

CHARBEL FARHAT

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Charbel Farhat is the Vivian Church Hoff Professor of Aircraft Structures in the School of Engineering at Stanford University, where he is also a professor in the Institute for Computational and Mathematical Engineering. From 2008 to 2023, he chaired the Department of Aeronautics and Astronautics, serving from 2022 to 2023 as its inaugural James and Anna Marie Spilker Chair. He also directed the Stanford-King Abdulaziz City for Science and Technology Center of Excellence for Aeronautics and Astronautics (2014–2024) and served on multiple national advisory boards, including the Space Technology Industry-Government-University Roundtable (2017–2023), the U.S. Air Force Scientific Advisory Board (2015–2019), and the Bureau of Industry and Security’s Emerging Technology and Research Advisory Committee (2008–2018). From 2007 to 2018, he was Director of the Army High Performance Computing Research Center at Stanford. Recognized by the U.S. Navy as a Primary Key-Influencer, he flew with the Blue Angels during Fleet Week 2014.

He holds a Ph.D. in Civil Engineering from the University of California, Berkeley and is a member of three national academies: the National Academy of Engineering, the Royal Academy of Engineering (UK), and the Lebanese Academy of Sciences. His honors include a Vannevar Bush Faculty Fellowship from the Department of Defense and Docteur Honoris Causa degrees from École Normale Supérieure Paris-Saclay, École Centrale de Nantes, and École Nationale Supérieure d’Arts et Métiers. He is a laureate of the TAKREEM AMERICA Foundation for Scientific and Technological Achievement and an ISI Highly Cited Researcher in Engineering.

Farhat is a Fellow of several professional societies, including the AIAA, ASME, IACM, SES, SIAM, USACM, and WIF. He was knighted in the Order of Academic Palms and awarded the Chevalier Medal by the Prime Minister of France. Among his many distinctions, he has received the Lifetime Achievement Award and Spirit of St. Louis Medal from the ASME, the Ashley Award for Aeroelasticity, Structures, Structural Dynamics & Materials Award, Collier Aerospace HyperX/AIAA Structures Award, and Journal Authors Seminar Award from the AIAA, as well as the Computational Fluid Dynamics Award from SAE International. From the USACM, he has been awarded the John von Neumann Medal, the Computational & Applied Sciences Award, and the R.H. Gallagher Special Achievement Award. His contributions to computational mechanics have also been recognized with the Gauss-Newton Medal, the IACM Award, the Computational Mechanics Award, and the Young Investigator Award from the IACM. Additionally, he has received the Gordon Bell Prize and Sidney Fernbach Award from the IEEE Computer Society, the Grand Prize from the Japan Society for Computational Engineering and Science, the Modeling & Simulation Award from the Department of Defense, and the Presidential Young Investigator Award from the National Science Foundation and the White House.

From 2014 to 2024, Farhat served as Editor-in-Chief of the International Journal for Numerical Methods in Engineering and, from 2017 to 2024, of the International Journal for Numerical Methods in Fluids. He is currently an Associate Editor of the Journal of Computational Physics and a member of the editorial boards of eight international scientific journals. A frequent AGARD and NATO lecturer, he has delivered keynote and plenary talks at major international conferences. He has authored over 650 refereed publications in fluid-structure interaction, computational fluid dynamics, structural mechanics, acoustics, supercomputing, parallel processing, model order reduction, and physics-based machine learning. His research has been funded by NSF, AFOSR, ONR, ARL, DARPA, NASA, DoE, and various national laboratories and industry leaders, including Autodesk, Boeing, Ford, Lockheed-Martin, Michelin, Toyota, and Volkswagen.