



**Professor Erkan Oterkus**

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### Overview:

Dr. Erkan Oterkus is a professor (reader) in the department of Naval Architecture, Ocean and Marine Engineering of University of Strathclyde. He is also the director of PeriDynamics Research Centre (PDRC). He received his PhD from University of Arizona, USA and was a researcher at NASA Langley Research Center, USA before joining University of Strathclyde. His research is mainly focused on computational mechanics of materials and structures by using some of the state-of-the-art techniques including peridynamics and inverse finite element method. Some of his recent research is focusing on multiscale modelling of stress corrosion cracking, underwater shock response of marine composite structures, failure analysis of electronic packages, collision and grounding of ships and real-time monitoring of ship structures. His research has been supported by various organizations including European Union, Defence Science and Technology Laboratory (DSTL), British Council, U.S. Air Force Research Laboratory, Samsung Electronics, Lloyd's Register, Babcock, QinetiQ, ORE Catapult, KIAT and Tubitak. He is the co-author of numerous publications including the first of book on peridynamics, journal and conference papers. Dr. Oterkus was a visiting professor at Stanford University (USA), University of Padova (Italy), Otto von Guericke University (Germany) and Nihon University (Japan). Dr. Oterkus is an associate editor of Journal of Peridynamics and Nonlocal Modeling (Springer) and Sustainable Marine Structures (NASS). He is also a subject editor of Journal of the Faculty of Engineering and Architecture of Gazi University. In addition, Dr. Oterkus is Special Issue Editor for Computational Materials Science (Elsevier), Journal of Mechanics (Cambridge), Journal of Marine Science and Engineering (MDPI), and AIMS Materials Science. Dr. Oterkus is a member of the editorial boards of International Journal of Naval Architecture and Ocean Engineering (Elsevier), Journal of Marine Science and Engineering (MDPI), Composite Materials, Annals of Limnology and Oceanography, Materials International, and Journal of Composites and Biodegradable Polymers.

### Selected Publications:

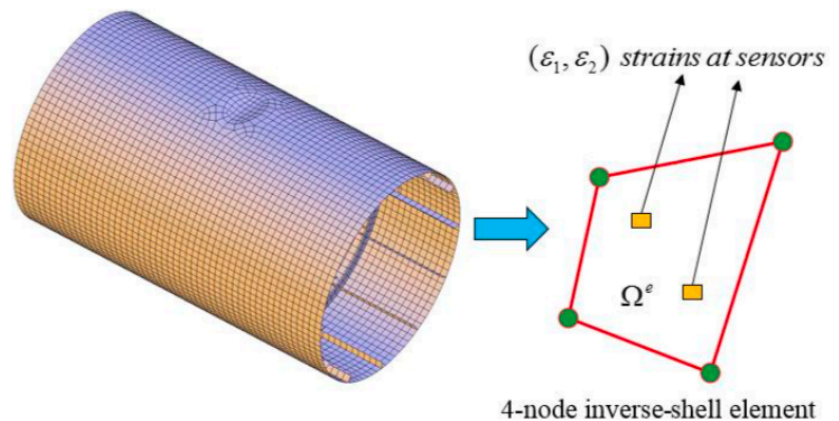


Figure 1. iFEM discretization with four-node quadrilateral inverse-shell element (iQS4).

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Erkan Oterkus and Selda Oterkus, "Peridynamics: A novel approach for material and structural modeling", Publisher is not identified in the pdf file, November 2016

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A. Kefal, A. Tessler and E. Oterkus, "An inverse finite element method based on refined zigzag theory for structural health monitoring of laminated composite and sandwich shell structures", *14th U.S. National Congress on Computational Mechanics (USNCCM14)*, 17-20 July 2017

Adnan Kefal, Alexander Tessler and Erkan Oterkus, "An enhanced inverse finite element method for displacement and stress monitoring of multilayered composite and sandwich structures", *Composite Structures*, Vol. 179, pp 514-540, November 2017

Arash Hemmati and Erkan Oterkus, "Semi-active structural control of offshore wind turbines considering damage development", *Journal of Marine Science and Engineering*, Vol. 6, 102, 2018

Adnan Kefal, Jimmy Bunga Mayang, Erkan Oterkus and Mehmet Yildiz, "Three-dimensional shape and stress monitoring of bulk carriers based on iFEM methodology", *Ocean Engineering*, Vol. 147, pp 256-267, 2018

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