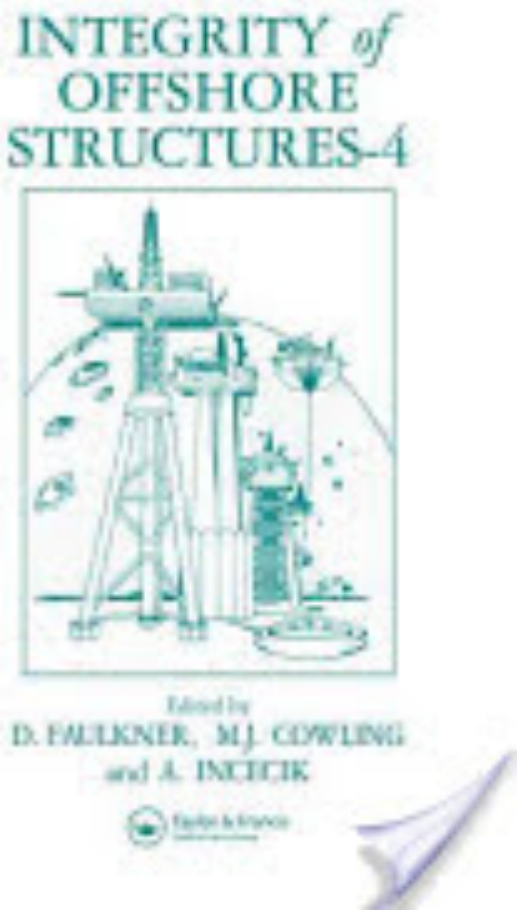
Professor Douglas Faulkner (1929-2011)



D. Faulkner, M.J Cowling, A. Incecik (Editors) Integrity of Offshore Structures, Vol.. 4, CRC Press, 1991, 640 pages

See:
http://www.universitystory.gla.ac.uk/biography/?id=WH2472&type=P

Biography from the website above:
Douglas Faulkner (1929-2011) was John Elder Professor of Naval Architecture at the University from 1973 to 1995.
Born in Gibraltar, Faulkner worked as a dockyard apprentice and then went to the Royal Naval College at Greenwich, gaining the professional certificate of the Royal Corps of Naval Constructors in 1954. He went to sea and then to HM Dockyard at Devonport, before becoming Constructor at the Naval Construction Research Establishment in Dunfermline.
In 1963 he returned to Greenwich as Assistant Professor of Naval Architecture, and he was Structural Adviser to the Ship Department at Bath from 1966 to 1968 and then Constructor Commander attached to the British Embassy in Washington DC from 1969 to 1970. He returned to the Ship Department at Bath and was structural adviser to the Merrison Box Girder Bridge Committee from 1971 until his appointment to the John Elder Chair.
Faulkner was the British representative on the Standing Committee of the International Ship Structures Congress from 1973 to 1985 and became an authority on submarine structural design problems. He has been a consulting structural engineer and naval architect, specialising in ship casualty investigations, since 1995.
The University awarded him an Honorary BSc in 1973. Douglas Faulkner died on the 13th February 2011, aged 81.

Obituary in the Guardian by John Caldwell, Friday 15 April, 2011:
(http://www.theguardian.com/technology/2011/apr/15/douglas-faulkner-obituary):
After the sinking of the Derbyshire with all hands in the Pacific Ocean in 1980, there was much speculation, as well as formal inquiry, into what had befallen the carrier – at 91,655 gross tons, the largest British ship to have been lost at sea. Even when, 14 years later, its wreckage was located on the seabed, the photographic evidence was insufficient to substantiate hypotheses that a major structural failure of the hull had occurred, or that water entering the ship via ventilators had been the primary causes of foundering.
Douglas Faulkner, who has died aged 81, was appointed as an assessor to Lord Donaldson of Lymington's inquiry in 2000, and put forward the now widely accepted view that the ship, trapped for several hours in a severe typhoon, had encountered such exceptional waves that they broke directly on to the hatches, which were not designed to withstand such loads. Douglas's opinion, backed by formidable research and analysis, has had a significant impact on ship design and the regulations to which naval architects must work.
Coming towards the end of a distinguished career in marine architecture, this episode encapsulated those principal elements in Douglas's work for which he achieved international renown – his concern to find better ways of establishing the true strength and survivability of marine artifacts – ships, submersibles and offshore structures – and by also developing more scientific ways of predicting the extreme conditions to which such artifacts might be subjected, thus ensuring that the risk of loss of life and property could be made acceptably small. His 40-year output of papers and reports, and his many contributions at national and international levels, have ensured his place in the annals of marine science and technology.
Born in Gibraltar, Douglas spent his boyhood in various overseas outposts, mainly in the far east, as his father's naval duties required. Back in Britain, he attended Sutton high school, Plymouth, followed by his introduction to naval architecture via an apprenticeship at Devonport dockyard. From there, he was one of the very few selected annually for study at the Royal Naval College, Greenwich, to enter the Royal Corps of Naval Constructors – at that time (1954) one of the foremost groups of warship designers in the world.
Subsequent appointments gave him experience in aircraft carrier design and ship production engineering.
He spent four influential years (1959-63) at the Admiralty's Naval Construction Research Establishment at Dunfermline, which stimulated his growing interest in finding better ways to design structures, especially of novel ships, that stretched conventional methods to – and beyond – their limits.
At Dunfermline, and later at the warship design headquarters in Bath, Douglas became deeply involved in the design of the first British nuclear submarine, HMS Dreadnought. He designed and supervised the tests on Dreadnought's structure during its first deep dive in 1962. After three years as assistant professor at the Royal Naval College, he became structural adviser at Bath.
It was during those Greenwich years in the early 1960s that Douglas and I worked together, focusing in particular on the analysis, design and safety of ship structures, which led to some pioneering tests to find the ultimate strength of stiffened plate elements – the basic building blocks of all marine structures. His subsequent appointment to the staff of the British embassy in Washington, followed by a year (1970-71) as defence fellow at the Massachusetts Institute of Technology, brought Douglas into fruitful contact with the rapidly developing technology associated with offshore resource recovery. Conception and creation of the novel structures – rigs, platforms, submersibles – required for increasingly deep and more hostile waters, provided fertile ground for "design from first principles", in which Douglas's more scientific methods could flourish.
Whereas the process of design of conventional ships has developed over centuries, and was, even in the 1970s, still something of a mixture of traditional art and emerging science, there was no such background of experience with the new ocean structures, for which reliable design procedures were needed urgently. Douglas's opportunity to develop and apply his ideas and methods to these new ventures came with his appointment in 1973 to the John Elder chair of naval architecture at Glasgow University.
Shipbuilding in Britain, and not least on Clydeside, had been in such steep decline that naval architecture, with its traditional role in ship design, was no longer attractive to young people, and the annual intake of undergraduates to Glasgow's department of naval architecture had declined almost to zero. But Douglas recognised that naval architecture should now broaden into marine architecture, and by embracing ocean

engineering into its title, teaching and especially research, he ensured the survival and enhanced reputation of the department.

Until and beyond his retirement in 1995, Douglas and his team at Glasgow made outstanding contributions to reliability-based design methods for marine structures. His early student interest in hydrodynamics was rekindled by the Derbyshire experience and led him into a study of freak waves, for which he became the senior adviser to a major collaborative European research project. The many honours and distinctions conferred on him included election in 1981 to the Royal Academy of Engineering and honorary degrees from the universities of Gdansk and Lisbon, as well as the most prestigious medals to be awarded by marine institutions in Britain and America.

During our time in Greenwich, Douglas and I discovered mutual interests in many things, as did our families. With Jenifer, his wife, and their three girls, Wendy, Karelia and Alison, we with our two boys shared their enjoyment, especially in outdoor activities, in which Douglas's adventurous spirit found expression in energetic pursuits such as rope-climbing and mountaineering. He regarded any difficult rock-face or unusually tall tree as a competitive challenge, and was equally adept at a variety of games – croquet, chess and Go being particular favourites. A fierce but fair competitor in play and at work, Douglas was always good and stimulating company.

Selected Publications:

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