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Birthday celebration speech for Professor Colin Rogers

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The WASCOM 2011 Conference had the honour of marking the 70th birthday of Professor Colin Rogers, a distinguished scientist and person of great originality and style.

Colin Rogers was born in Wales, UK, on December 1st, 1940. He studied at Oxford University (Jesus College) where he obtained his BA in Mathematics in 1963. In 1969, he received his PhD in Continuum Mechanics at the University of Nottingham, UK. In 1991, the same university awarded him the Doctor of Science (a higher doctorate) for his published work in the Mathematical Sciences.

Colin Rogers began his teaching activity as a Lecturer at the University of Nottingham and continued it around the globe. He was a Professor at the University of Western Ontario, Canada (1971-1973), Old Dominion University, Virginia, USA (1973-1974), University of Western Ontario, Canada (1974-1978) and University of Waterloo, Canada (1974-1988). He held the Chair of Mathematical Engineering at Loughborough University of Technology, UK (1988-1992) and a Chair in Applied Mathematics at the University of New South Wales, Australia (1992-2007). He was then appointed to the Chair in Engineering Mathematics at the Hong Kong Polytechnic University from which he retired in 2011. Colin Rogers is currently an Emeritus Professor and Visiting Professorial Fellow at the University of New South Wales. He has been and continues to be a brilliant and engaging lecturer who has been able to make the importance of science accessible to many students.

Colin Rogers' first research article was published in 1968. Its title "Reciprocal Relations in Non-Steady One-Dimensional Gasdynamics" essentially represents the main areas of his research for more than forty years, namely invariance

principles and nonlinear continuum mechanics. Specifically, Colin Rogers has been concerned with nonlinear phenomena in various media, nonlinear differential equations modelling these phenomena and transformations of various types allowing to solve the underlying governing equations. Colin Rogers is one of the pioneers in the modern study and applications of Bäcklund transformations for nonlinear PDEs (1969). He succesfully applied Bäcklund transformation techniques in various areas such as gasdynamics, hydrodynamics, magnetogasdynamics, elasticity and differential geometry. In more than forty years, Colin Rogers has produced a number of important and groundbreaking results which are well-recognized by the international scientific community and form a fundamental part of the modern theory of Bäcklund and reciprocal transformations.

A large part of Colin Rogers' research has involved the study and applications of nonlinear boundary value problems in science and engineering. His name is intimately related to significant results in connection with Loewner and Ermakov systems and other integrable equations. Colin Rogers' recent activity in the area of classical differential geometry applied to the theory of 'nonlinear' materials has demonstrated great efficiency of these methods and opened new directions of research. A characteristic feature of Colin Rogers' style of research is to combine his interest in concrete physical problems with the development of appropriate sophisticated mathematical methods which may be used as tools for their analysis and solution.

Colin Rogers published more than 200 research articles and three monographs:

(1) C. Rogers and W. F. Shadwick, Bäcklund transformations and their applications, Academic Press, New York, 1982.

(2) C. Rogers and W. F. Ames, Nonlinear boundary value problems in science and engineering, Academic Press, New York, 1989.

(3) C. Rogers and W. K. Schief, Bäcklund and Darboux transformations. Geometry and modern applications in soliton theory, Cambridge University Press, 2002.

Colin Rogers is a Fellow of the Australian Academy of Science. His research achivements have been recognized, for instance, by the award of the Centennial Medal, 2003 (Australian Goverment Award) and by the Hannan Medal, 2011 (Australian Academy of Science).

Colin has collaborated with more than 70 researches all over the world and most of them remain good friends. I met Colin for the first time in 1982 during the famous conference "Solitons '82" in Edinburgh and since then has had the honour and fortune to collaborate with him and to have numerous dicussions

with him about various academic and non-academic matters. I have learnt a great deal from him during my visits to Loughborough and Sydney and our encounters at conferences all over the world. During these 30 years, it has always been a real pleasure to meet Colin again and again, to absorb his brilliant command of the English language and to listen to British jokes ("Not so fast, John!"). I particularly remember walking together along Sydney's bays and seeing (or imagining) him dancing Tango ("Estilo Milonguero"). It is not that frequent in life and research that one meets a person of such great style and originality as Colin Rogers.

Boris G. Konopelchenko