

ACE-X2018

12th International Conference on Advanced Computational Engineering and Experimenting
AMSTERDAM (The Netherlands) from 1-5 July, 2018

Professor Bob Adams

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Professor Emeritus of the University of Bristol, Visiting Professor at the University of Oxford, sometime Head of Department and Graduate Dean of Engineering at Bristol.

Professor Bob Adams received his PhD from Cambridge University on the subject of damping in metals in 1967, when he joined Bristol University. There, he set up groups on composites and adhesives, studying both static and dynamic behaviour. He pioneered the use of Finite Element Analysis for predicting the mechanical behaviour of bonded joints, particularly their strength. In composites, his main interest was in the measurement and prediction of the damping and dynamic moduli of laminates. Starting from directly measured fibre and matrix behaviour, micro and macro mechanics theories were used to predict the dynamic properties of laminates, which were then carefully measured to complete the circle. His work on composites and adhesives developed in parallel and his group recently studied compound adhesive joints for use at high and low temperatures, such as might be encountered by supersonic aircraft. The answer to the question of why real joints fail still eludes us, but very recent work has brought up some unusual evidence which might just solve the problem. Recent work has also been on the subject of adhesive bonding in multimaterial lightweight structures for transport use.

He has written and edited several books on adhesive joints, together with hundreds of papers in refereed journals and conferences.

He is joint editor in chief of the International Journal of Adhesion and Adhesives, which has the highest impact factor of all the international journals on adhesion.