Pilot Assessment Lufthansa Flight Training Center

Pilot Mental Health Assessment and SupportA Practitioner's GuideTaylor & Francis

The book is in three parts, which consider training from the perspective of the learner, the instructor and the organization. Its intended readership includes civil and military training and senior pilots, flying instructors, check pilots, CRM facilitators, Human Factors and safety departments, and aviation and educational psychologists as well as those in operations and air traffic management and regulatory authorities.

What is for a professional pilot required to fly as safe as possible? Written by pilots the book gives a detailed introduction into the basics of accident prevention in air traffic. Explicit background knowledge as well as detailed listings of safety relevant features in human behaviour are included.

The commercial aviation industry is a major part of the U.S. transportation infrastructure and a key contributor to the nation's economy. The industry is facing the effects of a reduced role by the military as a source of high-quality trained personnel, particularly pilots and mechanics. At the same time, it is facing the challenges of a changing American workforce. This book is a study of the civilian training and education programs needed to satisfy the work-force requirements of the commercial aviation industry in the year 2000 and beyond, with particular emphasis on issues related to access to aviation careers by women and minorities.

Many 21st century operations are characterised by teams of workers dealing with significant risks and complex technology, in competitive, commercially-driven environments. Informed managers in such sectors have realised the necessity of understanding the human dimension

to their operations if they hope to improve production and safety performance. While organisational safety culture is a key determinant of workplace safety, it is also essential to focus on the non-technical skills of the system operators based at the 'sharp end' of the organisation. These skills are the cognitive and social skills required for efficient and safe operations, often termed Crew Resource Management (CRM) skills. In industries such as civil aviation, it has long been appreciated that the majority of accidents could have been prevented if better non-technical skills had been demonstrated by personnel operating and maintaining the system. As a result, the aviation industry has pioneered the development of CRM training. Many other organisations are now introducing non-technical skills training, most notably within the healthcare sector. Safety at the Sharp End is a general guide to the theory and practice of non-technical skills for safety. It covers the identification, training and evaluation of non-technical skills and has been written for use by individuals who are studying or training these skills on CRM and other safety or human factors courses. The material is also suitable for undergraduate and post-experience students studying human factors or industrial safety programmes.

This book seeks to extend the boundaries of aviation psychology in two interrelated ways: by broadening the focus of aviation psychology beyond the flight deck to the whole aviation system; and by discussing new theoretical developments which are shaping this applied discipline. A key feature of these theoretical advances is that they are grounded in a more developed, ecologically valid, understanding of practice. Among the issues addressed in this new integration of theory and practice are the following: what goes on in the flight deck is dependent on the wider organisational context; human factors issues in aircraft

maintenance and grounding are critical to aviation safety; our capacity to learn from aviation accidents and incidents needs to be supported by more systematic human factors investigation and research; we must also develop our understanding of the human factors of accident survival as well as accident prevention; theories of crew coordination and decision making must be supported by an analysis of how decisions are actually made in the real world with all its stresses and constraints; training should be grounded in a thoroughgoing analysis of the complexity of the job and a full understanding of the training process itself. The text will be of interest to human factors researchers and practitioners in aviation and related areas. It will be of particular relevance to those who have a role in training, management or regulation throughout the aviation system.

The weeks following the attacks of September 11, 2001, were traumatic for nearly every American, but for some, the answers they received from the media and the government to explain the horrific events was not satisfactory. Accusations of cover-ups, internal plots, and sabotage from within the ranks of the U.S. government were—and continue to be—not uncommon. But compelling evidence contrary to the accepted narrative has, for some skeptics, been lacking. This investigation into the events of that day reveals dark secrets about United States–sponsored terrorism. Taking highly complex technical and scientific information, and distilling it for the consumption of the lay person, this inquiry attempts to reveal the truth behind that infamous day.

Crew Resource Management (CRM) training was first introduced in the late 1970s as a means to combating an increased number of accidents in which poor teamwork in the cockpit was a significant contributing factor. Since then, CRM training has expanded beyond the cockpit, for example, to cabin crews, maintenance crews, health care teams, nuclear

power teams, and offshore oil teams. Not only has CRM expanded across communities, it has also drawn from a host of theories from multiple disciplines and evolved through a number of generations. Furthermore, a host of methodologies and tools have been developed that have allowed the community to better study and measure its effect on team performance and ultimately safety. Lacking, however, is a forum in which researchers and practitioners alike can turn to in order to understand where CRM has come from and where it is going. This volume, part of the 'Critical Essays on Human Factors in Aviation' series, proposes to do just that by providing a selection of readings which depicts the past, present, and future of CRM research and training.

A vital resource for pilots, instructors, and students, from the most trusted source of aeronautic information.

Do corporate culture and leadership contribute to a firm's success? And if so, how? How can a company create and develop its corporate culture to compete successfully over the long term? Answers to these questions emerge in case studies of the business practices of six long-established and world-renowned companies: the BMW Group, Deutsche Lufthansa, Grundfos, Henkel, Hilti and Novo Nordisk. In a project initiated by the Bertelsmann Stiftung, researchers investigated these firms and analyzed the central characteristics of corporate success from a culture perspective. The case studies render a detailed picture of each firm's distinctive corporate culture and the factors that shape it. Based on these examples, Sonja A. Sackmann has identified concrete strategies and practices that illustrate how a company's management can make a significant contribution toward developing a dialogue-oriented corporate culture that supports a firm's viability. The appendix provides a checklist for readers who want to develop their firm's culture and practice culturally aware management.

On Tuesday 24 March 2015, the Airbus A320-211 registered D-AIPX operated by Germanwings took off from Barcelona, Spain, at 09:00 with destination Düsseldorf, Germany. At 09:41, the aircraft crashed into the mountains northeast of Marseille. The investigation into the causes of the crash revealed that the co-pilot, at a moment when he was alone in the cockpit, had deliberately flown the plane into the mountains killing all 150 persons on board. The investigation revealed also that the co-pilot was under medical treatment for depressions by several health care providers. Neither of those providers informed any aviation authority, nor any other authority about the co-pilot's mental state. No action could have been taken by the authorities and/or his employer to prevent him from flying on the day of the accident, because they were not informed about the co-pilot's mental state of mind.

This edited textbook is a fully updated and expanded version of the highly successful first edition of Human Factors in Aviation. Written for the widespread aviation community - students, engineers, scientists, pilots, managers, government personnel, etc., HFA offers a comprehensive overview of the topic, taking readers from the general to the specific, first covering broad issues, then the more specific topics of pilot performance, human factors in aircraft design, and vehicles and systems. The new editors offer essential breath of experience on aviation human factors from multiple perspectives (i.e. scientific research, regulation, funding agencies, technology, and implementation) as well as knowledge about the science. The contributors are experts in their fields. Topics carried over from the first edition are fully updated, several by new authors who are now at the fore of the field. New material - which represents 50% of the volume - focuses on the challenges facing aviation specialists today. One of the most significant developments in this decade has

been NextGen, the Federal Aviation Administration's plan to modernize national airspace and to address the impact of air traffic growth by increasing airspace capacity and efficiency while simultaneously improving safety, environmental impacts and user access. NextGen issues are covered in full. Other new topics include: High Reliability Organizational Perspective, Situation Awareness & Workload in Aviation, Human Error Analysis, Human-System Risk Management, LOSA, NOSS and Unmanned Aircraft System. Comprehensive text with up-to-date synthesis of primary source material that does not need to be supplemented New edition thoroughly updated with 50% new material and full coverage of NexGen and other modern issues Instructor website with test bank and image collection makes this the only text offering ancillary support Liberal use of case examples exposes readers to real-world examples of dangers and solutions

Engaging the Next Generation of Aviation Professionals is an edited volume that brings together a diverse set of academic and professional perspectives within the three themes of attracting, educating, and retaining the next generation of aviation professionals (NGAP). This compilation is the first academic work specifically targeting this critical issue. The book presents a rich variety of perspectives, academic philosophies, and real-world examples. Submissions include brief case studies, longer scholarly works from respected academics, and professional reflections from individuals who have made important contributions to their field. The book includes academic chapters that explore the

topic from a more theoretical standpoint yet are accessible and understandable to a professional audience. These are complemented by both broad and specific practice examples that describe initiatives and applications occurring in the industry around the three themes. All submissions include descriptive insights, experiences, and first-hand accounts of accomplishments, intended to support the work of other professionals managing NGAP issues. This work will be valuable to anyone involved in attracting, educating, or retaining NGAP, including academics, operators, national and international regulators, and outreach coordinators, among many others.

This book offers the first complete account of more than sixty years of international research on In-Flight Simulation and related development of electronic and electro-optic flight control system technologies ("Fly-by-Wire" and "Fly-by-Light"). They have provided a versatile and experimental procedure that is of particular importance for verification, optimization, and evaluation of flying qualities and flight safety of manned or unmanned aircraft systems. Extensive coverage is given in the book to both fundamental information related to flight testing and state-of-the-art advances in the design and implementation of electronic and electro-optic flight control systems, which have made In-Flight Simulation possible. Written by experts, the

respective chapters clearly show the interdependence between various aeronautical disciplines and in-flight simulation methods. Taken together, they form a truly multidisciplinary book that addresses the needs of not just flight test engi neers, but also other aeronautical scientists, engineers and project managers and historians as well. Students with a general interest in aeronautics as well as researchers in countries with growing aeronautical ambitions will also find the book useful. The omission of mathematical equations and in-depth theoretical discussions in favor of fresh discussions on innovative experiments, together with the inclusion of anecdotes and fascinating photos, make this book not only an enjoyable read, but also an important incentive to future research. The book, translated from the German by Ravindra Jategaonkar, is an extended and revised English edition of the book Fliegende Simulatoren und Technologieträger , edited by Peter Hamel and published by Appelhans in 2014.

How should we organize our selection or training procedures? In what way can a flight crew mediate problems? How are we to understand reported errors? Mechanisms in the Chain of Safety presents recent findings in aviation psychology, bringing fresh insights to such questions. Aviation psychologists study personnel selection and training; they evaluate the management of flight operations, and ultimately

they analyse the things that went wrong. The strong interrelation between these components allows us to talk about a chain of safety. This volume appraises this chain of safety by considering the mechanisms that determine its effectiveness - input mechanisms, coping mechanisms and control mechanisms. Each contribution discusses a component of the chain while the book as a whole emphasizes and illustrates that understanding the connections between these parts is essential for the future. By addressing these issues the book leads to further considerations such as how mistakes are linked to training and how coping mechanisms should help us to understand errors and accidents. Mechanisms in the Chain of Safety will appeal to aviation professionals (human factors experts, safety managers, pilots, ATCOs, air navigation service providers, etc.) and academics, researchers, graduates and postgraduates in human factors and psychology. Although primarily written for the aviation industry, this book will also be of interest to other high-risk dynamic activities that face similar challenges: the need to present effective and safe outcomes to the public in general and the stakeholders in particular.

Human Factors and Ergonomics have made a considerable contribution to the research, design, development, operation and analysis of transportation systems which includes road and rail

vehicles and their complementary infrastructure, aviation and maritime transportation. This book presents recent advances in the Human Factors aspects of Transportation. These advances include accident analysis, automation of vehicles, comfort, distraction of drivers (understanding of distraction and how to avoid it), environmental concerns, in-vehicle systems design, intelligent transport systems, methodological developments, new systems and technology, observational and case studies, safety, situation awareness, skill development and training, warnings and workload. This book brings together the most recent human factors work in the transportation domain, including empirical research, human performance and other types of modeling, analysis, and development. The issues facing engineers, scientists, and other practitioners of human factors in transportation research are becoming more challenging and more critical. The common theme across these sections is that they deal with the intersection of the human and the system. Moreover, many of the chapter topics cross section boundaries, for instance by focusing on function allocation in NextGen or on the safety benefits of a tower controller tool. This is in keeping with the systemic nature of the problems facing human factors experts in rail and road, aviation and maritime research– it is becoming increasingly important to view problems not as isolated issues

that can be extracted from the system environment, but as embedded issues that can only be understood as a part of an overall system.

Cockpit Resource Management (CRM) has gained increased attention from the airline industry in recent years due to the growing number of accidents and near misses in airline traffic. This book, authored by the first generation of CRM experts, is the first comprehensive work on CRM. Cockpit Resource Management is a far-reaching discussion of crew coordination, communication, and resources from both within and without the cockpit. A valuable resource for commercialand military airline training curriculum, the book is also a valuable reference for business professionals who are interested in effective communication among interactive personnel. Key Features * Discusses international and cultural aspects of CRM * Examines the design and implementation of Line-Oriented Flight Training (LOFT) * Explains CRM, LOFT, and cockpit automation * Provides a case history of CRM training which improved flight safety for a major airline

ON 8 MARCH 2014, MALAYSIA AIRLINES FLIGHT 370 TOOK OFF FROM KUALA LUMPUR INTERNATIONAL AIRPORT BOUND FOR BEIJING. LESS THAN AN HOUR AFTER TAKEOFF, SOMEWHERE OVER THE SOUTH CHINA SEA, THE PLANE SIMPLY VANISHED. ONE EYEWITNESS SAW A BURNING PLANE CRASH

INTO THE SEA. But confusing radar signals tracked an aircraft taking an erratic course across the Malaysian peninsula, then on to the Andaman Sea. Did it crash there? Or did it fly on to land safely in disputed lands of Central Asia, or the top-secret CIA 'black site' on Diego Garcia? Data from the Rolls-Royce engines tracked by Inmarsat was said to indicate that it might have ditched in the furthest reaches of the South Indian Ocean. We know more about the surface of the moon than the bottom of the sea there. And the weather and currents are so bad, it may never be found. Convenient? Two years later, the Australians are still searching - at the cost of billions - and have found nothing. But was the search in such a remote place part of a cover-up to distract the world's attention because the US Navy had, in fact, shot the plane down?A huge plane, along with 227 passengers and 12 crew, cannot simply have vanished. The Worldwide Web is a-buzz with conspiracy theories. Was the disappearance of MH370 related to the downing of MH17 over the Ukraine four months later? Some have suggested that it was the same plane... Or is the loss of MH370 more akin to the crash of Germanwings Flight 9525, after deranged pilot Andreas Lubitz deliberately flew the plane into the side of a mountain in the Alps, killing all on board... Since the invention of radio, radar, satellite navigation and the internet, the world has become a smaller place. The answer must be

out there. Or, perhaps, hidden within the pages of the secret files...

The presentation of mental illness at work has different implications and consequences depending on the specific nature of the job, work context, regulatory framework and risks for the employee, organisation and society. Naturally there are certain occupational groups where human factors and/or mental illness could impair safety and mental acuity, and with potentially devastating consequences. For pilots, the medical criteria for crew licensing are stipulated by regulatory aviation authorities worldwide, and these include specific mental illness exclusions. The challenge of assessment for mental health problems is, however, complex and the responsibility for psychological screening and testing falls to a range of different specialists and groups including AMEs (authorised aviation medical examiners), GPs and physicians, airline human resources departments, psychologists, human factor specialists and pilots themselves. Extending and developing the ideas of Aviation Mental Health (2006), which described a range of psychological issues and problems that may affect pilots and the consequences of these, this book presents an authoritative, comprehensive and practical guide to modern, evidence-based practice in the field of mental health assessment, treatment and care. It features contributions from experts in the field drawn from several countries, professions and representing a range of aviation-related organisations, displaying a range of different skills and methods that can be used for the clinical assessment of pilots and in relation to specific

mental-health problems and syndromes.

This two volume set presents the reader with new strategies for the contributions of psychology and Human Factors to the safe and effective functioning of aviation organizations and systems. The volumes comprise the edited contributions to the Fourth Australian Aviation Psychology Symposium. The chapters within are orientated towards presenting and developing practical solutions for the current and future challenges facing the aviation industry. Each volume covers areas of vital and enduring importance within today's complex aviation system. Volume 2 covers Selection, Training, Human-Machine Interface, Air Traffic Control, Maintenance and Situational Awareness. Invited chapters include contributions from Capt. Dañiel Maurino (ICAO), Professor Bob Helmreich (University of Texas), Jean Pariés and Dr. Ashleigh Merritt (Dédale), Professor Ron Westrum (Eastern Michigan University), Capt. Azmi Radzi (Malaysian Airlines), Nicole Svátek (Virgin Atlantic), Professor Patrick Hudson (Leiden University), Dr. Sherry Chappell (Delta Technology), Dr. Nick McDonald (Trinity College, Dublin), Professor Jan Davies (University of Calgary), Capt. John Bent (Cathay Pacific Airways), Dr. Carol Manning (FAA), Dr. Manfred Barberino and Dr. Anne Isaac (EUROCONTROL), Dr. Drew Dawson (University of South Australia), Rebecca Chute and Professor Earl Wiener (NASA Ames), Dr. Gavan Lintern (AMRL), Bert Ruitenberg (IFATCA) and Dr. Mica Endsley (SA Technologies)

A selection of annotated references to unclassified reports and journal articles that were introduced into the

NASA scientific and technical information system and announced in Scientific and technical aerospace reports (STAR) and International aerospace abstracts (IAA). This book presents selected papers introducing readers to the key research topics and latest development trends in the theory and application of MMESE. The advanced integrated research topic man-machine-environment system engineering (MMESE) was first established in China by Professor Shengzhao Long in 1981, with direct support from one of the greatest modern Chinese scientists, Xuesen Qian. In a letter to Shengzhao Long from October 22nd, 1993, Xuesen Qian wrote: “You have created a very important modern science and technology in China!” MMESE primarily focuses on the relationship between man, machine and environment, studying the optimum combination of man-machine-environment systems, where “man” refers to people in the workplace (e.g., operators, decision-makers), “machine” is the general name for any object controlled by man (including tools, machinery, computers, systems and technologies), and “environment” describes the specific working conditions under which man and machine interact (e.g., temperature, noise, vibration and hazardous gases). The three goals of optimizing such systems are ensuring safety, efficiency and economy. Presenting interdisciplinary studies on the concepts and methods in physiology, psychology, system engineering, computer science, environmental science, management, education and other related disciplines, this book is a valuable resource for all researchers and professionals whose work involves MMESE subjects.

Tricky maneuvers, curious passengers, and other kinds of turbulence The star DJ who spontaneously invites the entire flight crew to his concert in Rome, the businessman who has his forgotten cigars flown in by private jet, and the oil millionaire who has the stewardesses crawl through the cabin on all fours to the sound of Pavarotti arias—there's nothing that Pilot Patrick has not experienced in his job. Germany's most famous airline captain takes us on a joyride to the most beautiful places in the world, telling us how he made his dream of flying come true, what really helps against the fear of flying, and what you should consider if you want to become a pilot yourself. From wild party nights on the Côte d?Azur to sex above the clouds, Pilot Patrick gives us an exclusive look behind the normally closed doors of the international jet set—and reveals a secret that, until now, has always flown below the radar.

This title was first published in 2003. An international journal targeted specifically at the study of the human element in the aerospace system, and its role in either avoiding or contributing to accidents and incidents, and in promoting safe operations. The journal contains both formal research and practitioner papers, describing new research in the area of human factors and aerospace safety, and activities such as successful safety and regulatory initiatives or accident case studies. In every issue there is also an invited position paper by an internationally respected author, providing a critical overview of a particular area of human factors and aerospace safety, with the aim of developing theory and setting a research agenda for the future. Other features

of the journal include: a critical incidents section describing recent aviation incidents with human factors root causes, a calendar of events, listing forthcoming international conferences, seminars and workshops of interest to the reader, and occasional book reviews.

Final report of the National Commission on Terrorist Attacks upon the United States.

Aircrew Training and Assessment is designed for professionals in the aviation psychology, human factors, assessment and evaluation, vocational, technical, educational psychology, and educational technology communities. It explores the state of the art in the training and assessment of aircrews and includes a review and description of the use of simulations in the area of aircrew training and assessment. An aircrew consists of one or more persons who are responsible for achieving a mission goal through use of an aircraft. Depending on one's point of view, an aircrew can be as small as one pilot flying a single-seat aircraft, or as large as a full crew operating an airliner. Despite advances in aircrew selection and human factors engineering techniques, the need for better aircrew training is still readily apparent. For example, in the military, the missions requiring aircrews keep getting more complex. Simulation is used extensively in both military and civilian training to deal with this complexity. The book is organized into two major sections: models and tools for training of aircrews and models and tools for

assessment of aircrew training. Both military and civilian environments are covered, as well as individual and team training.

Designed to respond to the changing nature of criminal law, Criminal Law: Doctrine, Application, and Practice offers a fresh approach that features a blend of criminal law theory, clear presentation of the doctrine, classic and modern cases, and an exploration of the practice and policy considerations of the doctrine. Materials are presented in a visually lively style, via a consistently structured pedagogy within each chapter: Doctrine (treatise-like explanation), Application (cases), and Practice/Policy (questions providing an opportunity for normative critique of the law and exploration of practical and strategic challenges facing criminal lawyers). Theory is integrated into the doctrine section rather than conveyed through law review excerpts, so as to help students make the necessary connections to doctrinal issues. Aggressively-edited cases help keep the length to a minimum, and modern cases will engage younger students and professors.

This unique book expands the contribution of aviation psychology and human factors to the aviation industry within the Asia Pacific region, with participation from many other parts of the globe, and key local and international experts, developing the safety, efficiency and viability of the industry. It is a

forward-looking work, providing new strategies for psychology and human factors to increase the safe and effective functioning of aviation organisations and systems, pertinent to both civil and military operations. This is the formal refereed proceedings of The Fifth Australian Aviation Psychology Symposium, Manly Beach, Sydney 2000. The symposium had a diverse range of contributions and Development Workshops, bringing together practitioners from aviation psychology and human factors, flight operations management, safety managers, pilots, cabin crew, air traffic controllers, engineering and maintenance personnel, air safety investigators, staff from manufacturers and regulatory bodies, and applied aviation industry researchers and academics. This book will be of interest to anyone involved in human factors, safety systems or aviation psychology within both the civil and military aviation industry.

This report consists of eight parts. The first part is concerned with describing pilot selection, why it is important, and the knowledge, skills, abilities, and other characteristics typically considered during selection. Part two introduces the concept of validity and the steps involved in doing a validation study. Part three reviews some common methodological issues that make the interpretation of pilot selection studies more difficult and offers "best practices" advice for researchers and practitioners. Part four

describes several common criterion measures of pilot training and job performance and research regarding the development of models of performance. Parts five and six review military and commercial pilot selection practices. Where available, information about the construct and predictive validity of the selection methods is provided. Part seven examines future trends in the measurement of pilot aptitude. Finally, part eight provides recommendations for pilot selection researchers and practitioners. Most important in conducting pilot selection research is scientific rigor. Without scientific rigor, results may be worse than meaningless leading to counterproductive practice. Before setting out to develop a pilot selection system, it is imperative to have a firm foundation in the published literature of human abilities, reliability, validity, job performance measurement, and meta-analysis. Cumulative research results should guide practice. The military has a long history of research in the selection of pilots and other aviation occupations. In general, they have used both paper-and-pencil tests and apparatus tests such as psychomotor. Cumulative results suggest that general cognitive ability (g) has been a mainstay of military testing and will likely remain so. Measures of pilot job knowledge and psychomotor ability have demonstrated incremental validity when used with measures of g.

This comprehensive book describes in practical terms - underpinned by research - how recruitment, selection, and psychological assessment can be conducted amongst pilots. The chapters emphasize evidence-based and ethical selection methods for different pilot groups. It includes chapters written by experts in the field and also covers related areas, such as air traffic controllers and astronauts. The book is written for airline managers, senior pilots responsible for recruitment and training, human resources specialists, human factors and safety specialists, occupational health doctors, psychologists, AMEs, practitioners or academics involved in pilot selection. Robert Bor, DPhil CPsychol CSci FBPsS HonFRAeS UKCP Reg EuroPsy, is a Registered and Chartered Clinical Counselling and Health Psychologist, Registered Aviation Psychologist and Co-Director of the Centre for Aviation Psychology. Carina Eriksen, MSc DipPsych CPsychol FBPsS BABCP, is an HCPC Registered and BPS Chartered Consultant Counselling Psychologist and Registered Aviation Psychologist. Todd P. Hubbard, B.A., M.S. Aeronautical Sciences, Ed.D. Applied Educational Studies in Aviation, Lt. Col. USAF (ret.), is the Clarence E. Page Professor of Human Factors research, University of Oklahoma. Ray King, Psy,D., J.D. is a licensed clinical psychologist, recently retired from the U.S. Air Force, currently with the

U.S. Federal Aviation Administration (FAA).