The investigation and modelling of aviation accident causation is dominated by linear models. Aviation is, however, a complex system and as such suffers from being artificially manipulated into non-complex models and methods. This book addresses this issue by developing a new approach to investigating aviation accident causation through information networks. These networks centralise communication and the flow of information as key indicators of a system's health and risk. This holistic approach focuses on the system environment, the activity that takes place within it, the strategies used to conduct this activity, the way in which the constituent parts of the system (both human and non-human) interact and the behaviour required. Each stage of this book identifies and expands upon the potential of the information network approach, maintaining firm focus on the overall health of a system.

The book's new model offers many potential developments and some key areas are studied in this research. Through the centralisation of barriers and information nodes the method can be applied to almost any situation. The application of Bayesian mathematics to historical data populations provides scope for studying error migration and barrier manipulation. The book also provides application of these predictions to a flight simulator study for the purposes of validation. Beyond this it also discusses the applicability of the approach to industry. Through working with a legacy airline the methods discussed are used as the basis for a new and prospective safety management system.

Contents
Introduction; Modelling a dynamic world; A complex approach to a complex scenario; Development of a study; Extending the potential of information networks: a Bayesian approach; Can we validate networks derived from incident data through simulation? A pilot study; Incidents versus accidents: an industrial study; Conclusions; References; Index.

About the Author
Dr Thomas G.C. Griffin is a pilot with DHL Aviation based in the Kingdom of Bahrain. Previously he was a Captain flying for Gama Aviation which is a global business aviation service provider. He has a BSc in Biological Sciences with specialisation in behaviour and psychology from King’s College London and a PhD in Human Factors from Brunel University in the UK. In addition to Thomas’ flying role he has worked for some time as a Flight Safety Officer and with Safety Management Systems within the business and airline aviation industries. His research interests centre on the complexity of real-world, non-linear accident causation in aviation and the interaction between humans and the information available in their environment.

Dr Mark S. Young is a Visiting Professor in Human Factors & Ergonomics within the School of Engineering and Design, Brunel University, London, UK. His research interests include cognitive ergonomics aspects of attention, human performance, and human error. Particular emphasis is placed on transportation human factors and transport safety, particularly with advanced vehicle technologies and automation. His research has focused mainly on driver attention and mental workload with vehicle automation, but he also has experience in rail safety and human factors aspects of aviation. Mark has a BSc in Psychology and a PhD in Cognitive Ergonomics, both from the University of Southampton, and a PGCert in Learning and Teaching in Higher Education from Brunel University. He worked at the Rail Safety and Standards Board from 2001 to 2003, and was a Visiting Fellow in the Department of Aviation, University of New South Wales, in 2004. He was a full-time member of Brunel Design from 2004 to 2012, and is also a Visiting Fellow at Curtin University in Perth, Australia.

Professor Neville A. Stanton, PhD, is both a Chartered Psychologist and a Chartered Engineer and holds the Chair in Human Factors Engineering in the Faculty of Engineering and the Environment at the University of Southampton. He has degrees in Psychology, Applied Psychology and Human Factors and has worked at the Universities of Aston, Brunel, Cornell and MIT. His research interests include modelling, predicting and analysing human performance in transport systems as well as designing the interfaces between humans and technology. Professor Stanton has worked on cockpit design in automobiles and aircraft over the past 25 years, working on a variety of automation projects. He has published 25 books and over 200 journal papers on Ergonomics and Human Factors, and is currently an editor of the peer-reviewed journal Ergonomics. In 1998 he was awarded the Institution of Electrical Engineers Divisional Premium Award for a paper on Engineering Psychology and System Safety. The Institution of Ergonomics and Human Factors awarded him The Otto Edholm Medal in 2001, The President's Medal in 2008 and The Sir Frederic Bartlett Medal in 2012 for his contribution to basic and applied ergonomics research. The Royal Aeronautical Society awarded him the Hodgson Prize and Bronze Medal in 2006 for research on design-induced flight-deck error.

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