



MACQUARIE
University
SYDNEY · AUSTRALIA

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Citizenship: Australian

Employment History

Position	Employer	Dates
Professor (E) of Psychology (Tenured)	Macquarie University	(1 st March 2014 -
Associate Professor (D) of Psychology (Tenured)	Macquarie University	(9 th June 2008 – 28 th February 2014)
Adjunct Associate Professor (D) of Psychology	University of Western Sydney	(12 th June 2009 – 1 st January 2012)
Associate Professor (D) of Psychology (Tenured)	University of Western Sydney	(1 st January, 2006 – 5 th June 2008)
Senior Lecturer (C) in Psychology (Tenured)	University of Western Sydney	(1 st January, 2002 – 31 st December 2005)
Senior Lecturer (C) in Human Factors (Tenured)	University of Western Sydney	(25 th November, 1998 – 31 st December 2001)
Senior Lecturer (C) in Human Factors (Fixed Term)	University of Western Sydney	(24 th February, 1997 – 25 th November, 1998)
Lecturer (B) in Human Factors (Casual)	Swinburne University of Technology	(24 th February, 1997 – 1 st January 2002)
Lecturer (B) in Human Factors (Tenured)	University of Newcastle	(29 th March, 1993 - 21 st February, 1997)
Demonstrator in Psychology	University of Otago	(January, 1991 - September, 1992)
Part-Time Research Assistant	University of Otago	(August, 1991 - January, 1992)
Junior Research Fellow	University of New England	(August - September, 1990)
Social Educator	Challenge Foundation of N.S.W.	(July, 1988 – August, 1990)

Executive Positions

Position	Employer	Dates
Director – Macquarie University Simulation Hub	Macquarie University	January 2015 -
Associate Dean (Research), Faculty of Human Sciences	Macquarie University	January 2011 - September 2015
Chair, Postgraduate Coursework Committee, Department of Psychology	Macquarie University	January 2009 - January 2011
Program Director: Organisational Psychology	Macquarie University	January 2009 – January 2014
Head of School: School of Psychology	University of Western Sydney	January, 2006 – April 2008
Associate Director: MARCS Auditory Research Laboratories	University of Western Sydney	January 2000 – June 2008
Program Head: Fourth Year Psychology Programs	University of Western Sydney	January 2002 – December 2005
Acting Head of School: School of Psychology	University of Western Sydney	January 2004 – May 2004
Manager: Aviation Income Generating Unit	University of Western Sydney	January 2001 – December 2001
Program Head: Aviation	University of Western Sydney	January 2001 – December 2001
Chair: Human Research Ethics Panel	University of Western Sydney	January 2003 – June 2003

Other Appointments

Position	Organisation	Dates
Associate Editor – Australian Psychologist	Australian Psychological Society	March 2017 -
College of Organisational Psychologists – Course Approvals	Australian Psychological Society - College of Organisational Psychologists	May 2015 -
Member	Australian Psychological Society - College of Organisational Psychologists National Committee	August 2015 -
Member	Clinical Excellence Commission Human Factors Advisory Committee	January 2015 -
Alternate Board Member – Hearing Cooperative Research Centre	Hearing Cooperative Research Centre	January 2015 -
Member, ERA 2015 Steering Committee	Macquarie University	October 2014 – March 2015
College of Organisational Psychologists Representative – Review of Murdoch University	Australian Psychological Society - College of Organisational Psychologists	August 2012
Member, Macquarie University New Staff Grant Selection Committee	Macquarie University	January 2011 -
Member, ERA 2012 Steering Committee	Macquarie University	January 2011 – March 2012
Member, Professional Staff	Macquarie University	January 2011 -

Development Grant Selection Committee		
Field Supervisor	Psychology Board of Australia	October 2011 -
Member, Web Steering Committee	Macquarie University	January 2011 -
Member, Faculty of Human Sciences Faculty Board	Macquarie University	January 2011 -
Member, Research Management Committee	Macquarie University	January 2011 -
Chair, Faculty of Human Sciences Research Subcommittee	Macquarie University	January 2011 -
Member, Staff Consultative Group	Macquarie University	January 2009 - July 2010
Expert Assessor of International Standing	Australian Research Council	January 2003 -
Expert Panel Member of the Joint Safety Analysis Team for Aeronautical Decision-Making	United States Federal Aviation Administration	January 2001 – May 2001
Consultant Member of the Human Factors Advisory Group	Civil Aviation Safety Authority	January 2000 – December 2003
Member of Ethics Committee	University of Western Sydney - Macarthur	January 2000 – December 2000
Member of the Faculty of Arts and Social Sciences Workload Committee	University of Western Sydney - Macarthur	January 2000 – December 2000
Member of the Faculty of Arts and Social Sciences Research Committee	University of Western Sydney - Macarthur	January 2000 – December 2000
Acting Chair of the Human Research Ethics Committee	University of Western Sydney - Macarthur	January 2000 – December 2000
Member of the Faculty of Arts and Social Sciences Academic Planning Committee	University of Western Sydney – Macarthur	January 1999 – December 1999
Member of the Faculty of Arts and Social Sciences Research Infrastructure Committee	University of Western Sydney - Macarthur	January 1999 – December 1999
Member of the Human Factors Curriculum Advisory Panel	Civil Aviation Safety Authority	January 1999 – December 2000
Member of the Faculty of Science Ethics Committee	University of Newcastle	January 1993 - December 1996
Member of the Board of the Faculty of Science and Mathematics	University of Newcastle	January 1993 - December 1996
Chairperson of the Department of Aviation & Technology Teaching Committee	University of Newcastle	January 1993 - December 1996
Treasurer	University of New England Union	January 1988 – December 1989
Vic-President	University of New England Union	January 1988 – December 1989

Academic Qualifications

Degree	Institution	Date Awarded	Major/ Topic
Bachelor of Social Science	University of New England	1989	Psychology
Bachelor of Arts (Honours)	University of New England	1991	Psychology: Emotional Arousal: Its Effects on Cerebral Lateralisation and T-Wave Amplitude
Master of Arts (Honours) with Distinction	University of Otago	1993	Psychology: Aeronautical Experience and Weather-Related Decision-Making: A Cross-Sectional Analysis
Doctor of Philosophy	University of Otago	2001	Psychology: Expertise and Weather-Related Decision-Making

Prizes

Judy Ewing Memorial Prize – University of New England (1988)
 Macquarie University Postgraduate Research Association – Supervisor of the Year (2012)
 Faculty of Human Sciences Dean’s Award for Teaching Excellence (2012)
 Executive Dean’s Award for Programs that Enhance Learning (2016) (with Barbara Griffin, Monique Crane, Ben Searle, and Linda Yeomans).
 Vice Chancellor’s Award for Programs that Enhance Learning (2016) (with Barbara Griffin, Monique Crane, Ben Searle, and Linda Yeomans).

Society Membership

Role	Institution	Date Admitted
Registered Psychologist	Australian Health Practitioners Registration Authority	1999
Member	Australian Psychological Society	1993
Member	Society for Industrial and Organisational Psychology	2008
Member	Australian Psychological Society – College of Organisational Psychologists	2005
Member	Human Factors and Ergonomics Society	1993
Member	Australian Aviation Psychology Association	1997
Member	Society for Applied Research in Memory and Cognition	2008
International Affiliate	American Psychological Association	1997

Editorships, Keynote Speaker, and Session Chairs

Role	Conference/ Journal
Consulting Editor	Journal of Expertise
International Reviewer	Social Sciences and Humanities Research Council of Canada (SSHRC)
International Reviewer	Netherlands Organisation for Scientific Research (NWO)
Keynote Speaker	Singapore Airlines Regional Human Factors Info Share
Keynote Speaker	12 th Australian Aviation Psychology Association International Symposium
Review Panel Member	Macquarie University, Review of the Department of Linguistics (2016)
Course Reviewer	Australian Psychological Society (2014-2016)
Session Chair	11 th Industrial and Organisational Psychology Conference, Melbourne, Australia (2015)
Consultant Reviewer	IIE Annual Conference and Expo, 2015
Consultant Reviewer	2015 International Annual Meeting of the Human Factors and Ergonomics Society
Consultant Review	Aviation Technology and Engineering
Consultant Reviewer	Applied Ergonomics
Consultant Reviewer	International Journal of Industrial Ergonomics
Peer Reviewer	National Health and Medical Research Council
Keynote Speaker	PACDEFF (2014)
Invited Speaker	Queensland Children's Critical Incident Panel (2014)
Consultant Reviewer	Safety Science
Editorial Board	Aviation Psychology and Applied Human Factors
Opening Address	Australian Institute of Interpreters and Translators Biennial Conference (2012)
Organising Committee	10 th International Symposium of the Australian Aviation Psychology Association (2012)
Plenary Speaker	10 th International Symposium of the Australian Aviation Psychology Association (2012)
Reviewer	Department of English (Macquarie University)
Editorial Board	Scientific World Journal
Consultant Reviewer	Consciousness and Cognition
Book Review	Bentham Publishers
Book Reviewer	MIT Press
Consultant Reviewer	Meteorological Applications Journal
Consultant Reviewer	Organizational Behavior and Human Decision Processes Journal
Plenary Address	Healthcare Human Factors Seminar - Sydney, Australia (2010)
Consultant Reviewer	2014 International Annual Meeting of the Human Factors and Ergonomics Society
Organising Committee	9 th International Symposium of the Australian Aviation Psychology Association (2010)
Consultant Reviewer	ASCS09 Proceedings: 9 th conference of the

	Australasian Society for Cognitive Science
Consultant Reviewer	Aviation, Space and Environmental Medicine
Consultant Reviewer	Annual Symposium of the Human Factors and Ergonomics Society
Organising Committee	8 th Industrial and Organisational Psychology Conference, Sydney, Australia (2009)
Consultant Reviewer	Australian and New Zealand Journal of Organisational Psychology
Consultant Reviewer	2013 International Annual Meeting of the Human Factors and Ergonomics Society
Consultant Reviewer	8 th Industrial and Organisational Psychology Conference, Sydney, Australia (2009)
Consultant Reviewer	Journal of Experimental Psychology: Applied
Standing PhD Reviewer	National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan
Invited Speaker	Human Factors in Healthcare Workshop, Sydney, Australia (2008)
Session Chair	8 th International Symposium of the Australian Aviation Psychology Association
Editorial Board	The Ergonomics Open Journal
Consultant Reviewer	2013 International Annual Meeting of the Human Factors and Ergonomics Society
Editorial Board	International Journal of Aviation Psychology
Consultant Reviewer	Human Factors
Consultant Reviewer	The International Journal of Applied Aviation Studies
Consultant Reviewer	The Australian Journal of Psychology
Invited Speaker	SimTecT 2007 Healthcare Simulation Conference
Session Chair	Tenth International Symposium on Aviation Psychology
Conference Secretary	30 th Australasian Experimental Psychology Conference
Technical Chair	30 th Australasian Experimental Psychology Conference
Session Chair	30 th Australasian Experimental Psychology Conference
Consultant Reviewer	Australian Aviation Psychology Symposium - 2006 Conference
Consultant Reviewer	Australasian University Aviation Association - 2001 Conference

Industry Courses, Invited Presentations, and Workshops

Topic	Organisation	Date
The Psychology of Expertise	BDO Australia sponsorship for Institute of Public Administration Australia 2016 National Conference	2016
Risk Perception and Response both from an Individual and Organisational Level	Singapore Airlines	2016
Assessing Diagnostic Skills: Psychometric and Systemic Issues	Clinical Excellence Commission Seminar: Applying Human Factors to the Design of Safe Systems	2015
Learning How Experts Learn: Becoming the Learning Agile	BDO Australia	2015
Assessing Diagnostic Skills in Industrial Settings	University of Western Australia, Department of Psychology	2015
Cue-Based Processing: Understanding Individual Differences in the HMI Environment	Third Annual Control Room Design and Operation Conference	2015
Using Operational Cues to Sustain Elite Performance in Aviation	Qantas Airways – Safety Day	2015
Invited Grand Rounds and Resident Rounds	Yale Medical School, Department of Anesthesiology	2014
Ensuring Human Factors in Developing Train Control Systems and Centres	IQPC Train Control and Management	2013
Beyond Aesthetics: Cognitive Usability and its Implications for System Design and Evaluation	Telstra	2013
The Use of Simulation for Cue-based Learning of Diagnostic Skills	3 rd International Paediatric Simulation Symposium and Workshops	2010
Attention Management	TransGrid Pty Ltd	2010
An Introduction to Human Factors	Human Communication Science Network: SummerFest	2009
Human Factors in Simulation	Westmead Childrens Hospital	2009
Human Factors: Decision-Making	Human Communication Science Network: SummerFest	2007
Noise in childcare centres	ABC Melbourne	2007
Noise in childcare centres	ABC Newcastle	2007
Noise in childcare centres	Newsradio	2007
Review of human performance laboratory	Australian Flying	2007 (Jan)

Human Factors: Decision-Making	Human Communication Science Network: SummerFest	2006
Weatherwise II	ABC Radio National	2003
Weatherwise II	2SM	2003
Operational resource management	Australian Women Pilots Association	2001
Weather-related decision-making	Australian Women Pilots Association	1996
Decision-making in micolight environments	Hang-gliding federation of Australia	1995

Specialist Skills

- Experience in the use and interpretation of electroencephalography
- Experience in the use and interpretation of electrocardiography
- Experience in the administration and interpretation of psychometric tests
- Private Pilots Licence - Fixed Wing Aircraft
- Constant-Speed Endorsement - Fixed Wing Aircraft
- Retractable Endorsement - Fixed Wing Aircraft

Consultancies

Organisation	Activity	Date
Parsons Brinckerhoff	Human Factors Analysis of Adamstown Level Crossing (Newcastle)	2016
Energex	Presented a series of workshops on mastery	2016
Energex	Presented a series of workshops on expert technical communication	2015
Parsons Brinckerhoff/ Australian Rail Track Corporation (ARTC)	Workload analysis of rail controllers <i>in situ</i>	2014
Parsons Brinckerhoff/	Evaluating the feasibility of a track sequencing alarms system	2013
Nova Systems/ THALES	Evaluating the as-is and to-be editions of an air traffic control display	2012-2013
SNP Security	Developed a White Paper that presents a model for the integration of human factors within the security industry	2012
Powerlink	Developed and presented workshops on decision-making, communication, and situational awareness	2008
Victorian Department of Infrastructure	Conducted a human factors analysis of the proposed Train Control Monitoring System for the Melbourne Metropolitan Region	2007-
Australian Transport Safety Bureau	Contributed to workshops on human factors in transportation presented on behalf of the Indonesian National Transportation Safety Committee.	2007-2010
Civil Aviation Safety Authority	Developed a syllabus for aerial agricultural pilots	2007
Civil Aviation Safety Authority	Wrote questions for the Australian Airline Pilots Examination	2007-2009
TransGrid	Developed and presented workshops on	2007

	decision-making, communication, and organisational systems	
National Electricity Market Management Corporation	Developed and presented a workshop on work-family conflict, stress, and fatigue in the workplace	2006
New South Wales Rail Corporation	Conducted human factors training sessions for railway accident investigators	2006
RMAus	Conducted a human factors assessment of the mental workload of train controllers.	2005
TransGrid	Developed Advanced Human Factors Training Courses	2005
Victorian Department of Infrastructure	Conducted a human factors assessment of train control management systems	2005
Aerospace Aviation	Conducted Management Operational Skills training for the Australian International Pilots Association	2004, 2005
RMAus/ Railcorp	Conducted a comparative analysis of the performance of railway area controllers	2005
New South Wales Rail Corporation	Prepared a report of the impact of the ATRICS advanced technology signalling system	2004
Key Centre for Human Factors and Applied Cognitive Psychology	Reviewer for report on head-up displays prepared for the Civil Aviation Safety Authority	2003
Australian Transport Safety Bureau	Conducted presentations on decision-making, attention, and situational awareness	2001 - 2010
Eastern Australia Airlines	Presented a course on pilot selection and testing	2002
Federal Aviation Administration	Expert consultant on aeronautical decision-making	2001
Bureau of Air Safety Investigation	Conducted research into aircraft accident causation	1995
Civil Aviation Safety Authority (1998)	Wrote ATPL questions for human factors and assisted with the development of the human factors syllabus	1998, 2007
Swinburne University of Technology	Developed and taught academic subjects	2001-
Combined Aviation Services	Conducted crew resource management courses	1997
Legal Aid (1994)	Expert opinion following aircraft accident	1994

Tertiary Teaching Experience

Managerial Teaching Responsibility

Role	Degree	Institution	Dates
Program Director	Master of Organisational Psychology	Macquarie University	2009-2013
Coordinator	Graduate Diploma of Psychological Studies	University of Western Sydney	2007-2008
Coordinator	Postgraduate Diploma of Psychology	University of Western Sydney	2001-2005
Coordinator	Master of Human Factors	University of Western Sydney	2000-2001
Coordinator	Master of Aviation Studies	University of Western Sydney	1998-2001

		Sydney	
Coordinator	Bachelor of Aviation Studies (Honours)	University of Western Sydney	1997-2001
Coordinator	Bachelor of Aviation Studies	University of Western Sydney	1999-2001
Coordinator	Master of Arts (Aviation)	University of Western Sydney	1997-2001
Coordinator	Bachelor of Science (Aviation) (Honours)	University of Western Sydney	1993-1997

Degree Development

Degree	Institution
Master of Organisational Psychology	Macquarie University
Postgraduate Diploma of Organisational Behaviour	Macquarie University
Postgraduate Diploma of Psychology	University of Western Sydney
Bachelor of Aviation Studies (Honours)	University of Western Sydney
Master of Human Factors	University of Western Sydney

Subject Development: Distance Education

Subject	Institution
Aviation Psychology (Module (300pp approx) and Videotaped Materials)	University of Western Sydney
Human Factors (Module (300pp approx) and Videotaped Materials)	University of Western Sydney
Human Factors Testing and Evaluation (Module (300pp approx) and Software)	University of Western Sydney
Reliability Analysis (Module (300pp approx) and Software)	University of Western Sydney
Human Factors Instruction (Module (300pp approx) and Software)	University of Western Sydney
Aviation Resource Management (Module (300pp approx) and Software)	University of Western Sydney
Research Methods in Aviation (Module (300pp approx) and CD-ROM)	University of Western Sydney

Teaching

Subject	Details	Institution
Professional Practice	Fifth level comprising two hrs/wk: Workshop	Macquarie University
Human Factors and New Technology	Fifth level comprising two hrs/wk: Workshop	Macquarie University
Training in Organisations	Fifth level comprising two hrs/wk: Workshop	Macquarie University
Applied Psychology and Human Resource Management	Fifth level comprising two hrs/wk: Workshop	Macquarie University
Applied Cognition and Human Performance:	Third level comprising three hrs/wk: Lectures, workshops and tutorials	University of Western Sydney
Organisational Psychology	Third level comprising three hrs/wk:	University of Western

	Lectures, workshops and tutorials	Sydney
Personality, Motivation and Emotion	Second level comprising three hrs/wk: Lectures, workshops and tutorials	University of Western Sydney
Human Learning and Cognition	Second level comprising three hrs/wk: Lectures, workshops and tutorials	University of Western Sydney
Introduction to Human Factors in Aviation	Fifth level distance education	Swinburne University of Technology
Advanced Human Factors in Aviation	Fifth level distance education	Swinburne University of Technology
Aviation Psychology	Second level comprising three hrs/wk: Lectures, workshops and tutorials	University of Western Sydney
Human Factors	Second level comprising three hrs/wk: Lectures, workshops and tutorials	University of Western Sydney
Group Interaction and Flightcrew Performance	Third level comprising five hrs/wk: Lectures, workshops and tutorials	University of Western Sydney
Aviation Resource Management	Third level comprising five hrs/wk: Lectures, workshops and tutorials	University of Western Sydney
Research Methods in Aviation	Third level comprising three hrs/wk: Lectures, workshops and tutorials	University of Western Sydney
Human Factors Testing and Evaluation	Fifth level comprising five hrs/wk: Lectures, workshops and tutorials	University of Western Sydney
Reliability Analysis	Fifth level comprising five hrs/wk: Lectures, workshops and tutorials	University of Western Sydney
Human Factors Instruction	Fifth level comprising five hrs/wk: Lectures, workshops and tutorials	University of Western Sydney
Aviation Psychology: Theory and Practice	Third level comprising lectures, workshops and tutorials	University of Western Sydney

Degree Supervision

Doctoral Degree

Candidates	Topic	Institution	Date Awarded
Kyle Fitzgerald (Primary Supervisor)	Video Game Experience and Psychomotor Skill Acquisition	Macquarie University	2016
Eva Gacasan (Primary Supervisor)	Cues in Management	Macquarie University	2017
Jaime Auton (Primary Supervisor)	Utilisation of Prosodic and Semantic Cues of Nonunderstanding during Readback/Hearback Verbal Transactions in Technical Environments	Macquarie University	2015
Thomas Loveday (Primary Supervisor)	Cue Utilisation and Expert Performance	Macquarie University	2013

Lianne Britten (Primary Supervisor)	Migrant and indigenous transition to the workplace	Macquarie University	2015
Nicole Weeks (Associate Supervisor)	Judgement under Uncertainty	Macquarie University	2014
Laura Kirby (Associate Supervisor)	Uncertainty and Decision-Making	Macquarie University	2014
Craig MacMillan (Associate Supervisor)	Moral Decision-Making	Macquarie University	In Progress
Penelope Faure (Associate Supervisor)	Uncertainty Appraisal and Return to Work	Macquarie University	2014
Natalie Morrison (Associate Supervisor)	Attentional resourcing: The role of cognitive complexity and cognitive load. Integrating multiple- and unitary-model predictions into a two-level hierarchical framework	University of Western Sydney	2010
Ben Morrison (Primary Supervisor)	Profiling the Profiler: Exploring the Role of Cues in the Development of Expertise within the Domain of Offender Profiling	University of Western Sydney	2010
Jemma Harris (Primary Supervisor)	Cue based Assessments of Higher and Lower-Order Cognitive Skills in Pilots	University of Western Sydney	2010
Nathan Perry (Primary Supervisor)	A Reduced Processing Approach to Decision Support for Improving the Decisions of Less-experienced Incident Commanders	University of Western Sydney	2010
Kell Tremayne (Associate Supervisor)	Social value orientation and contextual cues influence cooperation and trustworthiness.	University of Western Sydney	2010
Iris-Corinna Schwarz (Associate Supervisor)	Speech Perception, Phonological Sensitivity, and Articulation in Early Vocabulary Development	University of Western Sydney	2008
Brett Molesworth (Primary Supervisor)	Case-Based Reasoning and Risk Management in Aviation	University of Western Sydney	2006
Graham Beaumont (Primary Supervisor)	Situational Awareness in Commercial Airline Operations	University of Western Sydney	2003

Masters Degree (Thesis)

Candidates	Topic	Institution	Date Awarded
Elise Hawke	Cue utilisation as a mechanism for identifying diagnostic expertise in learn-to-swim instructors.	Macquarie University	2016
Jarrah Watkinson	Exploring the Validity of an Assessment Tool for Measuring the Cue Utilisation Performance of Audiologists-in-Training	Macquarie University	2016
Dean Mann	Search and rescue drones of the future: A preliminary study of the relationship between sustained, divided attention and cue utilisation in a high fidelity simulation.	Macquarie University	2016
Shay Donaghey	Sometimes a little experience can be dangerous: The effect of cue utilisation on diagnostic performance when miscued	Macquarie University	2015
Lauren Gatt	The Relationship Between Individual Differences in Cue-Utilisation and Propensity to be Miscued	Macquarie University	2015
Jovana Pavkovic	Cue Utilisation under Moderate Workload	Macquarie University	2015
Danielle Moore	Feature Discrimination and the Transfer of Skills amongst Competent Pilots	Macquarie University	2014
James Evans	The Role of the Cue-utilisation and Task Complexity on Retrospective Perceptions of Mental Workload	Macquarie University	2014
Amelia Rees	The Impact of a Range of Distraction Tasks Based on Kaplan's Criteria for Restorative Experiences on the Restoration of Vigilance Performance in a Railway Control Monitoring Task and the Implications for the Underload and Overload Theories of the Vigilance Decrement	Macquarie University	2013
Mona Elsharkawy	Situation Assessment in Forensic Accounting: Cues, Self-Regulated Learning, and Conscientiousness	Macquarie University	2013
Claire Benito	The Impact of Online Social Media on Decision-Making in Personnel Selection	Macquarie University	2013
Paris Lehn	Cues in Safety Management	Macquarie University	2012
Lucy Lyons	Cues in Distributed Network Service Provision	Macquarie University	2012
Catherine Innis	Cue Utilisation Amongst Sustainability Managers	Macquarie University	2012
Danielle Azar	Cues in General Aviation	Macquarie University	2011
Aaron Small	Expertise differences in abbreviated cue identification performance amongst Australian power system operators and student engineers.	Macquarie University	2011
Aimee Lord	The Impact of Company Websites on	Macquarie	2011

	Employment Intentions: Investigating Fit, Realism, Information and Organisation Image in the Banking and Finance Industry	University	
Rebecca Johnstone	Individual Differences in Diagnosis	Macquarie University	2011
Phillipa Cantrall	Cross-Cultural Leadership	Macquarie University	2011
Steven Scott	Fatigue in Commercial Airline Operations	University of Western Sydney	2003
Peter Renshaw	Cognitive Failure and NVGs in Helicopter Operations	University of Western Sydney	2001
Susie Foley	Human Error in Air Traffic Control	University of Western Sydney	2001

Research Interests

Audiovisual Decision Support Systems

The development of advanced technology is such that complex decisions are now being made with the aid of computer-based decision support systems. These systems enable users to formulate decisions on the basis of probability estimates of certain outcomes. The aim of this experimental programme is to investigate the role of applied cognition in the development and implementation of decision support systems. Ultimately, I expect to provide guidelines to ensure the successful integration of decision support systems in a wide range of operational settings.

Communication and Decision-Making in Advanced Technology Settings

Where some researchers regard decision making as a purely intellectual process, I examine decision making as it occurs within complex operational environments. This 'naturalistic' approach to decision making is designed to ensure that the outcomes of our research are meaningful to people who function in time-constrained, complex environments, and where the information that they receive is often shrouded in uncertainty. My research programme is designed to develop a theoretical model of decision making that integrates 'cognition' and 'application' with the ultimate aim of improving human performance.

Cue Analysis

My work in the area of cue analysis is designed to help us understanding how people acquire cues, how they use cues to direct their behaviour, and how they reinforce the use of these cues over extended periods of time. I believe that understanding the cues that people use to direct their behaviour is essential in designing training strategies to: (a) improve their performance; and (b) maintain their performance within a range of operational settings.

Scholarships, Grants and Awards (External)

Funding Body	Date	(\$A) Value	Topic
Australian Research Council Discovery Grant with Anina Rich (CI) Alex Woolgar Jeremy Wolfe William Helton	2016	\$397,500	Monitoring the monitors: Understanding Sustained Attention in Vigilance.
Royal Life Saving Society with Barbara Griffin (CI)	2016	\$25,000	
Australian Research Council Linkage Grant (CI) with	2016	\$492000 ¹	Predicting the Diagnostic Performance of Individuals and Organisations.
Australian and New Zeland College of Anaesthetists with Suyin Tan (CI) Thomas Loveday Monique Crane Kirsty Forrest	2014	\$70000	Impact of Emotion on Diagnostic Decision-Making in Anaesthesiology
Australian Research Council Linkage Grant (CI) with William Helton David O'Hare Dan Twigg Neil Smith Rick Santin Henry Gorniak	2013	\$426000 ²	Cues as Catalysts for Skilled Performance: Identifying a Mechanism to Improve Design, Training, and Selection in High Technology Control Environments
Australian Research Council Discovery Grant (CI) with Deak Helton David O'Hare	2012	\$236000	Improving Performance in High Risk Environments using Guided Distraction and Iconic Cues
Transfield Foundation (CI)	2012	\$18600	Cue Utilisation in the Unique Environment of a Power Generation Control Room
Australian Research Council Linkage Grant (CI) with David O'Hare Neil Smith	2008	\$340000 ³	Cue Acquisition as a Mediator of Cognitive Skills Development
Defence Science and Technology Organisation with Beryl Hesketh (CI) Barbara Griffin	2008	\$30375	Shared Situation Awareness: A State of the Art Review

¹ Includes \$130,000 cash support from industry partners

² Includes \$130,000 cash support from the industry partners

³ Includes \$60,000 cash support from the industry partner

Australian Transport Safety Bureau with Renee Glass (CI)	2007	\$21000	The Development and Evaluation of a Methodology for the Development of Safety Factor Maps
Australian Research Council Discovery Grant (CI) with Gerry Fogarty Merylin Childs	2006	\$174000	Cognitive Features of Decision Support System Interfaces
Australian Transport Safety Bureau with Kate Stevens (CI)	2005	\$25000	Design and Evaluation of Auditory Icons as Informative Warning Signals
Australian Transport Safety Bureau (CI)	2004	\$24000	Descriptive Evaluation of General Aviation Pilot Performance
Australian Research Council Linkage Grant (CI) with Scott Taylor Matthew Thomas	2004	\$130000 ⁴	Cognitive Cue Analysis: Seeing the Unseen in Human Performance
Australian Transport Safety Bureau (CI)	2004	\$24000	Cognitive Analysis of Factors Leading to the Misinterpretation of Weather Radar Systems amongst Pilots.
Wolf Aviation Fund (CI)	2003	\$3225	Anticipation and Decision-Making in Aviation
Federal Aviation Administration (CI)	2001	\$70000	The Development and Validation of Weatherwise II
National Space and Aviation Administration (NASA) with David O'Hare (CI) Alan Stokes	2000	\$150000	Learning from Experience
Federal Aviation Administration (CI)	2000	\$15000	Computer-Based Training for Aeronautical Decision-Making
Ohio State University Federal Aviation Administration (CI)	1996	\$7500	The Development of a Pilot Judgement Tutoring System for Weather-Related Decision-Making amongst Pilots

Scholarships, Grants and Awards (Internal)

Funding Body	Date	(\$A) Value	Topic
Macquarie University Strategic Infrastructure Scheme With Michelle Leishman Yann Tristant Manolya Kavakli-	2016	\$147,678	Simulated High Fidelity Unmanned Aerial System (UAS)

⁴ Includes \$15,000 cash support from the industry partner

Thorne Sammy Diasinos Mark Williams Melanie Taylor Simon Clark			
Research Infrastructure Block Grant With Barbara Griffin (CI) Michael Jones Jennifer Hudson Ron Rapee Catherine McMahon Kay Bussey Kerry Sherman Naomi Sweller Monique Crane Jennifer Barbour	2015	\$61,000	Statistical Infrastructure and Capability Development
Macquarie University Research Centre with William Thompson (CI) John Sutton Barbara Griffin Melanie Taylor Mark Williams Kim Curby Catherine McMahon Manolya Kavakli- Thorne Anina Rich Greg Downey	2015	\$50,000	Centre for Elite Performance, Expertise, and Training
Faculty of Human Sciences Human Sciences Perspectives Series Workshop with William Thompson Jaime Auton Lori Lockyer Kathryn Mills Melissa Norberg Julia Irwin Sue Brouwers Andrew Baillie Greg Downey Peter Renshaw	2015	\$8,000	Human Performance Simulation: A Meeting of Minds
Faculty of Human Sciences	2015	\$3,000	Constant Voltage and Current Simulator

Equipment Grant with Melissa Norberg (CI) Andrew Ballie Julie Irwin			
Macquarie University Strategic Infrastructure Scheme with Thomas Loveday (CI) Monique Crane William Thompson Andrwas Hellman Kevin Brooks Kim Curby Manolya Kavakli- Thorne	2014	\$150,0 00	Virtual Reality Dome System
Macquarie University Strategic Infrastructure Scheme with William Thompson (CI), Julia Irwin Eugene Chekaluk, Kim Curby Jan Tent Ritchie Howitt Robyn Dowling Jenny Batchelor Wayne Warburton Kevin Brooks Catherin Dean Michael Jones	2013	\$200,0 00	Driving Simulation
Macquarie University Research Development Scheme with Monique Crane (CI)	2012	\$28,76 5	The Role of Psychological Resilience and Wellbeing in the development of Specialist Expertise
Macquarie University Strategic Infrastructure Scheme with Mark Wiggins (CI), Carol Newall, Kerry-Ann Grant, Catherine McMahon, Ron Rapee, Jennie Hudson, Heidi Lyneham, Lorna Peters, Barbara Griffin,	2012	\$107,9 30	Portable Eye Tracking Facility, incorporating a Tobii T120 and Tobii Glasses Smart IR Eye Tracker

Lawrence Ang, Andreas Hellmann, Anina Rich, Greg Downey Shirley Wyver			
Macquarie University Safety Net Scheme	2012	\$25,000	Guided Distraction And The Use Of Iconic Cues To Assist Re-Engagement With Low Stimulus Primary Tasks
Macquarie University Partnerships Seeding Scheme	2011	\$7500	Cognitive complexity and information acquisition amongst expert and non-expert aviators: A simulation study
Macquarie University Safety Net Scheme	2011	\$14000	Recognising and Responding to the Deteriorating Patient in Intensive Care
Macquarie University Research Development Scheme with Ben Searle (CI)	2010	\$49998	Uncertainty and Appraisal: An Experimental Investigation Using Rail Control Simulation
Macquarie University Research Infrastructure Block Grant	2010	\$75000	Purchase of a Redbird FMX Flight Simulator
Macquarie University Strategic Infrastructure Scheme (MQSIS)	2009	\$31250	Purchase of a remote EEG data capture tool.
Internal Research Grant (UWS)	2005	\$21446	Cues and Skill Acquisition in Complex Environments
College of Arts, Education and Social Science (UWS)	2003	\$3000	The Assessment of Human Factors in the Workplace: An Integrated Approach.
Internal Research Grant (UWS)	2003	\$13826	Information acquisition, decision heuristics and decision accuracy in complex decision support systems
Australian Research Council: Small Grant with David O'Hare	2000	\$8089	Validation of a Pilot Judgement Tutoring System
Research Management Committee (Newcastle)	1997	\$12000	An Operational Validation of a Pilot Judgement Tutoring System for Weather-Related Decision-Making amongst Pilots
Faculty Development Committee (UWS) with Irene Henley Prue Anderson	1997	\$6000	Travel Grant to attend the Ninth International Symposium on Aviation Psychology
UWS Macarthur Foundation Grant with Irene Henley Prue Anderson	1997	\$7500	The Development and Validation of Human Factors Training Sequences for the Aviation Environment
Complementary Research Grant (UWS) with Nigel Bond Kate Stevens (CI)	1997	\$3500	Integration of Information across Modalities: Implications for Design, Education and Multimedia

Kay Owens Robyn Lawson Lyn Murray Dawn Riley Ming Zhang			
Visiting Scholars Grant (UWS)	1997	\$2450	Support for Visiting Scholar – Dr David O'Hare
Teaching Incentive Grant (UWS) with Kate Stevens	1997	\$3450	A Computer-Based Approach to Research Skills Development in Distance Education
Foundation Grant (UWS) with Kate Stevens Prue Anderson	1997	\$8500	The Impact of Time Stress on the Structure and Outcomes associated with Expert and Novice Pre-Flight Decision-Making
Research Management Committee (Newcastle)	1996	\$8300	A Cognitive Task Analysis of Weather-Related Decision-Making amongst Expert Pilots
Teaching Committee (Newcastle) with Scott Taylor Mike Nendick	1995	\$3700	Computer-Based Training for Pre-Flight Decision-Making
Research Management Committee (Newcastle)	1994	\$2100	Travel Grant to attend the Eighth International Symposium on Aviation Psychology
Teaching Committee (Newcastle)	1994	\$4100	Ab initio Crew Resource Management Training Systems Development
Research Management Committee (Newcastle)	1993	\$250	Travel Grant to attend the New Zealand Psychological Society Conference
Enhancement of the Research Skills Base (Newcastle) with Irene Henley Phil Moore	1993	\$7500	Decision-Making Amongst Flight Instructors

Monographs and Edited Texts

1. Wiggins, M.W. & Loveday T. (Eds.) (2015). *Diagnostic expertise in organizational environments*. Aldershot, UK: Ashgate.
2. Wiggins, M.W., & Stevens, C. (1999). *Aviation social science: Research methods in practice*. Aldershot, UK: Ashgate.

Book Chapters

1. Wiggins, M.W., Loft, S., Westbrook, J. (Accepted 6 Mar 2017). Data sources and research tools for human factors. In S. Landry (Ed.). *Aviation human factors handbook*. Boca Raton, FL: CRC Press.

2. Wiggins, M.W., & Bollwerk, S. (2015). Heuristic-based information acquisition and decision making among pilots. In D. Harris & W-H. Li (Eds.), *Decision-making in aviation*. Aldershot, UK: Ashgate.
3. Harris, J.M., Wiggins, M.W., Morrison, B., & Morrison, N. (2015). Differentiating cognitive complexity and cognitive load in high demand and low demand flight simulation tasks. In T. Wyeld (Ed.), *The cognitive effects of spatial interaction, learning and ability* (pp.135-138). New York, NY: Springer
4. Wiggins, M.W. (2015). Cues in diagnostic reasoning. In M.W. Wiggins and T. Loveday (Eds.), *Diagnostic expertise in organizational environments* (pp. 1-13). Aldershot, UK: Ashgate.
5. Wiggins, M.W. (2015). Diagnosis and instructional systems design. In M.W. Wiggins and T. Loveday (Eds.), *Diagnostic expertise in organizational environments* (pp. 76-90). Aldershot, UK: Ashgate.
6. Loveday, T., Wiggins, M., Festa, M., Schell, D., & Twigg, D. (2013). Pattern Recognition as an Indicator of Diagnostic Expertise. In P. Latorre Carmona, J. S. Sanchez & A. L. N. Fred (Eds.), *Pattern recognition - Applications and methods* (Vol. 204, pp. 1-11): Berlin: Springer.
7. Wiggins, M.W. (2013). Training (Needs, methods & evaluation). In A.Saris & N.Kirby (Eds.), *Organisational psychology: Research and professional practice*. Melbourne, AUS: Tilde University Press.
8. Wiggins, M.W. (2012). Making Sense of Sustainability: Cue-Based Approaches to Sustainable Organizational Performance. In G.Avery & B.Hughes (Eds.), *Fresh thoughts & new research in sustainable leadership* (pp. 38-49) Melbourne, AUS: Tilde University Press.
9. Harris, J.M., Wiggins, M.W., Taylor, S., & Thomas, M.J.W. (2007). Performance and cognition in dynamic environments. The development of a new tool to assist practitioners. In J.M. Anca (Ed.), *Multimodal safety management and human factors* (pp. 159-168.). Aldershot, UK: Ashgate.
10. Wiggins, M.W. (2006). Cue-based processing and human performance. In W. Karwowski (Ed.), *Encyclopedia of ergonomics and human factors* (2nd ed) (pp. 641-645). London, UK: Taylor and Francis.
11. Wiggins, M.W., & O'Hare, D. (2006). Applications of micro-simulation in cognitive skills development. In W. Karwowski (Ed.), *Encyclopedia of ergonomics and human factors* (2nd ed) (pp. 3262-3267). London, UK: Taylor and Francis.
12. Wiggins, M.W. (2001). In-Flight Decision-Making Strategies amongst Pilots: Implications for Instruction. In M.J.W. Thomas & G.J.F. Hunt (Eds.), *Enhancing professionalism in aviation* (pp. 33-40). Auckland, NZ: Massey University Press.
13. O'Hare, D., Wiggins, M., Williams, A., & Wong, W. (2000). Cognitive task analysis for decision centred design and training. In J. Annett & N. A. Stanton (Eds). *Task analysis* pp. 170-190). London: Taylor & Francis. (Reproduction of O'Hare, et al.,1998).
14. Wiggins, M.W. (1999). The development of computer-assisted learning systems for general aviation. In D. O'Hare (Ed.), *Human performance in general aviation* (pp. 153-172). Aldershot, UK: Avebury Aviation.
15. Henley, I., Anderson, P., & Wiggins, M. (1999). Integrating human factors education into general aviation: Issues and teaching strategies. In D. O'Hare

- (Ed.), *Human performance in general aviation* (pp. 89-118). Aldershot, UK: Ashgate.
16. Wiggins, M.W. (2003). Computer-based approaches to aviation education. In I. Henley (Ed.), *Aviation education and training* (pp. 316-345). Aldershot, UK: Ashgate.
 17. Henley, I., Wiggins, M.W., Bye, J., & Turney, M.A. (2003). Teaching complex psychomotor skills. In I. Henley (Ed.), *Aviation education and training* (pp. 243-278). Aldershot, UK: Ashgate.
 18. Wiggins, M.W. (1997). Expertise and cognitive skills development for ab-initio pilots. In R.A. Telfer & P.J. Moore (Eds.), *Aviation training: Learners, instruction and organisation* (pp. 54-66). Aldershot, UK: Ashgate.
 19. Wiggins, M., Henley, I., & Anderson, P. (Eds.) (1997). *Aviation education beyond 2000*. Sydney, Aus: UWS Macarthur Press.
 20. Henley, I., Wiggins, M., & Dix, I. (1997). Using flight sequences as the impetus to integrate human factors into ab initio flight training. In M. Wiggins, I Henley, & P Anderson (Eds.), *Aviation education beyond 2000* (pp. 25-32). Sydney, Aus: UWS Macarthur Press.
 21. Anderson, P., Wiggins, M., & Henley, I. (1997). Distance education and the future of aviation education. In M. Wiggins, I Henley, & P Anderson (Eds.), *Aviation education beyond 2000* (pp. 25-32). Sydney, Aus: UWS Macarthur Press.
 22. Wiggins, M., & O'Hare, D. (1993). A skill-based approach to aeronautical decision-making. In R. Telfer (Ed.), *Aviation Instruction and Training* (pp. 430-475). Aldershot: Gower.

Refereed Journals

1. Yee, D.J, Wiggins, M.W., & Searle, B.J (Accepted 15 February, 2017). The role of social cue utilization and closing the loop communication in the performance of ad hoc dyads. *Human Factors*
2. Crane, M.F., Brouwers, S., Forrest, K., Tan. S.G.M., Loveday, T., Wiggins, M.W., Munday, C., & David, L., (in press, accepted 18/01/2017). Positive affect is associated with reduced fixation in a realistic medical simulation. *Human Factors*.
3. Gacasan, E.M.P., & Wiggins, M.W. (Accepted 16/09/16). Sensemaking through cue utilization in disaster recovery project management. *International Journal of Project Management*.
4. Auton, J., Wiggins, M.W., Searle, B.J., & Rattanasone, N.X. (2016). Utilization of prosodic and linguistic cues during perceptions of nonunderstandings in radio communication. *Applied Psycholinguistics*.
<http://dx.doi.org/10.1017/S014271641600031X>
5. Gacasan, E.M.P, Wiggins, M.W., & Searle, B (2016). The role of cues in expert project manager sensemaking. *Construction Management and Economics*. (DOI 10.1080/01446193.2016.1177190)
6. Brouwers, S., Wiggins, M.W., Helton, W., O'Hare, D., & Griffin, B. (2016). Cue utilisation and cognitive load in novel task performance. *Frontiers in Psychology*.

7. Wiggins, M. W. (2014). The role of cue utilisation and adaptive interface design in the management of skilled performance in operations control. *Theoretical Issues in Ergonomics Science*, 15(3), 283-292.
8. McCormack, C., Wiggins, M. W., Loveday, T., & Festa, M. (2014). Expert and Competent Non-Expert Visual Cues during Simulated Diagnosis in Intensive Care. Name: *Frontiers in Cognition*, 5, 949.
9. Wiggins, M., Brouwers, S., Davies, J., & Loveday, T. (2014). Trait-based cue utilization and initial skill acquisition: implications for models of the progression to expertise. *Frontiers in Cognition*, 5, 541. doi: 10.3389/fpsyg.2014.00541
10. Small, A., Wiggins, M.W. & Loveday, T. (2014). Cue-based processing capacity, cognitive load and the completion of simulated short duration vigilance tasks in power transmission control. *Applied Cognitive Psychology*, 28, 481-487
11. Wiggins, M.W., Azar, D., Hawken, J., Loveday, T., & Newman, D. (2014). Cue-utilisation typologies and pilots' pre-flight and in-flight weather decision-making. *Safety Science*, 65, 118-124.
12. Wiggins, M.W. (2014). Differences in situation assessments and prospective diagnoses of simulated weather radar returns amongst experienced pilots. *International Journal of Industrial Ergonomics*, 44, 1, 18-23. <http://dx.doi.org/10.1016/j.ergon.2013.08.006>
13. Loveday, T., & Wiggins, M.W. (2014). Cue utilization and broad indicators of workplace expertise. *Journal of Cognitive Engineering and Decision-Making*, 8, 98-113.
14. Perry, N.C, Wiggins, M.W., Childs, M., & Fogarty, G. (2013). The Application of Reduced Processing Decision Support Systems to Facilitate the Acquisition of Decision-Making Skills. *Human Factors*, 55, 535-544.
15. Auton, J.C., Wiggins, M.W., Searle, B. J., Loveday, T. & Rattanasone, N.X. (2013), Prosodic Cues Used During Perceptions of Nonunderstandings in Radio Communication. *Journal of Communication*, 63, 600–616. doi: 10.1111/jcom.12033
16. Wilson, K.M., Helton, W.S., & Wiggins, M.W. (2013). Cognitive engineering. *Wiley Interdisciplinary Reviews: Cognitive Science*, 4, 17-31.
17. Morrison, B., Wiggins, M.W., Bond, N., & Tyler, M. (2013). Measuring Cue Strength as a Means of Identifying an Inventory of Expert Offender Profiling Cues. *Journal of Cognitive Engineering and Decision-Making*, 7, 211-226.
18. Loveday, T., Wiggins, M.W. Harris, J., Smith, N., & O'Hare, D. (2013). An Objective Approach to Identifying Diagnostic Expertise Amongst Power System Controllers. *Human Factors*, 55, 90-107. doi:10.1177/0018720812450911
19. Loveday, T., Wiggins, M.W., Searle, B.J., Festa, M., & Schell, D. (2013). The capability of static and dynamic features to distinguish competent from genuinely expert practitioners in pediatric diagnosis. *Human Factors*, 55, 125-137. doi:10.1177/0018720812448475
20. Wiggins, M.W., & Glass, R. (2013). Improving the accessibility of investigation reports using safety factor maps. *Ergonomics in Design*, 21, 20-24.
21. Britten, L., Borgen, W., & Wiggins, M. (2012). Self-awareness of dual roles when using the CIT (Critical Incident Technique): Opening Pandora's Box? *Psychology Research*, 2, 52-63.

22. Wiggins, M.W., Hunter, D.R., O'Hare, D., & Martinussen, M. (2012). Deliberate versus Inadvertent Visual Flight into Instrument Meteorological Conditions. *Safety Science*, 50, 472-477.
23. Perry, N., Wiggins, M.W., Childs, M., & Fogarty, G. (2012). Can reduced processing decision support interfaces improve the decision-making of less-experienced incident commanders? *Decision Support Systems*, 52, 497-504.
24. Hunter, D., Martinussen, M., Wiggins, M., & O'Hare, D. (2011). Situational and personal characteristics associated with adverse weather encounters by pilots. *Accident Analysis and Prevention*, 43(1), 176-186 (doi:10.1016/j.aap.2010.08.007).
25. O'Hare, D., Hunter, D., Martinussen, M., & Wiggins, M. (2011). Classification and Prediction of Pilot Weather Encounters: A Discriminant Function Analysis. *Aviation, Space, and Environmental Medicine*, 82, 543-550.
26. Wiggins, M.W. (2011). Vigilance decrement amongst general aviation pilots. *Applied Cognitive Psychology*, 25, 229-235.
27. Morrison, B., Wiggins, M., & Porter, G. (2010). User Preference for a Control-Based Reduced Processing Decision Support Interface. *International Journal of Human-Computer Interaction*, 26, 297-316.
28. Pauley, K., O'Hare, D., & Wiggins, M. (2009). Measuring expertise in weather-related aeronautical risk perception: The validity of the Cochran-Weiss-Shanteau (CWS) index. *The International Journal of Aviation Psychology*, 19, 201-216.
29. Pauley, K., O'Hare, D., Mullen, N., & Wiggins, M. (2008). Implicit perceptions of risk and anxiety, and pilot involvement in hazardous events. *Human Factors*, 50, 723-733.
30. Pauley, K., O'Hare, D., & Wiggins, M. (2008). Risk tolerance and pilot involvement in hazardous events and flight into adverse weather. *Journal of Safety Research*, 39, 403-411.
31. Harris, J.M. & Wiggins, M.W. (2008). Polychronicity and information acquisition in pilot decision-making. *Journal of Cognitive Engineering and Decision-Making*, 2, 89-104.
32. O'Hare, D., Mullen, N., Wiggins, M., & Molesworth, B. (2007). Finding the right case: The role of predictive features in memory for aviation accidents. *Applied Cognitive Psychology* 21, 1-18.
33. Perry, N., Stevens, C., Wiggins, M., & Howell, C. (2007). Cough once for danger: An experimental investigation of auditory icons as informative warning signals in civil aviation. *Human Factors*, 49, 1061-1071.
34. Wiggins, M.W. (2007). Perceived GPS use and weather-related decision strategies amongst pilots. *The International Journal of Aviation Psychology*, 17, 249-264.
35. Renshaw, P.F., & Wiggins, M.W. (2007). Self-report critical incident assessment of Army NVG helicopter operations. *Human Factors*, 49, 200-213.
36. Grebenikov, L., & Wiggins, M. (2006). Psychological effects of classroom noise on early childhood teachers. *The Australian Educational Researcher*, 33 (3), 35-53.
37. Wiggins, M.W., & Bollwerk, S. (2006). Information acquisition and decision-making amongst pilots. *Human Factors*, 48, 734-746.

38. Molesworth, B., Wiggins, M.W., & O'Hare, D. (2006). Improving pilots' risk assessment skills in low-flying operations: The role of feedback and experience. *Accident Analysis and Prevention*, 38, 954-960.
39. O'Hare, D. & Wiggins, M.W. (2004). Remembrance of Cases Past: Who Remembers What, When Confronting Critical Flight Events? *Human Factors*, 46, 377-387.
40. Molesworth, B., & Wiggins, M.W. (2004). Representing Airspace Boundaries in a Redesigned En-Route Aeronautical Chart. *Ergonomics in Design* 21 (1), 18-23.
41. Wiggins, M.W., & O'Hare D. (2003a). Weatherwise: Evaluation of a cue-based training approach for the recognition of deteriorating weather conditions during flight. *Human Factors*, 45, 337-345.
42. Wiggins, M.W., & O'Hare, D. (2003b). Expert and novice pilot perceptions of static in-flight images of weather. *International Journal of Aviation Psychology*, 13, 173-187.
43. Hunter, D.R, Martinussen, M., & Wiggins, M. (2003). Understanding how pilots make weather-related decisions. *International Journal of Aviation Psychology*, 13, 73-87.
44. Wiggins, M.W., Stevens, C., Howard, A., Henley, I., & O'Hare, D. (2002). Expert, intermediate and novice performance during simulated pre-flight decision-making. *Australian Journal of Psychology*, 54, 162-167.
45. Simpson, P., & Wiggins, M.W. (1999). Attitudes towards unsafe acts in a sample of Australian general aviation pilots. *The International Journal of Aviation Psychology*, 9, 337-350.
46. O'Hare, D., Wiggins, M., Williams, A., & Wong, W. (1998). Cognitive task analysis for decision centred design and training. *Ergonomics*, 41, 1698-1718.
47. Wiggins, M.W., & Henley, I. (1997). A Computer-Based Analysis of Expert and Novice Flight Instructor Pre-Flight Decision-Making. *The International Journal of Aviation Psychology*, 7, 365-379.
48. Wiggins, M.W. & O'Hare, D. (1995). Expertise in aeronautical weather-related decision-making: A cross-sectional analysis of general aviation pilots. *Journal of Experimental Psychology: Applied*, 1, 305-320.
49. O'Hare, D., Wiggins, M., Batt, R., & Morrison, D. (1994). Cognitive failure analysis for aircraft accident investigation. *Ergonomics*, 37, 1855-1869.

Refereed Abstracts

1. Wiggins, M.W., & Glass, R. (2010). Factors affecting cue-based learning in an air traffic control task. In *Proceedings of the 9th International Symposium of the Australian Aviation Psychology Association* (p. 91). Sydney, Aus: Australian Aviation Psychology Association (ISBN 978-0-9751731-5-2).
2. McCormack, C., Wiggins, M., Schell, D., & Festa, M. (2010). A comparison of expert and competent paediatric diagnosis. In *Proceedings of the 9th International Symposium of the Australian Aviation Psychology Association* (p. 7). Sydney, Aus: Australian Aviation Psychology Association (ISBN 978-0-9751731-5-2).

3. Wiggins, M., Perry, N., & Harris, J. (2010). An operational analysis of rail controller behaviour during peak and non-peak periods. In *Proceedings of the 9th International Symposium of the Australian Aviation Psychology Association* (p. 28). Sydney, Aus: Australian Aviation Psychology Association (ISBN 978-0-9751731-5-2).
 4. Crone, L., de Pont, J., Schell, D., Festa, M., & Wiggins, M. (2009). Use of forensic interview techniques to identify important handover information in post-operative paediatric cardiac surgery patients. In *Abstracts of the 5th World Congress of Paediatric Cardiology and Cardiac Surgery (4020)*. Cairns, AUS: Cardiac Society of Australia and New Zealand.
 5. Wiggins, M., & Harris, J. (2008). Cues and clues: Using simulation to understand performance. In *Abstracts of Australian and New Zealand College of Anaesthetists Conference* (pp 89-90). Sydney, AUS: Australian and New Zealand College of Anaesthetists.
 6. Wiggins, M.W. (2004). Information acquisition and decision-making amongst experienced and inexperienced pilots. *Australian Journal of Psychology*, 56 (Supplement), 234.
 7. Molesworth, B.R., & Wiggins, M.W. (2004). Personalising the experience to improve the risk management behaviour of pilots. *Australian Journal of Psychology*, 56 (Supplement), 209.
 8. Wiggins, M. (2000). Transition matrices in the analysis of aeronautical decision-making. *Australian Journal of Psychology*, 52 (Supplement), 54.
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Publications in Non-Refereed Journals and Monographs

1. Burnham, D., Stevens, K., DiBiase, B., Buchholz, J., Kitamura, C., Malloch, S., & Wiggins, M. (2004). Research at MARCS Auditory Laboratories, University of Western Sydney. *Acoustics Australia*, 32 (2), 69-73.
2. Wiggins, M. & O'Hare, D. (1999, March). Ready for take-off: Simulation and computer-based training in general aviation. *Asia-Pacific Air Safety Journal*, 26-28.
3. Henley, I., Wiggins, M., & Anderson, P. (1998, January). A systemic approach to aviation safety research. *Airservices Bulletin*, 28-29.
4. Wiggins, M. (1997, Autumn). Red-eye special – Analysis. *Flight Safety Australia*, 12.
5. Simpson, P., & Wiggins, M. (1997, November). GA pilots' perspectives of human factors training. *Australian Aviation*, 78-79.
6. Galosi, S., & Wiggins, M. (1997, May). Passengers have eyes and ears too! *Australian Aviation*, 78.
7. Connan, N. and Wiggins, M. (1995, August/ September). Risking a weather-related accident. *Australian Flying*, 62-67.

8. Wiggins, M.W. (1994, July). Three-point altimeters: Still a cause for concern. *Australian Aviation*, 56-59.
 9. Wiggins, M.W. (1994). Human Factors: The past, the present and its future in Australia. *Aviation Bulletin*, 3(10), 14-16.
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Reports to Industry and Government.

1. Hesketh, B., Wiggins, M., Jinks, T., & Griffin, B. (2008). *Situation awareness: A literature review*. Salisbury, AUS: Defence Science and Technology Organisation.
2. Glass, R., & Wiggins, M.W. (2007). *Aviation safety factor maps: Applying concept mapping techniques to the analysis of aviation occurrences*. Canberra, AUS: Australian Transportation Safety Bureau.
3. Wiggins, M.W. (2007). *TCMS Project: Human factors assessment*. Melbourne, VIC: Rail Management Australia.
4. Stevens, C., Perry, N., Wiggins, M., & Howell, C. (2006). *Design and evaluation of auditory icons as informative warning signals*. Canberra, AUS: Australian Transportation Safety Bureau.
5. Wiggins, M.W. (2006). *An assessment of general aviation pilot performance during simulated flight*. Canberra, AUS: Australian Transportation Safety Bureau.
6. Wiggins, M.W., & Glass, R. (2006). *Summary of learning outcomes from the NEMMCO human factors training course*. Brisbane, QLD. NEMMCO
7. Wiggins, M.W. (2005a). *Core TCMS stage 3 supplier human factors assessment report*. Melbourne, VIC: Department of Infrastructure.
8. Wiggins, M.W. (2005b). *The interpretation and use of weather radar displays in aviation*. Canberra, AUS: Australian Transportation Safety Bureau.
9. Wiggins, M.W., & Vernal, M. (2005). *Organisational climate survey report: Train controller workload validation project*. Melbourne, VIC: Rail Management Australia.
10. Wiggins, M.W., & Stevens, K. (2004). *Comparative workload assessment of railcorp signallers' use of the ATRICS signalling system*. Melbourne, VIC: Rail Management Australia.
11. Wiggins, M.W. (2004). *Mental workload assessment of variations of the ATRICS signalling system*. Sydney, AUS: New South Wales Rail Corporation.
12. Molesworth, B., & Wiggins, M. (2001). *An evaluation of aspects of low-level enroute map design for aeronautical charts*. Canberra, AUS: Airservices Australia.
13. Rakovan, L., Wiggins, M., & Jensen, R., & Hunter, D.R (1999). *A national pilot survey to enhance the development and dissemination of safety information*. Washington, DC: Federal Aviation Administration (NTIS DOT/FAA/AM-99/7).
14. Wiggins, M.W., Wilks, W & Nendick, M. (1996). *Human factors aspects of simulated non-precision IFR approaches in Australia*. Canberra, AUS: Bureau of Air Safety Investigation.
15. Wiggins, M.W. (1995). *Report into the circumstances associated with the death of Mr William Bennet, 18km North-West of Bathurst, on 10 August, 1986*. Newcastle, AUS: FitzGerald, White Talbot & Co.

Other Contributions

(a) Conference Presentations (Published)

1. Auton, J. C., Wiggins, M. W., & Searle, B. J. (2014, September). The Importance of Intonation During Perceptions of Non-Understanding During Full and Partial Readback Responses in Radio Communication. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 58, No. 1, pp. 395-399). SAGE Publications.
2. Loveday, T., & Wiggins, M. W. (2014, September). Using iconic cues to recover from fixation on tablet devices in the cockpit. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 58, No. 1, pp. 350-354). SAGE Publications.
3. Davies, J., & Wiggins, M. W. (2014, September). Cue Utilization and Skill Acquisition for a Line of Sight UAV. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 58, No. 1, pp. 2330-2334). SAGE Publications.
4. Wiggins, M. W. (2014, September). Measuring Diagnostic Skills through the Utilization of Cues. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 58, No. 1, pp. 2345-2349). SAGE Publications.
5. Wiggins, M., Loveday, T., & Lyons, L. (2014). Cues and Cue-based Processing: Implications for System Safety. *Procedia Engineering*, 84, 55-61.
6. Jemma Harris, Mark Wiggins, Ben Morrison, and Natalie Morrison. (2013). Towards a cognition-based assessment protocol for user-centered design. In *Proceedings of the 25th Australian Computer-Human Interaction Conference: Augmentation, Application, Innovation, Collaboration (OzCHI '13)*, Haifeng Shen, Ross Smith, Jeni Paay, Paul Calder, and Theodor Wyeld (Eds.). ACM, New York, NY, USA, 135-138. DOI=10.1145/2541016.2541079 <http://doi.acm.org/10.1145/2541016.2541079>
7. Wiggins, M.W., Azar, D., & Loveday, T. (2012). The relationship between pre-flight decision-making and cue utilisation. *Proceedings of the Human Factors and Ergonomics Society 56th Annual Meeting* (pp. 2417-2421). Boston, MASS: Human Factors and Ergonomics Society.
8. Auton, J.C., Wiggins, M.W., & Loveday, T. (2012). Prosodic cues that signal non-understandings to power control operators during radio communication. *Proceedings of the Human Factors and Ergonomics Society 56th Annual Meeting* (pp. 483-487). Boston, MASS: Human Factors and Ergonomics Society. [PhD Student First Author]
9. Loveday, T., Wiggins, M., Festa, M., & Schell, D. (2012). Identifying diagnostic experts: Measuring the antecedents to pattern recognition. In J. S. Sanchez, P. L. Carmona & A. Fred (Eds.), *Proceedings of the 1st International Conference on Pattern Recognition Applications and Methods* (Vol. 2, pp. 269 - 274). Vilamoura, Algarve, Portugal: Institute for System and Technologies of Information, Control and Communication.

10. Loveday, T., Wiggins, M., & Harris, J.M. (2011). The relationship between domain-relevant and abstract assessments of diagnostic reasoning ability. *Proceedings of the 55th Annual Meeting of the Human Factors and Ergonomics Society, 19th - 23rd September*. Las Vegas, Nevada: Human Factors and Ergonomics Society.
11. Crone, L., de Pont, J., Schell, D., Festa, M., & Wiggins, M. (2010). Use of forensic interview techniques to identify important handover information in post-operative paediatric cardiac surgery patients. In *Proceedings of the 9th International Symposium of the Australian Aviation Psychology Association*. Sydney, Aus: Australian Aviation Psychology Association (ISBN 978-0-9751731-5-2).
12. Wiggins, M.W. (2010). Cues and the interpretation of weather radar returns. In *Proceedings of the 26th Meeting of the European Association of Aviation Psychologists, Budapest, Hungary*.
13. Perry, N., Wiggins, M., Childs, M., & Fogarty, G. (2010). Mind that cue: Decision support systems as an aid for decision training. In *Proceedings of the 9th International Symposium of the Australian Aviation Psychology Association* (p. 177-180). Sydney, Aus: Australian Aviation Psychology Association (ISBN 978-0-9751731-5-2).
14. Perry, N. Wiggins, M. Childs, M., & Fogarty, G. (2009). Reduced processing decision support for competent fire fighters. In *Proceedings of the 53rdrd Annual Meeting of the Human Factors and Ergonomics Society* (pp. xxxx-xxxx). New York, NY: Human Factors and Ergonomics Society. [Recipient of the Best Student Paper Award – Cognitive Engineering and Decision-Making Technical Group]
15. Morrison, B., Wiggins, M.W., Bond, N.W., & Tyler, M.D. (2009). Examining cue recognition across expertise using a computer-based task. In *Proceedings of the 9th International Conference on Naturalistic Decision Making* (pp. 91-98). Swindon, UK: British Computer Society.
16. Perry, N., Wiggins, M., Childs, M., & Fogarty, G. (2009). Decision support for competent and expert firefighters. In *Proceedings of the 8th Industrial and Organisational Conference* (pp. 101-105). Melbourne, AUS: Australian Psychological Society.
17. Wiggins, M.W., & Glass, R. (2008). A comparison between cue-based, exemplar-based, and production-based training in an air traffic control scenario. In *Proceedings of the 52nd Annual Meeting of the Human Factors and Ergonomics Society* (pp. 2042-2046). New York, NY: Human Factors and Ergonomics Society.
18. Perry, N., & Wiggins, M.W. (2008). Cue generation among firefighters: Competent vs. expert differences. In *Proceedings of the 52nd Annual Meeting of the Human Factors and Ergonomics Society* (pp. 418-422). New York, NY: Human Factors and Ergonomics Society.
19. Harris, J.M., & Wiggins, M.W. (2008). Evaluating cognitive competence: Does eye movement behavior represent the missing piece of the puzzle?. In *Proceedings of the 52nd Annual Meeting of the Human Factors and Ergonomics Society* (pp. 2077-2081). New York, NY: Human Factors and Ergonomics Society. [Recipient of the Best Student Paper Award – Training Technical Group]
20. Harris, J.M., Wiggins, M.W., Thomas, M., & Taylor, S. (2008). The relationship between cognitive complexity and performance: Implications for the assessment of cognitive skills. In *Proceedings of the 8th International Symposium of the Australian Aviation Psychology Association (CD-Rom)*. Sydney, AUS: Australian Aviation Psychology Association

21. Wiggins, M.W., Vernal, M., & Clemens, K. (2008). Assessment of safe and sustainable workload for train controllers and signallers. In CORE 2008 Conference Proceedings (pp. 575-580). Perth, AUS: Rail Technical Society of Australasia.
22. Perry, N., & Wiggins, M.W. (2008). Eye Tracking to Investigate Information Processing Demands. In *Proceedings of the SimTecT 2008 Simulation Conference and Exhibition* (pp. 85-89). Melbourne, AUS: Simulation Industry Association of Australia.
23. Harris, J.M., Wiggins, M.W., Thomas, M., & Taylor, S. (2008). Event Based Assessment of Cognitive Skills in a Simulated Environment. In *Proceedings of the SimTecT 2008 Simulation Conference and Exhibition* (pp. 397-401). Melbourne, AUS: Simulation Industry Association of Australia.
24. Hunter, D., Martinussen, M., Wiggins, M., & O'Hare, D. (2007). Aviation Weather Encounter Study: Some Preliminary findings. In R.S. Jensen (Ed.), *Proceedings of the 14th International Symposium on Aviation Psychology* (pp. 275-280). Dayton, OH: Ohio State University Press.
25. Molesworth, B.R.C., & Wiggins, M.W. (2007). Improving the retention of skills through training. In *Proceedings of the 45th Annual SAFE Symposium*. Reno, Nevada: SAFE Association.
26. Wiggins, M.W., & Glass, R. (2006). The Use of Cues in the Interpretation of Weather Radar Returns Amongst Pilots. In *Proceedings of the 7th International Australian Aviation Psychology Symposium*. Sydney, AUS: Australian Aviation Psychology Association.
27. Molesworth, B., & Wiggins, M. (2004). Personalising the experience to improve the risk management behaviour of pilots. In M. Katsikitis (Ed.), *Proceedings of the 39th APS Annual Conference. Psychological Science in Action* (pp. 201-205). Melbourne, AUS: The Australian Psychological Society.
28. Molesworth, B.R., & Wiggins, M.W. (2004). Improving pilots' risk management behaviour through active involvement during training. In *Proceedings of the Human Factors and Ergonomics Society 48th Annual Meeting* (pp. 2553-2556). San Diego, CA: Human Factors and Ergonomics Society.
29. Wiggins, M.W. (2003). Cue-Based Learning: A New Approach to Understanding Human Performance in Aviation. In *Proceedings of the 6th International Australian Aviation Psychology Symposium*. Sydney, AUS: Australian Aviation Psychology Association.
30. Molesworth, B.R.C., Wiggins, M.W., & O'Hare, D. (2003). Personalising risk and training to improve the risk management behaviour of pilots. In *Proceedings of the 6th International Australian Aviation Psychology Symposium*. Sydney, AUS: Australian Aviation Psychology Association.
31. Tate, F., & Wiggins, M.W. (2003). Flightcrew Assertiveness on Final Approach: A Comparative Assessment. In *Proceedings of the 6th International Australian Aviation Psychology Symposium*. Sydney, AUS: Australian Aviation Psychology Association.
32. Molesworth, B.R.C., & Wiggins, M.W. (2003). *Human factors in aeronautical chart design: Implications for pilot re-education*. In R.S. Jensen (Ed.), *Proceedings of the 12th International Symposium on Aviation Psychology* (pp. 821-825). Dayton, OH: Ohio State University Press.

33. Jensen, R.S., Wiggins, M., Martinussen, M., O'Hare, D., Hunter, D.R., Mauro, R., & Wiegmann, D. (2003). *Identifying ADM safety initiatives: Report of the human factors expert panel*. In R.S. Jensen (Ed.), *Proceedings of the 12th International Symposium on Aviation Psychology* (pp. 613-618). Dayton, OH: Ohio State University Press.
34. Wiggins, M., O'Hare, D., & Lods, O. (2003). *Validating a Computer-Based Training Tool for In-Flight Weather-Related Decision-Making*. In G. Edkins & P. Pfister (Eds.), *Innovation and consolidation in aviation* (pp.197-208). Aldershot, UK: Ashgate.
35. Grace, C., Wiggins, M., & Pfister, P. (2000). Theoretical taxonomies of cognitive human failure: A comparison between fixed, rotary wing, and glider type aircraft. In B.J. Hayward & A.R. Lowe (Eds.), *Aviation resource management* (Vol.1, pp. 337-344). Aldershot, UK: Ashgate.
36. Wiggins, M. & Anderson, P. (2000). Decision-Making under time constraints. In A.R. Lowe & B.J. Hayward (Eds.), *Aviation resource management* (Vol.2, pp. 379-390). Aldershot, UK: Ashgate.
37. Wiggins, M. (2000). Safety management in an integrated flying school. In B.J. Hayward & A.R. Lowe (Eds.), *Aviation resource management* (Vol.1, pp. 97-106). Aldershot, UK: Ashgate.
38. Wiggins, M., Martinussen, M., & Hunter, D. (1999). *Three continents but a single mind when it comes to weather*. Paper presented at the Tenth International Symposium on Aviation Psychology, Columbus, Ohio.
39. Martinussen, M., Hunter, D., & Wiggins, M. (1998). *The Use of Weather Information by Norwegian, American, and Australian Pilots*. Paper presented at the 23rd Conference of the European Association for Aviation Psychology, Vienna, Austria.
40. Henley, I., & Wiggins, M. (1997). Integrating human factors into ab initio flight training: Are flight instructors prepared for the task? In R.S. Jensen & L.A. Rakovan (Eds.), *Proceedings of the Ninth International Symposium on Aviation Psychology* (pp. 1213-1218). Columbus, OH: Ohio State University.
41. Wiggins, M., O'Hare, D., Jensen, R., & Guilkey, J. (1997). The design, development and evaluation of a computer-based pilot judgement tutoring system for weather-related decisions. In R.S. Jensen & L.A. Rakovan (Eds.), *Proceedings of the Ninth International Symposium on Aviation Psychology*. Columbus, OH: Ohio State University.
42. Rakovan, L.A., Wiggins, M.W., & Jensen, R.S. (1997). A national pilot survey to enhance the development and dissemination of safety information. In R.S. Jensen & L.A. Rakovan (Eds.), *Proceedings of the Ninth International Symposium on Aviation Psychology*. Columbus, OH: Ohio State University.
43. Taylor, S.T., & Wiggins, M.W. (1997). The validation of a computer-based program for the development of pre-flight decision-making skills amongst pilots. In R.S. Jensen & L.A. Rakovan (Eds.), *Proceedings of the Ninth International Symposium on Aviation Psychology*. Columbus, OH: Ohio State University.
44. Simpson, P., & Wiggins, M. (1997). Pilot metacognition: Factors affecting pilot self-awareness and self-perception . In *Proceedings of the 4th Conference of the Australasian Cognitive Science Society*, September 27-28, Newcastle, Australia.

45. Wiggins, M. (1996). A computer-based approach to human factors education. In B.J. Hayward, & A.R. Lowe (Eds.), *Applied aviation psychology: Achievement, change and challenge* (pp. 201-208). Aldershot, UK: Ashgate.
46. Wiggins, M., Henley, I., Foley, S., & Moore, P. (1996). Expert versus novice flight instruction. In B.J. Hayward, & A.R. Lowe (Eds.), *Applied aviation psychology: Achievement, change and challenge* (pp. 209-218). Aldershot, UK: Ashgate.
47. Simpson, P., & Wiggins, M. (1996). Human factors attitudes. In B.J. Hayward, & A.R. Lowe (Eds.), *Applied aviation psychology: Achievement, change and challenge* (pp. 185-192). Aldershot, UK: Ashgate.
48. Wiggins, M., Connan, N., & Morris, C. (1996). Weather-related decision-making and self-perception amongst pilots. In B.J. Hayward, & A.R. Lowe (Eds.), *Applied aviation psychology: Achievement, change and challenge* (pp. 193-200). Aldershot, UK: Ashgate.
49. Wiggins, M., Taylor, S., & Nendick, M. (1996). A Computer-based application for the development of pre-flight decision-making skills amongst ab-initio pilots. *Proceedings of the Third ICAO Global Flight Safety and Human Factors Symposium (CIRC 226-AN/158)* (pp. 229-235). Montreal: International Civil Aviation Organisation.
50. Wiggins, M., Connan, N., & Morris, C. (1995). *Self-perceptions of weather-related decision-making amongst pilots*. In R.S. Jensen & L.A. Rakovan (Eds.), *Proceedings of the Eighth International Conference on Aviation Psychology* (pp. 845-850). Columbus, OH: Ohio State University Press.
51. Wiggins, M.W. (1995). *Computer-Based Training for Human Factors: Linking the Theory with Practice*. Paper presented at the 3rd Asian Civil Aviation Training Conference. Singapore.
52. O'Hare, D., & Wiggins, M. (1993). *Expertise in aeronautical decision-making: A cognitive skill analysis*. Paper presented at the Seventh International Conference on Aviation Psychology, Columbus, Ohio.

(b) *Conference Presentations (Unpublished)*

1. Wiggins, M.W. (2015).
2. Loveday, T., Crane, M., & Wiggins, M.W. (2015). The Relationship between Recent Adversity, Affective States and Anaesthetist Diagnostic Skill Investigated Using an Online Simulation Based Assessment. Paper presented at the SimHealth 2015, Adelaide, Australia (Best Research Award)
3. Lehn, P., & Wiggins, M.W. (2012). Cue utilisation and Expert Performance in the Safety Professional Role. Paper presented at the *10th International Symposium of the Australian Aviation Psychology Association*. Sydney, Australia.
4. Loveday, T., & Wiggins, M.W., (2012). Distinguishing expert performance within medicine. Paper presented at the *10th International Symposium of the Australian Aviation Psychology Association*. Sydney, Australia.
5. Wiggins, M.W., Azar, D., & Loveday, T. (2012). Cue-Based Assessment of Expert Performance in the context of pre-flight aeronautical decision-making. Paper presented at the *10th International Symposium of the Australian Aviation Psychology Association*. Sydney, Australia.

6. Loveday, T., Wiggins, M., Harris, J. M., Smith, N., & O'Hare, D. (2011). Experience produces competence, not necessarily expertise: Revelations from a cue-based assessment of expert performance. *Proceedings of the 9th Industrial and Organisation Psychology Conference, 23rd - 26th June 2011*. Brisbane, Queensland: Australian Psychological Society.
7. Harris, J. & Wiggins, M. (2010). Feature acquisition and the diagnosis of cognitive skills. Paper presented at the *9th International Symposium of the Australian Aviation Psychology Association*. Sydney, Australia.
8. Wiggins, M. (2010). Cues and miscues: Implications for training and assessment in medical practice. Paper presented at the *9th International Symposium of the Australian Aviation Psychology Association*. Sydney, Aus.
9. Festa, M., McCormack, C., Schell, D., & Wiggins, M. (2010). *The use of simulation for cue-based learning of diagnostic expertise: Are we teaching the wrong cues*. Poster presented at the 3rd International Paediatric Simulation and Workshops, Madrid, Spain.
10. Wiggins, M.W. (2010). *Making sense of sustainability: Cue-based approaches to sustainable organizational performance*. Paper presented at the International Federation of Scholarly Associations of Management, Paris, France.
11. Wiggins, M.W. (2009). *Cue-based training for sustainable leadership*. Paper presented at the 2009 ANZAM Annual Conference. Melbourne, Australia.
12. Harris, J.M., & Wiggins, M.W. (2009). *How to build cognitive competencies*. Paper presented at the 8th Industrial and Organisational Psychology Conference. Sydney, Australia
13. Wiggins, M. (2008). *The utility of safety factor maps in accident/ incident communication*. Paper presented at the 8th International Symposium of the Australian Aviation Psychology Association. Sydney, Australia.
14. Wiggins, M. (2004, September). Information acquisition and decision-making amongst experienced and inexperienced pilots. *Poster session presented at the 39th APS Annual Conference*. Sydney, AUS.
15. O'Hare, D., & Wiggins, M. (1995). *Expertise in aeronautical weather-related decisionmaking*. Paper presented at the 3rd Conference of the Australasian Cognitive Science Society, April 18-20, Brisbane, Australia.
16. Wiggins, M.W. (1995). *Computer-based accident reports for pilot education and training*. Paper presented at the 3rd Annual meeting of the Australian and New Zealand Societies of Air Safety Investigators. Brisbane, Queensland.
17. Wiggins, M.W. (1994). *Computer-Based Training for Human Factors: Bridging the Gap between Theory and Practice*. Paper presented at the 27th Annual Conference of the New Zealand Psychological Society, Hamilton, New Zealand.
18. Wiggins, M.W., & O'Hare, D. (1992). *A skill-based approach to teaching weather-related decision-making amongst pilots*. Paper presented at the 25th Annual Conference of the New Zealand Psychological Society, Dunedin, New Zealand.
19. O'Hare, D., Wiggins, M., Batt, R., & Morrison, D. (1992). *Cognitive failures in the cockpit*. Paper presented at the 25th Annual Conference of the New Zealand Psychological Society, Dunedin, New Zealand.

20. Wiggins, M.W, & O'Hare, D. (1992). *A skill-based approach to teaching weather-related decision-making amongst pilots*. Paper presented at the 25th Annual Conference of the New Zealand Psychological Society, Dunedin, New Zealand.

(c) *Invited Addresses*

1. Wiggins, M.W. (2012). *What's Going On? Developing Sensemaking Skills for High Technology Environments*. Invited paper presented at the 10th International Symposium of Australian Aviation Psychology Association.
2. Wiggins, M.W. (2011). *Human Factors issues in Designing Systems for Experts: The Case of Train Control Monitoring Systems*. Invited paper presented at the Train Control Management Systems Conference, Perth, 24-25 August 2011.
3. Wiggins, M.W. (2010). *Cues and Miscues: Implications for training and assessment in medical practice*. Invited paper presented at the Healthcare Human Factors Seminar, 21 April, 2010.
4. Wiggins, M.W. (2008). *Cues as Mediators of Human Performance*. Invited paper presented as part of the HAIL Seminar Series, CSIRO ICT Centre, 8 September 2008.
5. Wiggins, M.W. (2008). *Cues and Clues: Using Simulation to Understand Human Performance*. Invited Paper Presented at the Annual Meeting of the Australian and New Zealand College of Anaesthetists, 2008
6. Wiggins, M.W. (2007). *It's why, not what: Assessing Cognitive Competency*. Invited paper presented at the SimTecT 2007 Healthcare Simulation Conference. 3-6 September 2007.
7. Wiggins, M.W. (2004). *Integrating Human Performance with Advanced Technology: Lessons from Aviation Human Factors*. Invited paper presented as part of the HAIL Seminar Series, CSIRO ICT Centre, 28 September 2004.
8. Wiggins, M.W. (2004). *The impact of the ATRICS advanced technology signalling system on the mental workload of signallers*. Invited paper presented to the New South Wales Transportation Regulator, Sydney, Australia, 7 June 2004.
9. Wiggins, M.W. (2000). *Weatherwise: A computer-based training program for in-flight weather-related decision-making*. Invited paper presented to the National Aeronautics and Space Administration, Ames Research Centre, Moffett Field, California, 28 September, 2000.
10. Wiggins, M.W. (2000). *Weatherwise: An introduction*. Invited paper presented at the Annual Safety Seminar of the Guild of Air Pilots and Navigators, Melbourne, VIC, 14 October, 2000.
11. Wiggins, M.W. (2000). *Using Good Science to Effect Applied Outcomes in Aviation: The Case of Weather-Related Decision-Making*. Invited paper presented to the Department of Psychology, University of Western Sydney (Macarthur), 1 September, 2000.
12. Wiggins, M.W. (1999). *A strategic approach to understanding cognitive skills development and maintenance in general aviation*. Invited paper presented to General Aviation Safety Panel at the Tenth International Symposium on Aviation Psychology, Columbus, Ohio.

13. Wiggins, M.W. (1999). *Emergency decision-making*. Invited paper presented at the Annual Safety Seminar of the Guild of Air Pilots and Navigators, Melbourne, VIC, 28 August, 1999.
14. Wiggins, M.W., Taylor, S., & Wilks, W. (1995). *An Integrated Approach to Human Factors Training for Pilots*. Invited paper presented at the Annual Safety Seminar of the Guild of Air Pilots and Navigators, Coffs Harbour, NSW.
15. Wiggins, M.W. (1994). *Weather-Related Decision-Making Amongst Pilots: Implications for Aviation Psychological Research*. Invited paper presented to the Department of Psychology, University of Newcastle, 5 May, 1994.
16. Wiggins, M.W. (1994). *Weather-Related Decisions: What can we learn from Experienced Pilots*. Invited paper presented at the Annual Safety Seminar of the Guild of Air Pilots and Navigators, Canberra, ACT.

(d) *Book Reviews*

1. Wiggins, M. (1997, Autumn). Aviation safety [Review of the book - Aviation Safety: The Human Factor]. *Flight Safety Australia*, 36.
2. Wiggins, M. (1997, Spring). Cockpit resource management [Review of the book - Cockpit Resource Management], *Flight Safety Australia*, 38.

(f) *Multimedia Programs*

1. Wiggins, M., O'Hare, D., & Hunter, D. (2003). *Weatherwise II* [Computer-Based Training Program]. Washington, DC: Federal Aviation Administration.
2. Wiggins, M., O'Hare, D., & Hunter, D. (2000). *Weatherwise* [Computer-Based Training Program]. Washington, DC: Federal Aviation Administration.
3. Parbery, M., & Wiggins, M. (1999). *Introduction to position papers* [Video Recording]. Sydney, AUS: University of Western Sydney, Macarthur.
4. Wiggins, M., & Stevens, K. (1998). *Social science research in aviation* [Computer-Based Training Program]. Sydney, AUS: University of Western Sydney, Macarthur.