THE UNIVERSITY OF CALIFORNIA – SAN DIEGO, Department of Structural Engineering (http://structures.ucsd.edu) has opened a search for a faculty member at the Assistant or Associate Professor level with demonstrated potential to achieve excellence in teaching, scholarship, and professional activities. The department is seeking to fill a faculty position in structural engineering with focus in the area of either civil infrastructure systems or advanced manufacturing.

A candidate in the area of civil infrastructure systems requires demonstrated expertise in large-scale laboratory dynamic testing and structural analysis. A strong background in structural mechanics and design, modeling and analysis of complex nonlinear structural and/or soil-foundation-structural systems, probabilistic performance-based analysis and design methodologies, structural monitoring strategies, and structural assessment and retrofit methodologies is highly desirable. Although advanced simulations are necessary to evaluate the response of civil infrastructure and networks on regional scales as part of risk management simulations and resilience-based multi-hazard design, the successful development of these simulations requires: (i) identification of critical elements, (ii) assessment of response to extreme loads such as earthquakes, (iii) assessment of damage and aging effects, (iv) understanding of interactions between different sub-structural systems and new/old materials, (v) development and evaluation of innovative materials and structural design solutions for high performance structures, and (vi) retrofit methodologies for existing structures. Large-scale experimental testing which faithfully reproduces damage and failure mechanisms in real-world civil infrastructure systems is needed. The large high performance outdoor shake table at UCSD is a unique experimental facility that can be used in unparalleled ways to improve our understanding of civil infrastructure systems under complex loading patterns.

A candidate in the area of advanced manufacturing of structures will have demonstrated excellence in novel manufacturing methods, intelligent/digital manufacturing, additive manufacturing, automated tow placement of composites, or online monitoring of additive manufacturing processes. This scope entails the use of a multi-physics/multi-scale experimental-analytical approach for process modeling to predict the properties of cured materials, flaw/defect states and post-cure residual stress, and to understand their effects on structural performance. Other key aspects include optimization of material systems (e.g., topological optimization), processes and structural geometries, embedded systems/sensors and electronics, uncertainty and variability, data analytics and machine learning methods for process control and initial as-manufactured state definition supporting the digital twin, and high-rate processing of structural materials and composites. Advanced manufacturing is critical to addressing ongoing challenges faced by various industrial sectors in the increasing adoption of advanced and additive manufacturing methods for the creation of innovative, high performance, and potentially low-cost structures.

A successful candidate will be required to teach undergraduate and graduate courses, develop an active and well-funded research program, and form synergistic connections with other areas in the department and university. An earned doctoral degree or advancement to candidacy in the relevant field is required at the time of application. For inquiries specific to the Department of Structural Engineering, contact the Chair of the Search Committee, Prof. Joel Conte (jpconte@ucsd.edu).

The Department of Structural Engineering houses unparalleled large-scale testing facilities, including the NHERI@UCSD Large High-Performance Outdoor Shake Table, a blast simulation facility, a composite and aerospace structures laboratory, a geotechnical centrifuge, two 9-m deep soil pits for foundation testing, a rail defect testing facility, a high-bay structural systems laboratory, a structural components laboratory, a large Caltrans 6-DOF shake table for testing structural response modification devices (SRMD), and multiple non-destructive evaluation/structural health monitoring (NDE/SHM) laboratories.
UCSD is an equal opportunity / affirmative action employer with a strong institutional commitment to excellence and diversity (http://diversity.ucsd.edu), and the Department of Structural Engineering within the Jacobs School of Engineering is committed to building an academically excellent, diverse, and inclusive faculty, staff, and student body (http://www.jacobsschool.ucsd.edu/diversity/).
Candidates with experience or willingness to engage in activities that contribute to diversity and inclusion are especially encouraged to apply.

For applicants interested in spousal/partner employment, please visit the UCSD Partner Opportunities Program website (http://academicaffairs.ucsd.edu/aps/partneropp/).

**Salary:** Level of appointment commensurate with qualifications; salary based on UC pay scales (https://www.ucop.edu/academic-personnel-programs/).

**Closing Date:** Applications received by January 31, 2019 will be given full consideration; however, the position is open until filled.

**To Apply:** The application (curriculum vitae, including a complete publication list, a list of four professional references with contact information, a cover letter which identifies the Department of Structural Engineering as the department to be considered for, a statement of research and teaching interests, and a separate statement describing past experience and activities that promote diversity and inclusion and/or plans to make future contributions), should be submitted electronically:
- **Assistant Professor:** [https://apol-recruit.ucsd.edu/apply/JPF01993](https://apol-recruit.ucsd.edu/apply/JPF01993)
- **Associate Professor:** [https://apol-recruit.ucsd.edu/apply/JPF01986](https://apol-recruit.ucsd.edu/apply/JPF01986)

For further information about contributions to diversity statements, see: [http://facultyequity.ucsd.edu/Faculty-Applicant-C2D-Info.asp](http://facultyequity.ucsd.edu/Faculty-Applicant-C2D-Info.asp)