State University at Fullerton, CA, November 22nd, 2014 (Faculty advisor: **Kim, U.**).

g. **Kim, U.** and Avetisyan, H. (2014). "When Combining Sustainable Design with Sustainable Construction", *2014 INFORMS Annual Conference,* San Francisco, CA, November 9-12th, 2014.

h. **Kim, U.** (2014). "Seismic Design Coefficients and Factors for Single-Story Steel Joist Girder Structures", *8th SEAOSC Seismology Committee Meeting,* California State University at Fullerton, CA, April 15, 2014.

10. Recent professional development activities

a. Attended: North American Steel Construction Conference (2016, 2017, 2019); NCSEA Structural Engineering Summit (2019); PCA Professors' Workshop (2017); National Academy of Sciences, Engineering and Medicine Workshop "The Role of Advanced Technologies in Structural Engineering for More Resilient Communities" (2017); ASCE Webinars; ATC Webinars

b. Invited Lectures / Certificate of Completion: Invited lectures at Sejong University, Seoul National University, and Yonsei University; Certificate for Completion "2017 PCA Professors' Workshop" (2017); Certificate for Completion "Application of the 2010 AISC Seismic Provisions" (2014)

1. **Name**: Kristijan Kolozvari

2. **Education**:
   Ph.D., Civil Engineering, UCLA, 2013
   M.S., Civil Engineering, UCLA, 2010
   B.S., Civil Engineering, University of Belgrade, Serbia, 2006

3. **Academic experience:**
   California State University Fullerton, Associate Professor, 2020-present, FT
   California State University Fullerton, Assistant Professor, 2014-2020, FT

4. **Non-academic experience**
   Saiful/Bouquet Structural Engineers, Pasadena, CA, Senior Engineer, 2013-2014
   Simpson Gumpertz & Heger, Newport Beach, CA, Intern, 2013
   Arup, Advanced Technology and Research, San Francisco, CA, Intern, 2012
   Del-Ing Ltd., Belgrade, Serbia, Structural Engineer, 2007-2009

5. **Certifications or professional registrations**
   Professional Engineer (Civil) License #83821 - CA

6. **Current membership in professional organizations**
   Los Angeles Tall Buildings Structural Design Council (LATBSDC)
   Structural Engineering Association of Southern California (SEAOSC)
   American Concrete Institute (ACI)
   Earthquake Engineering Research Institute (EERI)

7. **Honors and awards**
   CSUF Faculty Recognition - Research 2021
   CSUF Faculty Recognition - Service 2020
   S. B. Barnes Research Award, Structural Engineering Association of Southern California 2019
   CSUF Faculty Recognition - Teaching 2019
   CSUF Faculty Recognition - Research 2019
   Outstanding Reviewer, Engineering Structures Journal, 2017

8. **Service activities (within and outside of the institution**)
   ANSS USGS Committee (EERI Representative for Structures), 2021-present
   ACI 374 Committee (Diaphragm design task group leader), 2021-present
   Los Angeles Tall Buildings Structural Design Council (Seismic Resiliency Committee), 2021-present
   Honor Society Phi Kappa Phi – Scholarship and Awards Officer, 2016-present
   ECS College Beautification Committee, 2018-present
   Assessment and Continuous Improvement Department Committee, 2018-present
   Faculty Advisor for the EERI Student Chapter, 2014-present

Guest Editor, Bulletin of Earthquake Engineering, "Special Issue on Nonlinear Modeling of Reinforced Concrete Structural Walls and Wall Systems", 2019

Structural Engineering Association of Southern California, Existing Buildings Committee, 2018-present

Special Session Co-Chair – 16th World Conference in Earthquake Engineering

Session Title: Reinforced and High-Performance Concrete Structural Walls - Performance Issues, Modeling & Testing, 2017

Frequent reviewer of prominent structural engineering journals, 2014-present

9. Publications and presentations from the past five years

a. V. Terzic and K. Kolozvari (2022), "Probabilistic evaluation of post-earthquake functional recovery for a tall RC core wall building using F-Rec framework", Engineering Structures, 253: 113785.
b. C. N. Lopez, L. M. Massone, K. Kolozvari (2021), "Validation of an efficient shear-flexure interaction model for planar reinforced concrete walls," Engineering Structures, 243: 112680.
c. T. Isaković, M. Gams, A. Janevski, Z. Rakićević, A. Bogdanović, G. Jekić, K. Kolozvari, J. Wallace, M. Fischinger (2021). "Shake Table Test of RC Walls' Coupling Provided by Slabs", Building Materials and Structures 64 (2021) 225-234, doi: 10.5937/GRMK2104225I.
d. K. Kolozvari, K. Kalbasi, K. Orakcal, J. W. Wallace (2021), "Three-Dimensional Shear-Flexure Interaction Model for Analysis of Non-Planar Reinforced Concrete Walls," Journal of Building Engineering, 44: 102946.
e. K. Kolozvari, M. F. Gullu, K. Orakcal (2021), "Finite Element Modeling of Reinforced Concrete Walls under Uni- and Multi-Directional Loading using OpenSees," Journal of Earthquake Engineering, DOI: 10.1080/13632469.2021.1927893.
f. L. M. Massone, C. N. Lopez, K. Kolozvari (2021), "Formulation of an efficient shear-flexure interaction model for planar reinforced concrete walls," Engineering Structures, 243: 112680.
g. K. Kolozvari, K. Kalbasi, K. Orakcal, J. W. Wallace (2021), "Three-Dimensional Model for Nonlinear Analysis of Slender Flanged Reinforced Concrete Walls," Engineering Structures, 236: 112105.
h. K. Rodsin, T. Mehmood, K. Kolozvari, A. Nawaz (2020), "Seismic Assessment of Non-Engineered Reinforced Concrete Columns in Low to Moderate Seismic Regions", Bulletin of Earthquake Engineering, 18: 5941–5964.
i. Q. Zhang, Y.G. Zhao, K. Kolozvari, L. Xu (2020), "Simplified Model for Assessing Progressive Collapse Resistance of Reinforced Concrete Frames under an Interior Column Loss", Engineering Structures, 215: 110688. K. Kolozvari, K. Kalbasi, K. Orakcal, J. W. Wallace (2019), "Shear-Flexure-Interaction Models for Planar and Flanged Reinforced Concrete Walls," S.I.: Nonlinear Modeling of Reinforced Concrete Structural Walls, Bulletin of Earthquake Engineering, 1-27.
j. K. Kolozvari, L. Biscombe, F. Dashti, R. Dhakal, A. Gogus, F. M. Gullu, R. Henri, L. Lowes, L. Massone, K. Orakcal, F. Rojas, A. Shegay, J. W. Wallace (2019), "State-

of-the Art in Nonlinear Finite Element Modeling of Isolated Planar Reinforced Concrete Walls", Engineering Structures, 194: 46-65.
k. M. F. Gullu, K. Orakcal, K. Kolozvari (2019), "The Fixed-Strut-Angle Finite Element (FSAFE) Model for Reinforced Concrete Structural Walls," Bulletin of Earthquake Engineering, S.I.: Nonlinear Modeling of Reinforced Concrete Structural Walls, https://doi.org/10.1007/s10518-019-00641-0.
l. V. Terzic, K. Kolozvari, and D. Saldana (2019), "Implications of Modeling Approaches on Seismic Performance of Low- and Mid-Rise Office and Hospital Shear Wall Buildings", Eng. Structures, 189: 129-146.
m. K. Kolozvari, C. Arteta, M. Fischinger, S. Gavridou, M. Hube, T. Isakovic, L. Lowes, K. Orakcal, J Vasquez, and J. W. Wallace (2018), "Comparative Study on State-of-the-art Macroscopic Models for Planar Reinforced Concrete Walls", ACI Structural Journal, 115 (6): 1637-1657.
n. K. Kolozvari, V. Terzic, R. Miller, and D. Saldana (2018), "Assessment of Dynamic Behavior and Seismic Performance of a High-Rise RC Coupled Wall Building", Engineering Structures, 176: 606-620.
o. K. Kolozvari, K. Orakcal, J. W. Wallace (2018), "New OpenSees Models for Simulation of Nonlinear Flexural and Shear-Flexural Interaction Behavior of Reinforced Concrete Walls and Columns", Computers and Structures Journal, 196: 246-262.

10. Briefly list the most recent professional development activities

a. The First International Joint Research and Workshop on the Ten-story Tests at E-Defense, Berkeley, Berkeley, CA, 2019
b. Workshop on Seismic Design of Floor Diaphragms, Los Angeles, CA, 2016
c. EERI Earthquake Reconnaissance Data Collection Training, Los Angeles, CA, 2015

1. **Name**: Sudarshan Kurwadkar

2. **Education:**
   Ph.D., Civil Engineering, Missouri Univ. of Science & Technology, Rolla, 2005
   M.S., Civil Engineering, Indian Institute of Technology, Delhi, 1997
   M.S., Civil Engineering, Government College of Engineering, Pune, India 1996
   B.S., Civil Engineering, Government College of Eng., Amravati, India, 1994

3. **Academic experience:**
   California State University Fullerton, Professor, 2020-present, full time
   NRC Senior Research Associate, U. S. Environmental Protection Agency, 2021-2022
   California State University Fullerton, Associate Professor, 2017-2020, full time
   California State University Fullerton, Assistant Professor, 2014-2017, full time
   Tarleton State University Stephenville, Assistant Professor, 2009-2014, full time
   Directorate of Training and Technical Education, New Delhi, India, Lecturer, 1998-2001, full time

4. **Non-academic experience:**
   Missouri Department of Natural Resources, Jefferson City, MO, Environmental Engineer, 2006-2009
   MARRS Services, Inc., Santa Fe Springs, CA, Environmental Engineer, 2005-2006

5. **Certifications or professional registrations**
   Professional Engineer (PE) – Ohio, Missouri & Texas
   Board Certified Environmental Engineer

6. **Current membership in professional organizations**
   Member of American Society of Civil Engineers (ASCE)
   Member Environmental Water Resources Institute (EWRI)

7. **Honors and awards**
   Summer Faculty Fellowship Program in Israel, June 04 – 17, 2022
   The National Academy of Sciences, Engineering, and Medicine, National Research Council, Senior NRC Research Associate Fellowship, 2020
   National Science Foundation STEM – Diversity Inclusion Video Exhibition Challenge, Experts' Choice Award, 2020
   L. Donald Shields Excellence in Scholarship and Creativity Award, California State University, Fullerton, 2020
   Faculty Advisor of Distinction 2020, California State University, Fullerton
   2019 Outstanding ASCE Faculty Advisor in the State of California, 2020
   Outstanding ASCE Faculty Advisor, Los Angeles ASCE Section, 2019
   Outstanding ASCE Faculty Advisor, ASCE Orange County 2019
   Excellence in Scholarly and Creative Activities Award, California State University, Fullerton, 2018
   Visiting Faculty Fellowship, Pacific National Northwest Laboratory, Department of Energy, 2018

8. **Service activities (within and outside of the institution**)
    a. Auxiliary Services Corp., Faculty Director, Term Ends Spring 2016-2019
    b. Academic Standards Committee, Term Ends Spring 2020
    c. International Education Committee, Term Ends Spring 2020
    d. Honors Advisory Council, Term Ends in Spring 2020
    e. Member, faculty search committee, Dept. of Civil and Environmental Engineering
    f. Faculty Advisor for the ASCE Student Chapter, CSUF
    g. Associate Editor, Water Environment Research, 2012-2017

9. **Publications and presentations from the past five years**
    a. Kurwadkar, S.; Sankar* T. K.; Kumar A.; Ambade B.; Goutam A. S.; Biswas, J. K.; Salam, M. A. (2022) Emissions of black carbon and polycyclic aromatic hydrocarbons: Implications of cultural practices during Covid-19 pandemic. Gondwana Research (Accepted manuscript: Manuscript ID# GWR-D-21-00520)
    b. Kurwadkar, S.; Dane*, J.; Kanel, S. R.; Nadagouda, M. N.; Cawdrey*, R. W.; Ambade, B.; Struckhoff, G. C.; Wilkin, R. (2022) Per and Polyfluoroalkyl Substances in Water and Wastewater – A Critical Review of Global Occurrence, Distribution, and Potential Removal Technologies. Science of the Total Environment, 809, 15100351003 https://doi.org/10.1016/j.scitotenv.2021.151003
    c. Sahu, M. K.; Patel, R. K.; Kurwadkar, S. (2022) Mechanistic insight into the adsorption of mercury (II) on the surface of red mud supported nanoscale zero-valent iron composite. Journal of Contaminant Hydrology, 103959 https://doi.org/10.1016/j.jconhyd.2022.103959
    d. Avendaño*, S. T.; Harp, D. R.; Kurwadkar, S.; Ortiz, J. P.; Stauffer, P. H. (2021) Geographic dependence of barometric-pumping efficiency in North America, Geophysical Research Letters. 48(17), 0094-8276 https://doi.org/10.1029/2021GL093875
    e. Ambade, B.; Kurwadkar, S.; Sankar*, T. K.; Kumar*, A. (2021) Emission reduction of black carbon and polycyclic aromatic hydrocarbons during COVID-19 pandemic lockdown. Air Quality, Atmosphere, and Health, 14, 1081-1095 https://doi.org/10.1007/s11869-021-01004-y
    f. Ambade, B.; Sethi*, S. S.; Kurwadkar, S.; Kumar*, A.; Sankar*, T. K. (2021). Toxicity, and health risk assessment of PAHs in surface water, sediments and groundwater vulnerability, Groundwater for Sustainable Development, 13, 1-12, DOI: https://doi.org/10.1016/j.gsd.2021.100553

10. **Professional development activities**
    a. Data Analysis Research Experience (DARE) Program, Lehman College, City University of New York, June 17-18, 2022
    b. Symposium: Advances in detection, remediation, transport, fate, and bioaccumulation of legacy and emerging per- and polyfluoroalkyl substances. Society of Environmental Toxicology and Chemistry (SETAC) Europe 32nd Annual Meeting, May 15 – 19, 2022, Copenhagen, Denmark
    c. Panel Discussion: Obstacles in STEM: Challenges faced by students from Minority Serving Institutions (MSIs) and underrepresented racial and ethnic groups (URGs). U.S Department of Energy, October 06, 2021.

1. **Name**: Jeff Kuo

2. **Education**:

Ph.D.	Environmental Engineering	University of Southern California	1987
M.S.	Petroleum Engineering	University of Southern California	1985
M.S.	Environmental Engineering	University of Southern California	1985
M.S.	Chemical Engineering	University of Wyoming	1981
B.S.	Chemical Engineering	National Taiwan University	1975

3. **Academic experiences:**

CSUF	Professor	08/30 - present FT
CSUF	Associate Professor	08/99 – 07/03 FT
CSUF	Assistant Professor	08/95 – 07/99 FT
CSUF	Lecturer	01/91 – 05/95 PT
National Taiwan University	Teaching Assistant	08/78 – 06/80 FT

4. **Non-academic experiences:**

Los Angeles County Sanitation Districts Research Engineer Wastewater Treatment 1991 – 1995 FT
James M. Montgomery Supervising Engineer Groundwater and soil remediation 1989 – 1991 FT
Dames & Moore Senior Engineer Groundwater and soil remediation 1989 – 1989 FT
Groundwater Technology Inc. Senior Engineer Groundwater and soil remediation 1987 – 1989 FT
Su-Chiang Co., Taiwan Lecturer Technical sales of water treatment chemicals 1980 – 1981 FT
Nan-Ya Plastics Co., Taiwan Research engineer Conducted research in plastics-related products 1977 – 1978 FT

5. **Certification or professional registration**

Professional Civil Engineer in California
Professional Chemical Engineer in California
Professional Mechanical Engineer in California

6. **Current Membership in professional organizations:** (None)

7. **Honors and awards**

Carol Barnes Excellence in Outstanding Teaching Award, CSUF (2009 - 2010)
CSUF Outstanding Faculty/Scholar (2010, 2007, 2006, 2005, 2002, 2001)
Distinguished Faculty, College of Engineering and Computer Science, CSUF (2006)
Professor of the Year (2006 –2007), ASCE Chapter, CSUF
Professor of the Year (2003-04) of the MESA Engineering Program, CSUF

8. **Service activities**

Various departmental, college, and university committees

9. **Publications and presentations from past five years (selected)**:

a. Kuo, J. (2018) “Air Pollution Control Engineering for Environmental Engineers”, CRC Press, ISBN 9781138032040.
b. Kuo, J. (2018) “Disinfection Processes”, Water Environ. Res. 2018 Literature Review, pp.947-977.
c. Yeh, C.J.; Lo, S.L.; Kuo, J.; Chou, Y.C. (2018) “Optimization of Landfill Leachate Treatment by Microwave Oxidation using the Taguchi Method”, International J. Env. Sci. & Technol., 15(10), 2075-86.
d. Kuo, J.; Dow, J. (2017) “Biogas Production from anaerobic Digestion of Food Waste and Relevant Air Quality Implication”, J. Air & Waste Management Association, 67(9), 1000-1011.
e. Kuo, J. (2017) “Disinfection Processes”, Water Environ. Res. 2016 Literature Review, pp. 1206-1244 (39).
f. Lee, Y.C.; Chen, Y.P.; Chen, M.J.; Kuo, J.; Lo, S.L. (2017), “Reductive Defluorination of Perfluorooctanoic Acid by Titanium (III) Citrate with Vitamin B12 and Copper Nanoparticles”, J. Hazardous Materials, 340: 336-343.
g. Chen, M.J.; Lo, S.L.; Lee, Y.C.; Kuo, J.; Wu, C.H. (2016), “Decomposition of Perfluorooctanoic Acid by Ultraviolet Light Irradiation with Pb-modified Titanium Dioxide”, J. Hazardous Materials, 303: 111-118.
h. Munakata, N. and Kuo, J. (2016) “Disinfection Processes”, Water Environ. Res. 2016 Literature Review, pp. 1192-1229.
i. Chen, Y.C.; Kuo, J. (2016) “Potential of Greenhouse Gas Emissions from Sewage Sludge Management: a Case Study of Taiwan”, J. Cleaner Production, 129, 196-201.
j. Lee, Y.C.; Chen, M.J.; Huang, C.P.; Kuo, J.; Lo, S.L. (2016) “Efficient Sonochemical Degradation of Perfluorooctanoic Acid Using Periodate”, Ultrason Sonochem, 31, 499-505.
k. Kuo, J.; Hicks, T.C.; Drake, B.; Chan, T.F. (2015) “Estimation of Methane Emission for California Natural Gas Industry”, J. Air & Waste Management Association 65(7), 844-55.
l. Munakata, N. and Kuo, J. (2015) “Disinfection Processes”, Water Environ. Res. 2015 Literature Review, pp. 1127-1146.
m. Lin, J.C.; Lo, S.L.; Hu, C.Y.; Lee, Y.C.; Kuo, J. (2015) “Enhanced Sonochemical Degradation of Perfluorooctanoic Acid by Sulfate Ions”, Ultrason Sonochem, 22, pp.542-547.
n. Chou, Y.C.; Lo, S.L.; Kuo, J.; Yueh C.J. (2015) "Microwave-enhanced Persulfate Oxidation to Treat Mature Landfill Leachate", J. Hazardous Materials, 284:83-91.
o. Kuo, J. (2015) “Air Quality Issues Related to Using Biogas from Anaerobic Digestion of Food Waste”, California Energy Commission, CEC-500-2015-037, March 2015, 73 pages.
p. Kuo, J. (2014) "Practical Design Calculations for Groundwater and Soil Remediation (2nd edition)”, CRC Press.
q. Munakata, N. and Kuo, J. (2014) “Disinfection Processes”, Water Environ. Res. 2014 Literature Review, pp. 1250-1273.

10. **Recent professional development activities:** (None)

1. **Name:** Phoolendra Mishra

2. **Education:**
   Ph.D., Hydrology and Water Resources, University of Arizona, 2010
   Master of Technology, Civil Engineering, IIT Kanpur India, 2003
   Bachelor of Technology, Civil Engineering, G B Pant University, India, 2001

3. **Academic experiences:**
   CSUF, Associate Professor, Chair, 2018-current, FT
   CSUF, Assistant Professor, 2012-2018, FT
   Jaypee University India, Lecturer, 2004-2006, FT

4. **Non-academic experiences**:
   Los Alamos National Lab, Postdoctoral Research Associate, Groundwater flow and transport research, 2010-2012, FT
   Consulting Engineering Services, India, Assistant Engineer, Hydrologic analysis and design of hydropower projects, 2004-2006, FT

5. **Certifications or professional registrations**
   None

6. **Current membership in professional organizations**
   Member, American Associate of Civil Engineers, American Geophysical Union and National Groundwater Association

7. **Honors and awards**
   a. Exceptional Service Award from California State University Fullerton (2017)
   b. Exceptional Teaching Award from California State University Fullerton (2016)
   c. Excellence in Referring Award from Water Resources Research Journal (2015)
   d. Outstanding Reviewer Award from Advances in Water Resources Journal (2014)

8. **Service activities (within and outside of the institution)**
   a. Member of Provost Search Committee (2019-2020)
   b. University's representative as Board member of Association of Public land-grant Universities (APLU) (2017-current)
   c. Member of University's 2018-2023 Strategic Planning Steering Committee (2017-2018)
   d. Member of University's Provost Task force for Online Teaching Strategy (2017-2018)
   e. Member of several university committees including University Curriculum Committee, University Honors committee, Information and Technology Committee, Student Academic Life Committee
   f. Member of planning Committee, Water Resources Policy Imitative Conference (2015-current)
   g. Member of Groundwater Technical Committee, American Geophysical Union (2013-2016)

h. Convener and Chair of technical sessions at American Geophysical Union (2011-2016)

9. Publications and presentations from the past five years

a. D. Sharma, P.Mishra, R. Lekhi (2019). "A Bayesian Network Framework for Comparing Project Delivery Methods", Int. Journal of Civil Engineering, Springer.
b. M. Marquez, P.Mishra, C. Putcha (2019). "Study of identification of contaminant source in a water distribution system with the help of statistical and hydraulic models", Int. Conf software engineering research and practice, ISBN-160132-510-X, CSREA Press.
c. Bezait Ali, Magadalena Etimani and P. Mishra (2017). "Fullerton Arboretum Stormwater Mitigation Analysis", Water Resources Policy Initiative Conference, San Jose CA, April 4-6, 2017.
d. Hugo Elias and P. Mishra (2016). "River analysis and floodplain modeling us- ing HEC-GeoRAS/RAS, GIS and ArcGIS: a case study for the Salinas River", American Geophysical Union Fall Meeting, San Francisco.
e. Thomas Mihara and P. Mishra (2016). "Optimizing Coyote canyon landfill gas collection pipe network", Water Resources Policy Initiative Conference, Long Beach CA, April 28-29, 2016.
f. Jose Avina and P. Mishra (2016). "Four Parameter Analytical Solution for Infiltration through Vadose Zone", Water Resources Policy Initiative Conference, Long Beach CA, April 28-29, 2016.

10. Recent professional development activities

a. Attended 2019 ASCE Education Summit and Department Head Conference
b. Attended 2018 ABET Symposium and workshop

1. **Name**: Huda Munjy

2. **Education**
   Ph.D., Civil and Environmental Engineering, University of California, Irvine, 2019
   M.S., Civil and Environmental Engineering, California State University, Fresno 2013
   B.S., Civil and Environmental Engineering, California State University, Fresno 2011

3. **Academic experience**
   California State University Fullerton, Assistant Professor, August 2019 – present

4. **Non-academic experience**
   California Water Institute, Fresno, California, Intern, 2012-2013

5. **Certifications**
   04.2011 Engineer in Training (EIT)
   National Council of Examiners for Engineering and Surveying (NCEES)
   09.2015 Mentoring Excellence Program Completion Certification
   University of California, Irvine

6. **Current membership in professional organizations**
   American Society of Civil Engineers (ASCE)
   Society of Women Engineers (SWE)

7. **Service activities (within and outside of the institution)**
   August 2019 – Present Undergraduate Student Advisor, Department of Civil Engineering, CSUF, Fullerton, CA
   August 2019 – Present Faculty Advisor for CSUF Society of Structural Engineers, CSUF, Fullerton, CA
   STEM Goes Red Outreach Event, Discovery Cube, Santa Ana, CA, October 2019

8. **Honors and Awards**
   2019 NSF Travel Grant, $2,250
   2013-2019 California State University Chancellor's Doctoral Incentive Program Scholarship, $30,000
   2018 Department Diversity Fellowship, University of California, Irvine, $13,000
   2018 NSF Travel Grant, $2,500
   2013 Building Industry Association Women's Council Scholarship, $5,000
   2012 Charles C Buckley Engineering Scholarship, $1,500
   2012 James A. Ross Memorial Scholarship, $1,500

9. **Publications and presentations from the past five years**
   (under review) Munjy, H., Zareian, F., (2019). "Seismic loss estimation based on modeling dependence of peak floor acceleration and maximum interstory drift ratio with Gaussian copulas." Bulletin of Earthquake Engineering.

Munjy, H., Habchi, R., Zareian, F., (2019). "Validation of Simulated Earthquake Ground Motions for Displacement Response of Building and Bridge Structures Based on Intensity and Frequency Content Parameters." *Bulletin of Earthquake Engineering.*

Munjy,H. , Zareian, F., (2018). "Efficient Statistical Approximation of Engineering Demand Parameters in Building Structures." *16th European Conference on Earthquake Engineering.*

Apelian, D., Artis, S., Bennet, J., Burke, P., Cassidy, R., DaSilva, N., Grant, S., Li, G., Munjy, H., Reinkensmeyer, D., Sanders, B., Tran, K., Valdevit, L., Wilkens, J., (2017). "UCI: Excellence- Ideas, Ideals and Impact: The Samueli School Strategic Plan." *University of California, Irvine, Henry Samueli School of Engineering.* http://engineering.uci.edu/files/v28-final-ssoe-str-plan.pdf

Munjy, H., F. Tehrani, M. Xiao, and M. Zoghi., (2014). "A Numerical Simulation on the Dynamic Response of MSE Wall with LWA Backfill." *Numerical Methods in Geotechnical Engineering*: 1147-151.

Xiao, M., Tehrani, F. M., Ledezma, M., Hartman, C., and **Munjy, H.,** (2014). Shake Table Testing and Numerical Analyses of Seismic Responses of Mechanically Stabilized Earth Wall with Tire Derived Aggregate (TDA) Backfill. *Transportation Research Board 93rd Annual Meeting*: No. 14-2825.

10. Recent professional development activities

Team Based Learning (TBL) Collaborative- 2019-present
August 2019 – Present New Faculty Foundations, Faculty Development Center, CSUF, Fullerton, CA
New Faculty Orientation, Faculty Development Center, CSUF, Fullerton, CA, August 2019

1. **Name**: David Naish

2. **Education**
   Ph.D., Civil Engineering, UCLA, 2010
   M.S., Civil Engineering, UCLA, 2008
   B.S., Civil Engineering, UCLA, 2006

3. **Academic experience**
   California State University Fullerton, Professor, 2021-present, full time
   California State University Fullerton, Associate Professor, 2016-2021, full time
   California State University Fullerton, Assistant Professor, 2010-2016, full time

4. **Non-academic experience:** None

5. **Certifications or professional registrations**
   Professional Engineer (Civil) License #82508 - CA

6. **Current membership in professional organizations**
   Structural Engineering Institute (SEI)
   American Society of Civil Engineers (ASCE)
   American Concrete Institute (ACI)
   American Institute of Steel Construction (AISC)
   Chi Epsilon (XE)

7. **Honors and awards**
   CSUF Faculty Recognition - Teaching 2019
   CSUF Faculty Recognition - Service 2015
   ASCE-OC Distinguished Engineering Educator 2014

8. **Service activities (within and outside of the institution)**
   High Impact Practices (HIPs) Coordinator for ECS – current
   Faculty Advisor of student chapters of Institute of Transportation Engineers and Society of Structural Engineers – current
   Faculty Affairs Committee – 2018-2020
   Department Curriculum Committee – current
   HRDI Faculty Fellow – 2018-2019
   Department Search Committee – current
   Peer Review for various technical journals – 2010-present

9. **Publications and presentations from the past five years**
   Kolozvari, K., Naish, D., Mehrain, M., Naeim, F., Wraparound Frame for Seismic Retrofit of Soft Story Buildings, *2019 SEAOC Convention*, Squaw Creek, CA, August 28-30, 2019.

Aljasar, A., Naish, D., Punching Shear Behavior of RC Flat Plates Reinforced with High Strength Steel, *11th National Conference on Earthquake Engineering*, Los Angeles, CA, June 25-29, 2018.

Khader, S. A., Naish, D., Lanning, J., Experimental Evaluation and Development of a Self-Centering Friction Damping Brace, *ASCE SEI Structures Congress*, Denver, CO, April 6, 2017.

Abdullah, S., Abo-Shadi, N., Naish, D., Experimental Study of Nonplanar Wall-to-Beam Connections under Cyclic Loading. *ACI Structural Journal*, V. 113, No. 4, July-August 2016, p. 655-664.

Campbell, M., Naish, D., A Parametric Study of the Impact of Coupling Beam Strength and Stiffness on System Performance, *ASCE SEI Structures Congress*, Portland, OR, April 25, 2015.

10. Recent professional development activities

USC Equity Institute, USC, Spring 2019. *Eight-week course on developing equity and inclusion practices in hiring and retention of tenure track faculty*.

ANSYS Innovation Conference, UCI, May 23, 2018. *Seminar on current research applications using ANSYS.*

OER Ambassador Program, CSUF, Fall 2017. *Course on using and implementing open educational resources in classes.*

PCA Education Foundation 2016 Professors' Workshop, Skokie, IL, July 25-29, 2016. *Workshop on methods and materials for teaching reinforced and prestressed concrete from industry experts*.

Quality Matters Training, Pomona, CA, October 23, 2015. *Training session on applying Quality Matters rubric to online course development.*

1. **Name**: Prasada Rao

2. **Education**
   Ph.D., Civil Engineering, Indian Institute of Technology, Bombay, 1997.
   Master of Technology, Civil Engineering, Indian Institute of Technology, Kanpur, 1993.
   Bachelor of Technology, Civil Engineering, Nagarjuna University, 1991.

3. **Academic experience**
   CSUF, Professor, 07/16-current
   CSUF, Associate Professor, 07/08-06/16
   CSUF, Assistant Professor, 08/02–06/08
   Duke University, Durham, Research Associate, 11/00-07/02
   University of Kentucky, Research Associate, 01/97-10/00

4. **Non-academic experience**

5. **Certifications or professional registrations:** None

6. **Current membership in professional organizations**: None

7. **Honors and awards:** None

8. **Service activities (within and outside of the institution)**
   Hromadka II,T.V. and Rao. P. (2018), "Assessing Arid Area Extreme Precipitation Using Doppler Radar and Rain Gages", Southwest Extreme Precipitation Symposium (SWEPSYM), Scripps Institute, San Diego, March 29, 2018.

9. **Publications and presentations from the past five years**
   Rao, P., Hromadka II, T.V., (2016). Numerical Modeling of rapidly varying flows using HEC-RAS and WSPG Models, SpringerPlus, 5: 662, DOI 10.1186/s40064-016-2199-0
   Rao P, Hromadka II TV., Huxley C, Souders D, Jordan N, Yen CC, Bristow E, Biering C, Horton S, Espinosa B (2017) Assessment of computer modeling accuracy in floodplain hydraulics. Int J Model Simul 37(2):88–95
   Hromadka II, T.V., Rao, P., (2018), Use of Radar Data to Assess Water Infrastructure Resiliency and Sustainability, The Bridge, Linking Engineering and Society, National Academy of Engineering, 48:2, 21-25
   Walsh, T., Scioletti, M., Rao, P., Hromadka II, T. V., McInvale, H., (2018) Assessment of Uncertainty in Doppler Radar Estimates of Precipitation for Use in Geoscience Studies, The Professional Geologist, Vol. 56:1, 22- 26.
   Hromadka II, T. V., Rao, P., Walsh, T.H., (2018), Assessment of Uncertainty in Doppler Radar Estimated Precipitation, American Institute of Hydrology, Vol. 34:2, 4-7.
   Theodore V. Hromadka II, Colin Bloor, Prasada Rao, Resolution of the Computational Diffusion Hydrodynamic Model into Partial Differential Equation Form (2018), , Journal of Water Resource and Protection, Vol.10 No.12.
   Hromadka II, T.V., Perez, R.A., Rao, P., Eke, K.C., Peters, H.F. and McInvale, C.H.D. (2019) Evaluation of Doppler Radar Data for Assessing Depth Area Reduction Factors

for the Arid Region of San Bernardino County. Journal of Water Resource and Protection, 11, 217-232.
Hromadka II, T.V., and Rao, P. (2019) Examination of Computational Precision versus Modeling Complexity for Open Channel Flow with Hydraulic Jump, Journal of Water Resource and Protection, 11, 1233-1244. doi: 10.4236/jwarp.2019.1110071.
Hromadka II, T. and Rao, P. (2019) Application of Diffusion Hydrodynamic Model for Overland Flows. Open Journal of Fluid Dynamics, 9, 334-345.
Hromadka II, T. and Rao, P. (2019) CFD Analysis of Flow in a Grated Inlet; Open Journal of Civil Engineering (in press)

10. Recent professional development activities: None

1. **Name**: Paulina Reina

2. **Education**
   Ph.D., Civil, Environmental, and Sustainable Engineering, Arizona State University, 2015
   M.S.E., Civil, Environmental, and Sustainable Engineering, Arizona State University, 2011
   B.S.E., Civil Engineering, Arizona State University, 2009

3. **Academic experience**
   CSU-Fullerton, Assistant Professor, 2015 – present, full-time
   University of Wisconsin-Madison, Graduate Intern, 2013 –2015, full-time
   Arizona State University, Graduate Fellow, 2012 –2013, part-time
   Arizona State University, Graduate Researcher, 2011 –2013, full-time
   University of California Los Angeles, Visiting Undergraduate Researcher, 2008, part-time

4. **Non-academic experience**
   MassDOT, Transportation Intern, 2010, full-time
   V3 Companies of Arizona, Civil Engineering Intern, 2007, full-time
   City of Chandler, Skilled Occupational Intern, 2006, part-time

5. **Certifications or professional registrations:** None

6. **Current membership in professional organizations**: None

7. **Honors and awards**
   Engineering Early-Faculty Career Development Symposium NSF ASSIST Travel Award, 2017 & 2016
   Women's Transportation Seminar (WTS) Metropolitan Phoenix Chapter Scholarship, 2015 & 2013
   Dwight David Eisenhower Graduate Transportation Fellowship, 2013-2014
   NSF Sustainable Science for Sustainable Schools GK-12 Fellowship, 2012-2013
   NSF Bridge to the Doctorate (BTD) Fellowship, 2010-2012

8. **Service activities (within and outside of the institution)**
   Curriculum Committee, *Member*
   Dwight David Eisenhower Transportation Fellowship Program (DDETFP) Local Competition, *Faculty Liaison*
   29th European Conference on Operational Research, Traffic Flow and Control, *Session Chair*
   Faculty Development Center (FDC) Workshop, *Faculty Panelist*
   Project RAISE Faculty and Student Panel Networking Dinner, *Faculty Panelist*
   STEM University Fair, ASCE Exhibit, *Mentor*
   CSUF Institute of Transportation Engineers (ITE), *Mentor*
   CSUF High School Equivalency Program, University, *Presenter*

CSUF Transforming Academic and Cultural Identidad through Biliteracy (TACIB) Program, *Presenter*

9. **Publications and presentations from the past five years**

Selected publications:

Reina, P., Ahn, S., 2019. Lane Flow Distribution of Congested Traffic on Three-lane Freeways. *International Journal of Transportation Science and Technology*

Reina, P., Saman, G., Ahn, S., 2019. On the Spatial Evolution of Traffic State Transitions: Empirical Observations and General Features. *Transportation Research Record: Journal of the Transportation Research Board*.

Reina, P., Ahn, S., 2016. Characterizing Variations of Congested Freeway Lane Flow Distribution Trends. 95th Annual Meeting of the Transportation Research Board Compendium of Papers, Washington D.C., Paper #16-3868.

Reina, P., Ahn, S., 2015. On Macroscopic Freeway Merge Behavior: Estimation of Merge Ratio using Asymmetric Lane Flow Distribution, *Transportation Research Part C* 60, 24-35.

Selected presentations:

Reina, P., Saman, G., Ahn, S., 2019. On the Spatial Evolution of Traffic State Transitions: Empirical Observations and General Features (Poster). The 98th Annual Meeting of the Transportation Research Board, Washington, D.C.

Reina, P., Saman, G., 2018. Spatio-temporal Characteristics of Freeway Traffic State Transitions. 29th European Conference on Operational Research (EURO 2018), Valencia, Spain.

Reina, P., Ahn, S., 2017. Lane Flow Distribution of Congested Traffic on Three-lane Freeways. SoCal-Japan Joint Workshop on Advanced Traffic Management and Control in the Era of Connected and Autonomous Driving, Irvine, CA.

Reina, P., Ahn, S., 2016. Analysis of Congested Lane Flow Distribution Trends in Three-Lane Freeways (Poster). XIX Pan-American Conference of Traffic, Transportation Engineering and Logistics (PANAM), Mexico City, Mexico.

10. Recent professional development activities

CSUF Faculty Development Center Workshops

ASSIST Engineering Early-Faculty Career Development Symposium

1. **Name**: Deepak Kanhaiyalal Sharma

2. **Education:**
   Ph.D., Civil Engineering, University of Maryland, College Park, 2012
   M.S., Civil Engineering. The University of Alabama, Tuscaloosa, 2008
   B.E. Civil, Gujarat University, Ahmedabad, India, 1999

3. **Academic experience**:
   CSU Fullerton, Assistant Professor, 2014-present, full time
   University of Baltimore, Visiting Assistant Professor, 2012-2014, full time
   University of Maryland, Research and Teaching Assistant, 2008-2012, part time
   The University of Alabama, Teaching Assistant, 2007-2008, part time
   Nirma University, Lecturer, 2000-2007, full time
   Nirma University, Visiting Faculty, 1999-2000, part time
   Gujarat University, Visiting Faculty, 1999-2000, part time

4. **Non-academic experience**:
   Robins and Morton, Summer Intern, May to August 2008
   UA Campus Facilities Management, On-campus Job, May to August 2007

5. **Certifications or professional registrations:** None

6. Current membership in professional organizations
   American Society of Civil Engineers (ASCE), Life member of Indian Geotechnical Society (IGS), Life member of Indian Society for Technical Education (ISTE)

7. **Honors and awards**
   PI of a Raytheon funded research project $25,000 for the year 2017-2020.
   Recognized as Faculty Advisor of Distinction, 2019
   Secured CSUF's IRA funds totaling to 39,500 since 2015.
   ENGAGE in STEM Mini Grant $2,500 in 2014-2015
   Inducted to Construction Research Congress, CRC Annual Meeting, 2012
   Inducted to Chi-Epsilon Honor Society, Uni. of Alabama, 2008

8. **Service activities within and outside of the institution**
   Reviewed journal manuscripts (35), conference papers (10), and abstracts (10).
   Actively contributing to TRB's Revenue & Finance Committee, Construction Management, and Project Delivery Methods
   Chair of University's Campus Facilities and Beautification Committee since 2018
   Leading the Theta Tau colony as advisor at CSUF since the academic year 2018
   Chaired CEE's Undergrad Advising Committee for the academic year 2016-2018.
   Advisor to CSUF's AGC Student chapter since 2015
   Offering FE review sessions on Surveying, and Prob. & Statistics since 2014.
   Serving as a mentor under the Graduate Mentoring Program since 2015.
   Served on CSUF's Master Plan Executive Task Force in 2018 and 2019.
   Served as Assistant Faculty Marshal for the 2015 and 2019 commencements.

Served as faculty mentor to the Survey team to PSWC competition 2018-2019
Member of department's committees such as Curriculum Committee, Academic Standards Committee, Computer and Website Committee, Undergraduate advising Committee, Student Recruitment Committee, Laboratory Equipment/Safety Committee, and Website Committee.

9. **Publications and presentations from the past five years (Most recent)**
   Mahto R., **Sharma D. K.**, Xavier D., and Raghavan R. "Improving Performance of Photovoltaic Panel By Reconfigurability in Partial Shading Condition", Journal of Photonics for Energy (Accepted, in press)
   Sharma D. K., Mahto R., Harper C., and Alqattan S. "Role of RFID Technologies in Transportation Projects: A Review", International Journal of Technology Intelligence and Planning (Accepted, in press)
   Sharma D. K., Mishra P. K, Lekhi R. (2020) "A Bayesian Network Framework for Comparing Project Delivery Methods", International Journal of Civil Engineering, doi:10.1007/s40999-019-00480-9
   Diao C., Liang R., **Sharma D. K**., and Cui Q. (2019) "Legal Risk Detection using Twitter Data", Journal of Legal Affairs and Dispute Resolution in Engineering and Construction. DOI: https://doi.org/10.1061/(ASCE)LA.1943-4170.0000356
   Sharma D. K., Putcha, C., & Lekhi, R. (2019). "Efficiency Based Comparison of Project Delivery Methods". International Journal of Innovative Technology and Interdisciplinary Sciences, 2(2), 259-274
   Sharma D. K. (2019) "Automating Backhoe Operation Using Fuzzy Logic" ISEC-10 Conference, Chicago.
   Varma. H, Shah D., **Sharma D. K**., and Wadhwani S. (2019) "Slope Stabilization Using Low Density Polyethylene (LDPE)", ISEC-10 Conference, Chicago.
   Rafsanjani S. D., **Sharma D. K.**, Tran T., and Nguyen. P (2019) "Study And Analysis Of Incentives For State-Of-The-Art Net-Zero Energy Houses", ISEC-10 Conference, Chicago.
   Sharma D. K and Wiesner K. (2018) "Applications of RFID and other wireless technologies for highway construction", RNS developed for Transportation Research Board (Funded), Available at https://rns.trb.org/details/dproject.aspx?n=41380

10. **Briefly list the most recent professional development activitie**s
    Faculty/Graduate Student Mentoring Workshops since 2015
    P3 Higher Education Summit, 2016
    High Desert Water Summit, 2015

1. **Name**: Garrett C. Struckhoff

2. **Education:**
   Ph. D., Environmental Engineering, University of Iowa, 2009
   M.S., Civil Engineering, Missouri U. of Sci. and Tech., 2003
   B.S., Civil Engineering, Missouri U. of Sci. and Tech., 2002

3. **Academic experience**
   CSU-Fullerton, Associate Professor, 2018-present, full time
   CSU-Fullerton, Assistant Professor, 2012-2018, full time
   Air Force Inst. of Tech., Postdoctoral Associate, 2009-2012, full time
   University of Iowa, Research Assistant, 2003-2009, part time

4. **Non-academic experience**
   Ecolotree, Inc., Intern, Design of phytoremediation sites, 2006-2007, part time
   MO DOT, Intern, Construction inspection, 2000-2001, part time

5. **Certifications or professional registrations**

6. **Current membership in professional organizations**
   American Society of Civil Engineers; Association of Environmental Engineering and Science Professors; International Phytotechnologies Society; Chi Epsilon Honor Society, Tau Beta Pi Engineering Honor Society

7. **Honors and awards**
   Best Poster Award, Honorable Mention: *The Fourth International Phytotechnologies Conference* (2007)

   Fellow, Center for Biocatalysis and Bioprocessing (CBB), University of Iowa (2005-2009)

   Best Student Paper Award: *Fourth International Conference on Remediation of Chlorinated and Recalcitrant Compounds*, Battelle Memorial Institute (2004)

   Honorable Mention, NSF Graduate Research Fellowship (2003)

8. **Service activities (within and outside of the institution)**
   Department: Curriculum Committee Member; Search Committee Chair; MS EnvE Program Coordinator
   College: Curriculum Committee Chair; Safety Committee Member
   University: Writing Proficiency Committee Member and Former Chair; Bicycling Committee Member

9. **Publications and presentations from the past five years**

   Shelley, M., Agrawal, A., Qin, K., Struckhoff, G., Enfield, C., Waldron, J., & Powell, C. (2014). Upward flow constructed wetland for treatment of water contaminated with chlorinated aliphatics. *U.S. Patent No. 8,894,849*. Washington, DC: U.S. Patent and Trademark Office.

Schkoda, S., Struckhoff, G.C. "Evaluating the Effectiveness of *Chlorella vulgaris* in Treatment of Brewery Effluent." *Southern California Conferences for Undergraduate Research,* Fullerton, CA, November 22, 2014.

Gonzalo, J., Lopez, J., Struckhoff, G.C. Phytoremediation of 1,4-Dioxane by Ocimum basilicum and Raphanus sativus. (2014) Proceedings of the 9th International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Battelle Press, Columbus, OH.

Kurwadkar, S., Struckhoff, G.C., Mishra, P., Modha, N., Murga, E., Amaral, B., Machado, G., Gomes, N. (2015) Modeling Fate and Transport of Emerging Micro-Pollutants in the Environment. Emerging Micro-Pollutants in the Environment: Occurrence, Fate, and Distribution. 97-112

Qin, K., Struckhoff, G.C., Agrawal, A., Shelley, M.L., Dong, H. (2014) Natural Attenuation Potential of Tricholoroethene in Wetland Plant Roots: Role of Native Ammonium-Oxidizing Microorganisms. *Chemosphere* 119, 971-977.

Kurwadkar, S., Struckhoff, G., Pugh, K., & Singh, O. (2017). Uptake and translocation of sulfamethazine by alfalfa grown under hydroponic conditions. *Journal of Environmental Sciences*, *53*, 217-223.

Schkoda, S., Cecena, S., Struckhoff, G.C. "Inhibitory Effects of Hops (Humulus lupulus) on Algal Growth." *Southern California Conferences for Undergraduate Research,* Claremont, CA, November 21, 2015.

Struckhoff, G.C., Gonzalo, J. "Wireless Data Collection System to Assess Solar Panel Efficiency on Greenroofs." *14th International Phytotechnologies Conference,* Montreal, QC, Canada, September 25 – 29, 2017.

10. Recent professional development activities

Presented papers: 12th and 14th International Phytotechnologies Conference (2015 and 2017)

Completed training for online educators: Applying the QM Rubric (2014)

1. **Name**: Binod Tiwari

2. **Education**
   Ph.D., Env. Mgmt Science/ Geotechnical Eng., Niigata University, Japan, 2003
   M.S., Geo & Biosphere Science/ Geotech. Eng., Niigata University, Japan, 2000
   B.S., Civil Engineering, Tribhuvan University, Nepal, 1992

3. **Academic experience**
   California State University Fullerton, Associate Vice President, 2019-present
   California State University Fullerton, Professor, 2015-present, full time
   California State University Fullerton, Associate Professor, 2012-2015, full time
   California State University Fullerton, Assistant Professor, 2006-2012, full time
   Virginia Tech, Post-doctoral Research Associate, 2003-2006, full time

4. **Non-academic experience**
   Government of Nepal, Department of Roads, Transportation Engineer, 1992-2000

5. **Certifications or professional registrations**
   Professional Engineer (PE) – California
   State Mitigation Assessment Review Certification, CalEMA

6. **Current membership in professional organizations**
   Member & Geo-challenge Director of American Society of Civil Engineers
   Member American Society of Engineering Education (ASEE)
   Member & Engineering Division Chair, Council for Undergraduate Research
   Member & Vice President, International Consortium on Landslides

7. **Honors and awards**
   2018 Best paper Award, GeoShanghai 2018 International Conference, 2018, Shanghai, China.
   2018, 2017, 2016 and 2015 CSU Fullerton Nominee, The Wang Family Excellence Award, California State University.
   2017 Outstanding Professor Award, California State University, Fullerton.
   2017 Associate Editor of the Year, Journal of Geotechical and Geo-environmental Engineering, American Society of Civil Engineers (ASCE).
   2017 Outstanding Professor and Faculty Marshall Award, College of Engineering and Computer Science, California State University, Fullerton
   2016 Carol Barnes Teaching Excellence Award, California State University, Fullerton
   2014 Outstanding Leadership Award, American Society of Civil Engineers, Geo-Institute, Los Angeles Chapter.
   2014 Outstanding Service - SCCUR, Office of Research & Sp. Prj. CSU Fullerton

8. **Service activities (within and outside of the institution)**
   Associate Editor, Journal of Geotechnical and Geo-environmental Engineering, ASCE
   Executive Editor, Landslides, Journal of International Consortium on Landslides
   Associate Editor-in-Chief, International Journal of Geo-environmental Disasters

Secretary, Southern California Conference on Undergraduate Research

Award Committee Chair, Geo-Institute Technical Committee on Slopes, Embankment, and Dams, American Society of Civil Engineers

Member, Provost's Senior Leadership Council, California State University, Fullerton

Ex-officio Member, University Faculty Research Committee, Faculty Research Policy Committee, University Advancement Committee California State University, Fullerton

9. Publications and presentations from the past five years

Ajmera, B., Brandon, T., and **Tiwari, B.** (2019) "Characterization of the Reduction in Undrained Shear Strength in Fine-Grained Soils Due to Cyclic Loading," Journal of Geotechnical and Geoenvironmental Engineering, ASCE, 145(5): 04019017.

Tiwari, B., Pradel, D., Ajmera, B., Yamashiro, B., and Diwakar, K. (2018) "Landslide Movement at Lokanthali during the 2015 Earthquake in Gorkha, Nepal," Journal of Geotechnical and Geoenvironmental Engineering, ASCE, 144(3), 05018001 1-12.

Tiwari, B., Ajmera, B., and Villegas, D. (2018) "Dynamic Properties of Lightweight Cellular Concrete for Geotechnical Applications," Journal of Materials in Civil Engineering, ASCE 30 (2), 04017271 1-10.

Ajmera, B., Brandon, T., and **Tiwari, B**. (2017) Influence of Index Properties on Shape of Cyclic Strength Curve for Clay-Silt Mixtures, Soil Dynamics and Earthquake Engineering, Elsevier, 102, 46-55.

Ajmera, B., **Tiwari, B.**, Koriala, J., and Obaid, Z. T. A. 2017. "Compaction Characteristics, Unconfined Compressive Strengths, and Coefficients of Permeability of Fine-Grained Soils Mixed with Crumb Rubber," Journal of Materials in Civil Engineering, ASCE, 29 (9), 04017148 1-10.

Tiwari, B., Ajmera, B., Maw, R., Cole, R., Villegas, D., and Palmerson, P. 2017. "Mechanical Properties of Lightweight Cellular Concrete for Geotechnical Applications," Journal of Materials in Civil Engineering, ASCE, 29 (7), 06017007 1-7.

Tiwari, B., Ajmera, B., and Dhital, S. 2017. "Characteristics of Moderate to Large Scale Landslides Triggered by the Mw8 Gorkha Earthquake and Its Aftershocks," Landslides, Springer Nature, 14 (4), 1297-1318.

Swarat, S., Oliver, P., Tran, L., Childers, G., **Tiwari, B.**, and Babcock, J. 2017. How Disciplinary Differences Shape Student Learning Outcome Assessment: A Case Study, AERA Open, 3 (1), 1–12.

10. Recent professional development activities

FLAC 2D and FLAC 3D Training, 2019; Training on Geo-Studio Suite, 2017
Attended 36 conferences and presented 100 papers in the past 5 years

1. **Name: Xenia Wirth**

2. **Education**
   Ph.D., Civil Engineering, Georgia Tech, 2019
   M.S., Civil Engineering, Georgia Tech, 2016
   B.S., Civil Engineering, Georgia Tech, 2013

3. **Academic experience**
   California State University Fullerton, Assistant Professor, August 2019 - present

4. **Current membership in professional organizations**
   American Society of Civil Engineers (ASCE)
   California Geotechnical Society (CalGeo)

5. **Service activities (within and outside of the institution)**
   January 2021 – Present Secretary of the Orange County Geo-Institute Advisory Board, Orange County, CA
   January 2020 – Present Member of the Ingios Geotechnics External Advisory Board
   August 2019 – Present Undergraduate Student Advisor, Department of Civil Engineering, CSUF, Fullerton, CA
   August 2019 – Present Faculty Advisor for CSUF CalGeo Undergraduate Student Chapter, CSUF, Fullerton, CA
   August 2019 – Present Faculty Advisor for GeoInstitute Graduate Student Organization, CSUF, Fullerton, CA
   August 2019 – Present Internship Advisor for Senior Troy High School Student, CSUF, Fullerton, CA
   STEM Goes Red Outreach Event, Discovery Cube, Santa Ana, CA, October 2019

6. **Briefly list the most important publications and presentations from the past five years**

   X. Wirth, S. Beltran, J. Stapleton, and J. Navarette, (2021) “Shear strength of soils subjected to fires”, ASCE GeoExtreme 2021, published conference proceedings

   X. Wirth, D. Benkeser, N.N.N. Yeboah, C.R. Shearer, K.E. Kurtis, S.E. Burns, (2019) “Evaluation of alternative fly ashes as SCMs”, ACI Materials Journal, 116 (4), 69-77

   J. Won, X. Wirth, S.E. Burns, (2019) “An experimental study of cotransport of heavy metals with kaolinite colloids”, Journal of Hazardous Materials 373, 476-482

   X. Wirth, N.N.N. Yeboah, S.E. Burns, (2018) “Lead adsorption by biomass and weathered coal fly ash”, International Congress on Environmental Geotechnics, Conference Proceedings

X. Wirth, D.A. Glatstein, S.E. Burns, (2018) “Mineral phases and carbon content in weathered fly ashes”, Fuel 236, 1567-1576

X. Wirth, N.N.N. Yeboah, S.E. Burns, (2017) “The effects of wood source and combustion conditions on the properties of biomass fly ash”, World of Coal Ash 2017 Conference Proceedings, 1-9

X. Wirth, N.N.N. Yeboah, C.R. Shearer, S.E. Burns, K.E. Kurtis, (2017) “Evolution of the properties of organic matter and mineral phases of reclaimed coal fly ash”, World of Coal Ash 2017 Conference Proceedings, 1-10

7. **Briefly list the most recent professional development activities**

August 2020 – Present Pa’lante Fellowship Program Faculty Mentor, CSUF, Fullerton, CA
November 2021, July 2020 Completed the Teaching Remotely Through Canvas Workshops, Parts I and II, Faculty Development Program, CSUF, Fullerton, CA
August 2019 – Present New Faculty Foundations, Faculty Development Center, CSUF, Fullerton, CA
CETL Tech to Teaching Certificate, Georgia Institute of Technology, May 2019

1. **Name**: Nagi Abo-Shadi

2. **Education:**
   PhD, Civil Engr/Structural Engineering, May 1999, University of Nevada, Reno
   M.S., Civil Engr/Structural Engineering, Feb 1992, Mansoura University, Egypt
   B.S., Civil Engineering, May 1985, Mansoura University, Egypt

3. **Academic experience:**
   CSU Fullerton, Lecturer, 2012-present, PT
   UCI, Lecturer, 2008-2015, PT

4. **Non-academic experience**:
   Structural Engineering Center, Inc. President
   Professional Engineering Center President

5. **Certifications or professional registrations**:
   Registered Professional Engineer in the State of California C 61096
   Registered Structural Engineer in the State of California SE 4750
   Registered Structural Engineer and Civil Engineer in the State of Nevada 021173
   Registered Engineer in the State of Michigan 6201058356
   Registered Structural Engineer and Civil Engineer in the State of Washington 50757
   Registered Professional Engineer in Alberta, Canada PEng 160070

6. **Current membership in professional organizations:**
   Engineering Honor Association, Tau Beta Pi Association
   American Institute of Steel Construction, AISC
   International Code Council, ICC

7. **Honors and awards:**
   American Structural Engineers Association of Southern California, (SEAOSC)
   Engineering Honor Association, Tau Beta Pi Association
   Research Assistantship, University of Nevada, Reno (Nov.1995-May1999)
   Teaching Assistantship, University of Nevada, Reno (Jan 1996-Dec1998)
   Inductee to the International Student Hall of Fame, University of Nevada, Reno
   Recipient of the Paper Competition Award, GSA, University of Nevada, Reno

8. **Service activities (within and outside of the institution) (Most recent ones):**
   Reviewer for Structural Journal Manuscripts, ACI (American Concrete Institute)
   Reviewer for Nevada Medal for Distinguished Graduate Student Paper in Bridge Engineering
   ACI Subcommittee IV of the Committee on Award for Papers, CAP
   ACI Committee 341, Earthquake-Resistant Concrete Bridges

9. **Important publications and presentations from the past five years (Most recent):**
   Seismic Design of Structures: Your Guide for the California Civil Engineering Exam, Nagi Abo-Shadi, PhD, PE, SE, PEng 2019, Professional Engineering Course Center

Structural Steel Notes, LRFD PE Civil Exam Review, Nagi Abo-Shadi, PhD, SE, PEng 2019, Professional Engineering Course Center

Reinforced Concrete Design PE Civil Exam Review, Nagi Abo-Shadi, PhD, SE, PEng 2019, Professional Engineering Course Center

Engineering Surveying PE Civil Exam Review, Nagi Abo-Shadi, PhD, PE, SE, PEng 2019, Professional Engineering Course Center

Abdullah, S., Naish, D. and Abo-Shadi, N., "Experimental Evaluation of Out-of-Plane Wall-to-Beam Connections under Cyclic Loading," 10th International Conference on Urban Earthquake Engineering, Tokyo Institute of Technology, Tokyo, Japan, March 2013

Abdullah, S., Abo-Shadi, N., and Naish, D. “Experimental Study of Nonplanar Wall-to-Beam Connections under Cyclic Loading,” ACI Structural Journal, V. 113, No. 4, July 2016, pp. 355-664.

10. Briefly list the most recent professional development activities

Attending many webinars
Teaching PE Civil review courses

1. **Name**: Pankaj Bhattarai

2. **Education**
   Ph.D., Environmental Management Science/ Geotechnical Engineering, Niigata University, Japan, 2007
   M.S., Geo-Environmental Engineering/Geotechnical Engineering, Niigata University, Japan, 2003,
   B.S., Civil Engineering, Tribhuvan University, Nepal, 1992,

3. **Academic experience**
   CSUF, Lecturer 2012 -Present, PT
   Asst. Professor, Janakpur Engineering College, Nepal, 08/2008-07/2009 PT
   Asst. Professor, ACME Engineering College, Nepal, 01/2008-12/2009 PT

4. **Non-academic experience:**
   Government of Nepal Civil Engineer Supervising construction work, 1995-2001 FT
   C.E Construction, Company, Nepal, Senior Engineer Conducting research for quality control, 2007-2008 FT
   Excel Engineering Consult, Nepal, Senior Engineer Preparing feasibility study report of hydropower projects, 2008-2009 PT
   Grid Nepal Design Associates, Nepal, Geotechnical Engineer Analyzing and preparing soil investigation report, 2009-2010 FT
   G. S Soil and Materials Engineers, Nepal, Geotechnical Engineer Analyzing and preparing soil investigation report, 2010-2012 FT

5. **Certifications or professional registrations:**
   Professional Engineer PE (PE # C 85210)

6. **Current membership in professional organizations**
   None

7. **Honors and awards:**
   None

8. **Service activities (within and outside of the institution):** None
   Faculty Advisor, Geo-Wall competition, 2019
   Instructor, Engineering Innovation, a partnership program between California State University and Johns Hopkins University,2019

9. **Publications and presentations from the past five years:**
   P. Bhattarai, H. Marui, and B. Tiwari (2014): Effect of weathering on Physical and Mechanical Properties in relation to Landslides- A case study of several landslides in Japan, Proceedings of 12th International Symposium on Geo- Disaster Reduction, Fullerton, CA, USA, pp 42-52.

10. **Recent professional development activities:** None

1. **Name**: Yong Guo

2. **Education:**
   Ph.D., Civil Engineering, The Ohio State University, 2002
   M.S., Hydraulic Engineering, Chengdu University of Science and Technology, 1989
   B.S., Hydraulic Engineering, Chengdu University of Science and Technology, 1986

3. **Academic experience:**
   CSU Fullerton, Lecturer, 2018-present, PT
   CSU Los Angeles, Lecturer, 2014-2017, PT

4. **Non-academic experience**:
   Los Angeles County Public Works, Civil Engineer, reviewing and performing hydrology and hydraulic analyses, managing flood control projects, and supervising a unit of County staff, from 2003 to present, full-time.

5. **Certifications or professional registrations**:
   - Professional Land Surveyor California, (P.L.S.# 8646)
   - Professional Civil Engineer California, (P.E.# 67363)
   - Envision Sustainability Professional, Institute for Sustainable Infrastructure

6. **Current membership in professional organizations:**
   None

7. **Honors and awards:**
   None

8. **Service activities (within and outside of the institution) (Most recent ones):**
   None

9. **Important publications and presentations from the past five years (Most recent):**
   None

10. **Briefly list the most recent professional development activities**
    None

1. **Name**: Melad M. Hanna

2. **Education**
   Ph.D. Civil Engineering - Structural Mechanics/Dynamics, University of California, Irvine, 1989
   M.S., Civil Engineering - Structural Emphasis Cal Poly Univ., Pomona, 1983
   B.S., Civil Engineering, University of Aleppo, Syria, 1980

3. **Academic experience**
   California State University, Fullerton, Lecturer, Aug 2012 – present, PT
   University of California, Irvine, Consultant Sr. Projects, Sept 2007 – present, PT
   University of California, Irvine, Lecturer, April 2002 –June 2002, PT
   Irvine Institute of Technology, Lecturer, July 2001 - Aug 2001, PT
   Cal Poly, Pomona, Lecturer, Jan 1999 to June 2000, PT

4. **Non-academic experience**
   AECOM Vice President/ Chief Structures Engineer Responsible for all bridge/transportation structures work in Southern CA, 1995 – present, FT
   CRSS Civil Engineers Structures Section Manager Operation/engineering center manager, June 1993 –Feb 1995, FT
   Gannett Fleming, Inc. Sr. Project Manager, Responsible for bridge and structures design. Jan 1991 to June 1993, FT
   Wheeler & Gray, Inc., Project Manager Responsible for bridge and structures design. Jan 1990 – Jan 1991 FT
   County of Orange, CA Bridge Engineer Transportation and infrastructure projects. Feb 1987 to Jan 1990 FT
   American Computers & Structures Software Engineer Software development for structural analysis and design. Jan1984 to April 1986FT
   Military Constructions Establishment, Syria Construction Engineer Construction supervision. June 1978 to June 1981 PT

5. **Certifications or professional registrations**
   a. Professional Engineer, 1987, California #C042215
   b. Professional Engineer, 1994, Arizona #27644
   c. Professional Engineer, 1994, Oregon # 17438
   d. Professional Engineer, 1995, Texas #80786
   e. Professional Engineer, 2002, Nevada #15778
   f. Structural Engineering Certification Board # 195-0705

6. **Membership in professional organizations**
   a. Member, American Society of Civil Engineers

7. **Honors and awards**: None

8. **Service activities**: None

9. **Publications and presentations from past five years**: None

10. **Recent professional development activities**
    a. AECOM Technical Quality Auditor

1. **Name**: Hsuehhwa Andy Lee

2. **Education:**
   Ph.D., Civil and Environmental Engineering, University of California, Los Angeles, 2013
   M.S., Civil and Environmental Engineering, University of California, Los Angeles, 1996
   B.S., Civil Engineering, National Taiwan University, 1993

3. **Academic experience:**
   CSU Fullerton, Lecturer, 2009-present, Part-time

4. **Non-academic experience**:
   Los Angeles County Sanitation Districts, Research Engineer/Operations Engineer, Conducted multiple research projects and oversaw ~$20-million per year of sewer maintenance projects, 2012 to Present, full-time

5. **Certifications or professional registrations**:
   Professional Civil Engineer in California, (PE # C68406)

6. **Current membership in professional organizations:**
   Water Environment Federation

7. **Honors and awards:**
   None

8. **Service activities (within and outside of the institution) (Most recent ones):**
   None

9. **Important publications and presentations from the past five years (Most recent):**
   • Andy Lee, Rob Morton, Jim Barry, Nikos Melitas, Phil Friess (2017) "Digester Gas Hydrogen Sulfide Control Using a Biotrickling Filter" presentation at LABS May 2017 Dinner Meeting
   • Andy Lee, Rob Morton, Jim Barry, Nikos Melitas, Phil Friess (2017) "Cost Savings by Using a Full-Scale Biotrickling Filter to Remove Hydrogen Sulfide from Digester Gas". presentation of 2017 CWEA Annual Conference, Palm Springs, CA
   • Robert Morton, J. Ecker, R. Hickey, D. Gary, A. Lee, D. Czernaik, C. Tang (2015) "A Full-Scale Demonstration Food Waste and Sewage Sludge Co-Digestion Project at the Joint Water Pollution Control Plant". proceedings and presentation of 2015 WEFTEC, Chicago, IL

10. **Briefly list the most recent professional development activities**
    None

1. **Name**: Morteza Shakeri Majd

2. **Education:**
   Ph.D., Civil Eng. (Hydrology and Water Resources), 2016
   M.S., Civil Eng. (Hydraulic Structures), 2003
   B.S., Civil Eng., 2001

3. **Academic experience:**
   CSU Fullerton, Lecturer, 2020-present, PT
   Cal Poly Pomona, Lecturer, 2018-2019, PT
   IAU, Anzali Port, Iran, Academia, 2003-2008, FT
   UC, Irvine, Teaching Assitant,2010-2015, FT

4. **Non-academic experience**:
   Senior Hydraulic Engineer, US Army Corps of Engineers, Los Angeles District, CA (2016-Present)
   Numerical Modeler, Consulting project, Tustin, CA (2016, part time project)
   Consultant to Dean of University for future Development, Anzali Port University, Iran (2003-2008)
   Water Resources Engineer, Urban Management Projects, Iran (2005-2008)
   Hydraulic Structure Engineer, Harbor Engineering Project, Iran (2005)
   Structural Engineers, Structural Project, Iran (2001-2003)

5. **Certifications or professional registrations**:
   E.I.T/FE State of California

6. **Current membership in professional organizations:**
   American Society of Civil Engineers (ASCE)
   American Geophysical University (AGU)

7. **Honors and awards:**
   2013 UC Irvine, Civil and Environmental Travel Award.
   2012 Representative of Civil EngineeringTeaching Assistants in ABET program closure, UC Irvine.
   2012 UC Irvine, Civil and Environmental Travel Award.
   2011 UC Irvine, Urban Water Research Center, Summer Award.
   2007 Anzali Port University’s Award for Excellence in teaching.
   2003 Top 5% students in MSCE degree, Iran.
   2001 Top 5% students in Bachelor's degree, Iran.
   1997 Graduated with honor from Talented Students High School, SAMPAD-NODET, Iran.

8. **Service activities (within and outside of the institution) (Most recent ones):**
   ASCE Journal of Hydrologic Engineering, Journal of Flood Risk Management, Canadian Journal of Civil Engineering, Reviewer of Scientia Iranica

9. **Important publications and presentations from the past five years (Most recent):**
   a. Sadegh, M., Shakeri Majd, M., Hernandez, J., Torabi Haghighi, Ali. The Quest for Hydrological Signatures: Effects of Data Transformation on Bayesian Inference of Watershed Models. Journal of Water Resources Management, 5(2018), V32, 1867-1881.
   b. Shakeri Majd, M., Gallien, T.W., Schubert, J.E., and Sanders, B.F., Multi-Phase Shock-Capturing Model of Beach Hydromorphodynamics. In Preparation for publication in Advances in Water Resources.
   c. Shakeri Majd, M., Aghakouchak, A., Mallakpour, I., Moftakhari, H., Sadegh, m., Utilizing Hydrodynamic Models to Quantify Future Spatial and Temporal Changes in Los Angeles River Breakout Scenario Triggered by Sea Level Rise. In Preparation for publication in Geophysical Research Letters.
   d. Shakeri Majd, M., and Sanders, B.F., The LHLLC scheme for Two-Layer and Two-Phase transcritical flows over a mobile bed with avalanching, wetting and drying. Advances in Water Resources, 67 (2014) 16–31.
   e. Schubert, J.E., Gallien, T.W., Shakeri Majd M. and Sanders, B.F. Terrestrial laser scanning of anthropogenic beach berm erosion and overtopping. Journal of Coastal Engineering, 1(2015), 47-60.

10. **Briefly list the most recent professional development activities**
    USACE Certifications: USACE Advanced 1D/2D Modeling with HEC-RAS, USACE Levee Safety Fundamentals, USACE Streambank Erosion and Protection

1. **Name**: Iman Mallakpour

2. **Education:**
   Ph.D., Civil & Environmental Engineering, University of Iowa, 2016.
   M.S., Hydrology, University of Arizona, 2011.
   B.S., Water Engineering, Isfahan University of Technology, 2008.

3. **Academic experience:**
   California State University-Fullerton, Lecturer, 2020-present, PT
   University of California, Post-Doctoral Research Scholar, 2016-present, FT
   University of Iowa, Graduate Research Assistant, 2012-2016, FT
   University of Arizona, Graduate Research Assistant, 2010-2011, FT

4. **Non-academic experience**:
   Water Resources Research Center, Intern, To develop a transient MODFLOW model, 2009, FT
   "Ab Pardazan Novin Naghshehjahan" consulting firm, Hydraulic Engineer, Design irrigation and drainage systems, 2006-2008, PT

5. **Certifications or professional registrations**:
   None.

6. **Current membership in professional organizations:**
   American Geophysical Union (AGU)
   The International Association for Hydro-Environment Engineering and Research (IAHR)

7. **Honors and awards:**
   a. Outstanding research poster presentation, 2019 postdoctoral scholars research symposium, Irvine, CA, USA (2019)
   b. Scholarship from the National Oceanic and Atmospheric Administration (NOAA)'s Climate Program Office (CPO) to attend the 8th GEWEX Open Science Conference, Canmore, Alberta, Canada (2018)
   c. Graduate College Post-Comprehensive Research Award, The University of Iowa, Iowa City, Iowa, USA (2016)
   d. Outstanding Student Fellowship Award, Department of Hydrology, The University of Arizona, Tucson, Arizona, USA (2010)

8. **Service activities (within and outside of the institution) (Most recent ones):**
   Journal reviewer (e.g., Journal of Hydrology, Advances in Water Resources, Nature Scientific Reports)

9. **Important publications and presentations from the past five years:**
   a. Mallakpour, I., AghaKouchak, A., & Sadegh, M. (2019). Climate-Induced Changes in the Risk of Hydrological Failure of Major Dams in California. Geophysical Research Letters.

b. Qiaohong, S., Miao, C., AghaKouchak, A., Mallakpour, I., Duoying, J., & Duan, Q. (2019). Possible Increased frequency of ENSO-related dry and wet conditions over some major watersheds in a warming climate, Bulletin of the American Meteorological Society, https://doi.org/10.1175/BAMS-D-18-0258.1.
c. Mallakpour, I., Sadegh, M., & AghaKouchak, A. (2018). A new normal for streamflow in California in a warming climate: wetter wet seasons and drier dry seasons. Journal of Hydrology, 567, 203-211.
d. Mallakpour, I., & Villarini, G. (2017). Analysis of changes in the magnitude, frequency, and seasonality of heavy precipitation over the contiguous USA. Theoretical and Applied Climatology, 130(1-2), 345-363.
e. Vahedifard, F., AghaKouchak, A., Ragno, E., Shahrokhabadi, S., & Mallakpour, I. (2017). Lessons from the Oroville dam. Science, 355(6330), 1139-1140.
f. Mallakpour, I., Villarini, G., Jones, M. P., & Smith, J. A. (2017). On the use of Cox regression to examine the temporal clustering of flooding and heavy precipitation across the central United States. Global and Planetary Change, 155, 98-108.
g. Mallakpour, I., & Villarini, G. (2016). Investigating the relationship between the frequency of flooding over the central United States and large-scale climate. Advances in Water Resources, 92, 159-171.
h. Mallakpour, I., & Villarini, G. (2016). A simulation study to examine the sensitivity of the Pettitt test to detect abrupt changes in mean. Hydrological Sciences Journal, 61(2), 245-254.
i. Mallakpour, I., & Villarini, G. (2015). The changing nature of flooding across the central United States. Nature Climate Change, 5(3), 250-254.

10. Briefly list the most recent professional development activities

a. Mentoring Excellence workshop. Presented by Frances Leslie, University of California, Irvine, CA, USA, 2018.
b. Establishing and Sustaining an Undergraduate Research Program workshop. AGU Fall Meeting, New Orleans, LA, USA, 2017.
c. Author Workshop: An Elsevier Publishing Campus, Presented by Jane Ryley, Iowa City, IA, 2015.
d. The Craft of Scientific Presentations workshop, Presented by Dr. Marshall, Iowa City, IA, 2015.

1. **Name**: Michael Mann

2. **Education**
   M.S., Civil Engineering. California State University, Fullerton, 2017
   B.S. Civil, California State University, Fullerton, 2015
   Minor in Geology, California State University, Fullerton, 2015
   A.A., Liberal Arts: Mathematics and Sciences, Santiago Canyon College, 2012

3. **Academic experience**
   CSU Fullerton, Lecturer, 2018-present, part-time
   CSU Fullerton, Teaching Associate, 2016-2017, as Graduate Student

4. **Non-academic experience** –
   Golder Associates, Staff Engineer, providing clients with geotechnical engineering services including reporting, response to city comments, cost estimation, project planning, design, and data analysis under the direction of senior engineers. Field work including quality assurance for construction at landfills, mining sites, wastewater treatment facilities, and private developments. Other tasks that I have performed at Golder include nuclear gauge operations, managing exploratory boring projects, water sampling, soil sampling and testing, storm water improvement projects, and engineered filling. Clients have included public and private agenesis., 2017-Present, full-time

5. **Certifications or professional registrations**:
   Engineer In Training with the State of California (EIT), Qualified SWPPP Practitioner with State of California (QSP), Certified Erosion, Sediment and Stormwater Inspector with EnviroCert (CESSWI)

6. **Current membership in professional organizations**
   American Society of Civil Engineers (ASCE)

7. **Honors and awards**
   Dean's list at CSU Fullerton
   Honors at Santiago Canyon College
   Eagle Scout with Boy Scouts of America

8. **Service activities (within and outside of the institution):**
   - Volunteered to help with ASCE Students events in Spring 2020
   - Community judging for local high school student's speech and debate competitions.
   - Volunteering at my church

9. **Important publications and presentations from the past five years:**
   Khanal, P., Tiwari, B., Ajerma, B., **Mann, M.**, and Al Quraishi,M. 2017. "Parametric Study on the Influence of Replacement Ratio on Seismic Amplification in Soft Clay Sites

Modified with Deep Soil Mixing Panels," Geotechnical Special Publication 281, ASCE 27-36, DOI: 1061/97870784480489.004.

10. Briefly list the most recent professional development activities

- Passed the 8-hour Professional Engineer exam and currently in process of getting certified as a PE
- Taking on more project management and engineering responsibilities at Golder
- Arranging for my company to attend the CSUF career fair giving opportunities to students

1. **Name**: Dana De Vera

2. **Education:**
   M.S., Structural Engineering, University California at Berkeley, 1996,
   B.S., Civil Engineering, University of Southern California, 1995,

3. **Academic experience:**
   CSU Fullerton, Lecturer, 2019-present, PT

4. **Non-academic experience**:
   Los Angeles Metro, Senior Director, Major Capital Projects (2019 - present), FT
   Biggs Cardosa Associates, Inc., Associate, (2009-2019), FT
   Port of Long Beach, Structural Engineer, (2006-2009), FT
   AECOM, Senior Structural Engineer, (2002-2006), FT
   Biggs Cardosa Associates, Inc., Senior Engineer, (1999-2002), FT
   Figg Engineers, Inc., Bridge Designer, (1997-2002), FT

5. **Certifications or professional registrations**:
   Structural Engineer California, (SE # S4702)
   Professional Civil Engineer California, (PE # C58894)

6. **Current membership in professional organizations:**
   American Society of Civil Engineers (ASCE)

7. **Honors and awards:**
   Magna Cum Laude (USC, 1995)
   David Wilson Associates Award for Excellence in Civil Engineering (USC, 1995)
   Orange County Engineering Council Young Engineer Award Winner (2005)

8. **Service activities (within and outside of the institution) (Most recent ones):**
   None

9. **Important publications and presentations from the past five years (Most recent):**
   None

10. **Briefly list the most recent professional development activities**
    None

1. **Name**: Saeedeh Yavari-Ramshe

2. **Education:**
   Ph.D., Water Resources Engineering, Sharif University of Technology, 2016,
   M.S., Hydraulic Structures Engineering, Sharif University of Technology,2008,
   B.S., Civil Engineering, Sharif University of Technology, 2005,

3. **Academic experience:**
   CSU Fullerton, Lecturer, 2019-present, Part Time
   Landslides, Invited Editor, 2018-present
   Technical reviewer for several ISI journals such as Landslides, NHESS, COMMSENV 2016-Present
   Sharif University of Technology, Research Associate, 2016-present
   UC Irvine, Research Scholar, 2012-2014
   Sharif University of Technology, Research Assistant, 2007-2016
   Sharif University of Technology, Teaching Assistant, 2007-2015
   Alaodoleh Semnani Institute of Higher Education, Lecturer, 2009-2011

4. **Certifications or professional registrations**:
   Engineer-In-Training California, (EIT # 166295)

5. **Current membership in professional organizations:**
   American Geophysical Union (AGU)

6. **Honors and awards:**
   Invited Speaker for the 5th World Landslide Forum, Tokyo, Japan 2020
   Received a Travel Grant for the 2017 Landslide Tsunami Model Validation Workshop, As the representative of Prof. Ataie-Ashtiani's group, sponsored by NOAA's National Tsunami Hazard Mitigation Program (NTHMP), Jan. 9th-11th, 2017, Galveston, TX.
   Received the 2016 Landslides' Best Paper Awards, 2016
   Introduced as one of the 2004-2016 Highly Cited Papers published in Landslides for the 2011 Landslides' Best Paper Award, 2013
   Ranked 1st among 12 Hydraulic Structures students at the end of M.Sc. period, 2008

7. **Service activities (within and outside of the institution):**
   None

8. **Important publications and presentations from the past five years (Most recent):**
   a. Kirby JT, Grilli ST, Horrillo J, Liu P, Nicolasky D, Abadie S, Ataie-Ashtiani B, Castro M, Clous L, Escalante C, Fine I, Gonzales-Vida JM, Lovholt F, Lynett P, Ma G, Macias J, Ortega S, Shi F, Yavari-Ramshe S, Zhang Ch (2021) Validation and inter-comparison of models for landslide tsunami generation. Ocean Modeling. https://doi.org/10.1016/j.ocemod.2021.1019436

b. Yavari-Ramshe S, Ataie-Ashtiani B (2018) On the effects of landslide deformability and initial submergence on landslide generated waves. Landslides. https://doi.org/10.1007/s10346-018-1061-6
c. Yavari-Ramshe S, Ataie-Ashtiani B (2017) Landslide-generated waves in a dam reservoir: the effects of landslide rheology and initial submergence. Oral presentation, 2017 AGU Fall Meeting, Dec. 11-15, New Orleans, LA (NH33D-05).
d. Yavari-Ramshe S, Ataie-Ashtiani B (2017) Subaerial landslide-generated waves: numerical and laboratory simulations. 4th World Landslide Forum, May 29 - June 3, Ljubljana, Slovenia. In: Sassa K et al. (eds) Advancing Culture of Living with Landslides, pp 51-73. Springer.
e. Yavari-Ramshe S, Ataie-Ashtiani B (2017) A rigorous finite volume model to simulate subaerial and submarine landslide-generated waves. Landslides 14(1):203-221. https://doi.org/10.1007/s10346-015-0662-6
f. Yavari-Ramshe S, Ataie-Ashtiani B (2016) Numerical simulation of subaerial and submarine landslide-generated tsunami waves - Recent advances and future challenges. Landslides 13(6): 1325-1368.
g. Yavari-Ramshe S, Ataie-Ashtiani B, Sanders BF (2015) A robust finite volume model to simulate granular flows. Computers and Geotechnics 66:96-112. https://doi.org/10.1016/j.compgeo.2015.01.015

9. Briefly list the most recent professional development activities
None

10. Briefly list the most recent professional development activities
None