# Ashleigh Filtness Ph.D, BSc (Hons), DPS, CBiol

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#### **Personal summary**

I am an enthusiastic and collegiate early career academic committed to research excellence with an ambition to become a world leader in transport safety. I gained my Ph.D from Loughborough University in 2011 and subsequently gained 5 years international experience at two leading research institutes in Australia. I have a strong and established academic track record: 41 peer reviewed publications (21 journal, 18 conference, 2 book chapters), over \$1 million (AUD) of research income (including \$329,814 nationally competitive as PI for my institute), 31 government/industry reports, 20 national and international conference presentations with peer reviewed abstracts and 13 invited presentations. I am continuing to build my career trajectory with an aim to establish a multidisciplinary research team in the area of fitness to drive focusing on development and enhancement of transport technologies.

### **Qualifications**

2011 Loughborough University, UK: Doctor of Philosophy (Driver Sleepiness),

Thesis: Obstructive Sleep Apnoea and Day time Driver Sleepiness Supervisor: Dr Louise Revner, Director of Research: Prof Jim Horne

2007 Loughborough University, UK: Bachelor of Science, Human Biology (Honours) First Class

Final year project: The effect of a high sugar content drink on an afternoon nap

**Diploma of Professional Studies** 

Pharmaceutical Regulatory Affairs. 2006, 3M Health Care Ltd

### **Professional status**

Royal Society of Biology, UK: Professional status: Chartered Biologist, MRSB

### **Research Employment Experience**

Feb 2016 -**Loughborough University Design School** 

- Senior Research Associate (100% research), Supervisor: Prof Pete Thomas
- Work Package leader on Horizon 2020 funded project SafetyCube.
- Leading the Loughborough research involvement in all work packages.
- Supervision of research staff.
- Journal and conference paper submissions.

Feb 2013 – Jan Centre for Accident Research and Road Safety - Queensland (CARRS-Q)

> 2016 **Queensland University of Technology**

> > Research Fellow (100% research), Supervisor: Prof Narelle Haworth

- Leading grant and tender applications to state and national funding schemes.
- Working in collaboration with end-users of research.
- Project manager roles ensuring completion of projects in a timely, cost effective manner.
- Supervision of students and research assistants.
- Involvement in centre strategic planning activities.

Feb 2011 – Feb Monash University Accident Research Centre (MUARC), Human Factors Team

> 2013 **Monash University**

> > Research Fellow (100% research), Supervisor: Dr Missy Rudin-Brown

- Developing and conducting driving simulator studies.
- Working on both large grant projects and industry funded research.

### Consultancy

Consultant sleep

Invited speaker at Monash Mental Health week (2012)

and fatigue advisor

Leading training workshops for the mining industry about sleep and work (specialising driver sleepiness) both for Awake Itd and Fatigue Management International (2011).

Consultant road • safety advisor

Advising Transport for NSW state government on removal of signage from disused rail level crossings. Voluntary service Naweed, A., Filtness, A (2015).

### International recognition

Journal editor •

- International editorial board, Applied Ergonomics. ISSN:0003-6870
- Guest editor Fitness to Drive special issue Transportation Research Part F. ISSN:1369-8478

Committees

- European Sleep Research Society, Early Career Network Executive Committee. Chair June 2015 2016. Duties being on the organising team of the ESRS conference 2016.
- SomnoSafe International Somolence and Safety Symposium 2016. Scientific Committee member.
- Australasian College of Road Safety. Queensland Chapter committee May 2015- Jan 2016.

Collaborations (see research income and

- Within Australia I have established collaboration and research connections with Queensland University of Technology, Monash University, Central Queensland University and University of the Sunshine Coast.
- I have existing collaboration with the Global Road Safety Partnership.
- I was invited to complete a research internship at the Swedish national road and transport research institute (VTI) which has resulted in on going collaboration.

Reviewing

outputs)

 Regularly undertake peer reviews for Accident Analysis and Prevention, and also Traffic Injury Prevention in the road safety domain. Additionally, technology journals on the topic of fatigue detection (e.g. IET Intelligent Transport Systems). Provided peer review services for the Australasian Road Safety, SomnoSafe and Managing Fatigue conferences.

### **Citations**

My research is recognised nationally and internationally, as demonstrated by my citations:

- 206 citations in Google Scholar. Eight papers have been cited at least eight times. H index = 8.
- 113 citations in Scopus. Six papers have been cited at least six times. H index = 6.

Within the applied field of Road Safety, research citations are lower than other science domains. The journal with the highest Scopus Rank in field for Safety, Risk, Reliability and Quality has an impact factor of 2.391 and in the Transportation field has an impact factor of 3.306

### **Research Quality Recognition**

Competitive • Partnerships • and collaborations

- British Sleep Society young sleep researcher award 2009.
- Competitively awarded by the Health Collaborative Research Network in recognition of merit for existing research and for potential in establishing high performing and sustainable partnerships. Human Factors in Transport Exchange Program with Appleton Institute, Central Queensland University: Fatigue and SPAD risk.

Best • conference paper

- The Peter Vulcan Award for best research paper at the 2013 Australasian Road Safety Research, Policing and Education Conference. Salmon, P. M., Lenné, M. G., Walker, G., & Filtness, A. J. (2013, August 28-30). Investigating the factors influencing cyclist awareness and behaviour: an on-road study of cyclist situation awareness.
- The best paper award at the 11<sup>th</sup> International Symposium of the Australian Aviation
  Psychology Association. Lenné, M., Salmon P.M., Beanland V., Stanton N.A., Filtness A. J.
  (2014, Nov) The application of decision-making paradigms to map real-world driver
  decision-making at rail level crossings.

Competitive training courses

- Selection on to the 2011 International Master Class in Biomechanics for Design for Injury Prevention, Loughborough University, UK. This 4 day classroom based training course was conducted by international experts, including a focus on anthropometry and ergonomics for design. A travel grant to attend was awarded.
- Selection on to the ESRS-EU Marie Curie PENS Project 2007 2010. Sleep Research Training Course and practical training. This involved a 6 day residential classroom based training course in sleep research, a 5 day practical training at Sleep and Wake Disorders Center, Department of Neurology, University Hospital Zürich, Switzerland 2009 and a 5 day symposium.

Travel awards

- Travel award to attend the 2011 World Sleep Conference, in Kyoto, Japan.
- Travel award to attend the APSS SLEEP 2010 meeting, in San Antonio, Texas

### Research Significance, Originally and Rigour

My research has **significantly advanced understanding** of driver behaviour, particularly for driver sleepiness. For example, my work was the first to demonstrate the vulnerability of long term treated obstructive sleep apnoea patients to sleep loss, a topic on which have been **invited to give several international presentations**. I am committed to **developing new ideas and original methodologies for road safety research**. For example, I worked with a team of researchers to undertake the first on-road instrumented vehicle study considering the situation awareness of different road user groups (drivers, motorcyclists, pedestrians and cyclists) on the same road network. Findings are published in a leading journal for the field and are highly cited, for this area. I take a **rigours approach to all research activities**, where ever possible findings from industry and government commissioned research are disseminated as peer-reviewed journal papers. The quality of my work is further demonstrated by repeat engagement by industry/government and academic collaborators.

## **Teaching, Supervision and Mentoring**

- Student project
- **Ph.D:** Primary supervisor: Rodwell, D (2015-2016) Simulators for Novice Driver Training. Co-supervisor: Kunze, A (2017 present) Interface Design for Autonomous Vehicles.
- supervision
- Post graduate diploma: Primary supervisor: Sheppard, P and Lavan, G (2015) Driver sleepiness in urban driving.
- **Vacation research scholar:** Primary supervisor: Hawkins, A 2014-2015. Driver Sleepiness and social media Output: one journal paper, one conference paper
- **Psychology undergraduate placement:** Primary supervisor: Eighani, G 2015. Output: two magazine articles. Primary supervisor: Honey, M 2015
- Invited guest
  - Guest lecturer for the Australian National University (2012). Biological Psychology BSc.
  - lecturer
- Guest lecturer Belarusian Road Safety Network/Loughborough University (2016). Road Safety MSc.
- Guest lecturer for Loughborough University (2017). Ergonomics BSc.
- Staff supervision
- I am an experience supervisor of research staff in my work at Loughborough and CARRS-Q, including managing workloads, undertaking probation reviews, defining work programs, monitoring progress and completing annual performance development reviews.
- Mentoring •
- I currently mentor five PhD students. Mentorship is frequently in relation to study methodologies but also involves career development and paper co-authorship in two cases

### **Research Impact**

Throughout my career I have worked on a range of short term industry and government funded projects engaging and collaborating directly with the end-users of research. In total I have authored 25 reports which were directly commissioned to advance knowledge and to inform policy and practice. Eight of these reports were for Australian state governments. Outcomes from a 2014 research study conducted for the Australasian Centre for Rail Innovation has resulted in updates to AS1742 Part 7 Standard required sighting distance at passive level crossings. I have authored eight reports for the TCA, Australia considering technology solutions to record and manage truck driver fatigue. This work program influenced the introduction of electronic, rather than written work diaries for the industry. Recently, I worked with the Australian Ballooning Federation to improve ballooning safety through incident report analysis. I wrote two magazine articles on this topic communicating results of my peer-reviewed publications to a lay audience. This project was internationally recognised; the Ballooning Federation of American and the British Balloon and Airship Club both reprinted the magazine article.

### **Training and Equal Opportunities**

- My commitment to continued professional development in activities related to human measurement (e.g. EEG and eye tracking) has been recognised by the Royal Society of Biology who awarded me Chartered Status.
- ILM Level 5 Certificate in Leadership and Management in progress. Expected completion May 2018.
- Example training undertaken at Loughborough University: Managing Research Projects, Writing Successful Research Grant Proposals, Recruitment and Selection and Respective Diversity.
- I recognise commitment to the Athena SWAN Charter and am committed to observing Equal Opportunities policies at all times

# Research Income (AUS \$1,208,669 total)

competitive grants

- evaluating a theoretically grounded novice driver education program incorporating simulators. Awarded by Australian Research Council Linkage Projects. \$203,000, plus \$75,000 partner contribution. Industry partners: Global Road Safety Partnership, Roadcraft Driver Education, Queensland Department of Transport and Main Roads.
- Beanland, V., (PI at the ANU) & Filtness, A. J. (PI at QUT). (2014, July) Effects of sleep loss on change detection while driving. Awarded by the NRMA-ACT Road Safety Trust. \$51,814

contract research •

- Debnath, A., Haworth., N., **Filtness A.J.** Demmel, S. (2015 Oct). Road User Interaction with worksites. \$49,779
- Wishart, D., Biggs, B., Filtness, A.J., Watson, A., Rowland, B., Schramm, A, Haworth, N. (2015, Mar). Research proposal to reduce the crash involvement of taxis in Queensland: Situational analysis and crash and exposure analyses. Awarded by the Motor Accident Insurance Commission (MAIC). \$109,543
- Freeman, J., Watson, A., Filtness, A.J., Wilson, H., Siskind V. (2015, Feb). Understanding drink-drivers, their re-offence and crash rates and the impact of sanctions. Awarded by VicRoads, State Government of Victoria. \$99,492
- Laure, G., **Filtness, A.J.**, Wood, J., Naweed, A., Rakotoniraiy, A (2015, Jan). Review of stop sign level crossing sighting distance. Awarded by Australasian Centre for Rail Innovation. \$159,049.
- Rakotonirainy, A., **Filtness, A. J\*.,** Demmel, S., Blackman, R., Wishart D (2014, Dec). Literature and Product Review of Motorcycle Instrumentation Systems for Naturalistic Riding Studies. Awarded by Transport for New South Wales. \$32,945.
- Smith, S., Filtness, A.J\*., Rowland, B. (2014, Nov) Review of taxi driver fatigue. Awarded by Transport for New South Wales. \$43, 194.
- Freeman, J., Armstrong, K., Palk, G., **Filtness, A. J\***., Davey, J., & Kiata-Holland, E. (2014, April) Drug driving policy review. Awarded by Transport for New South Wales. \$42,724
- Watson, B., Bates, L., Filtness, A. J., & Fleiter, J. (2013, August) Research services to investigate how changing driver training in the Queensland licensing system would affect road safety.
   Awarded by Queensland Department of Transport and Main Roads. \$74,882
- Rakotonirainy, A., Filtness, A. J\*., Larue, G., & Schramm, A. (2013, July) Ability to absorb information from electronic and static signs (Austroads NT1782). Partnership program contract with ARRB. Awarded by ARRB. \$65,000
- Freeman, J., **Filtness, A. J,** Armstrong, K., Sheehan, M. & Fleiter, J. (2013, February) Options for rehabilitation in alcohol interlock programs (SS1755). Awarded by Austroads. \$94,496
- Rudin-Brown, C. M., Filtness, A. J., Lenné, M. G., & Young, K. L. (2011, July) Operational Pilot of electronic work diaries (EWD) and speed monitoring systems Stage 1. Awarded by Transport Certification Australia Ltd. (TCA) \$81,030
- Rudin-Brown, C. M, Filtness, A. J., Lenné, M. G., Logan, D., & Young, K.L. (2011, April) TCA
   Electronic Work Diaries Operational Pilot. Awarded by TCA. \$33,780

University Grants

- **Filtness A.J., (PI)** Smith S (2015, May) Caffeine and rear-end crashes in urban driving; developing a new test paradigm. Awarded by Queensland University of Technology Institute of Health and Biomedical Innovation. \$8,000.
- Freeman J., Larue G., Filtness A.J., Delhomme P (2015, May) Good intention but bad judgement? An intelligent transport system study to examine objective and subjective driving performance. Awarded by Queensland University of Technology Institute of Health and Biomedical Innovation. \$7,500.
- Naweed, A, (PI at CQU) Filtness, A.J. (PI at QUT) (2014, Oct) Human factors in Transport Exchange Program: Fatigue and SPAD risk. Awarded by Health Collaborative Research Network (CRN) University Exchange Program. \$7,000.
- **Filtness, A. J. (PI)** (2014, Aug) Understanding sleepy drivers: towards development of a targeted intervention. Mentors: Smith, S., & Anund, A. Awarded by Queensland University of Technology, Institute of Health and Biomedical Innovation Early Career Research award scheme. \$9,977
- **Filtness, A. J. (PI)**, Davey J., & Beanland, V. (2013, August) Proof of concept investigation into time of day effects on attentional blink. Awarded by Queensland University of Technology Institute of Health and Biomedical Innovation. \$7,960.

### **Publications and Research Output**

Peer reviewed Journal Articles

- 1. **Filtness A.J.,** Larue G., Schramm A., Fuller J., Rakotonirainy A Han C., Cairney P. (Accepted 8/3/17) Safety implications for co-locating road signs: A driving simulator investigation. Accident Analysis and Prevention
- 2. Cox J., Beanland V., **Filtness A.J.** (in press) Risk Safety perception on urban and rural roads: Effects of environmental features, driver age and risk sensitivity. Traffic Injury Prevention.
- 3. Beanland V., **Filtness A.J.**, Jeans R. (2017) Change detection in urban and rural driving scenes: Effects of change target and safety relevance on change blindness. Accident Analysis and Prevention, 100, 111-122.
- 4. **Filtness, A. J.**, Armstrong K., Watson A., Simth S.S. (2017) Sleep-related vehicle crashes on low speed roads. Accident Analysis and Prevention, 99 Part A, 279-286.
- 1. **Filtness, A.J.,** Naweed, A. (2017) Causes, consequences and countermeasures to driver sleepiness in the rail industry. Applied Ergonomics, 60, 12-21.
- 2. **Filtness, A. J.**, Armstrong K., Watson A., Simth S.S. (2017) Sleep-related crash characteristics: Implications for applying a fatigue definition to crash reports. Accident Analysis and Prevention, 99, Part B, 440-444.
- 3. Hawkins, A., **Filtness, A.J.** (2017) Driver sleepiness on YouTube: A content analysis. Accident Analysis and Prevention, 99, Part B, 459-464.
- 4. Anund, A., Ihstrom, J., Fors C., Kecklund, G., **Filtness, A.J.** (Accepted) Driver sleepiness and incidents in city bus drivers. Industrial Health.
- 5. Stefanova, T., Burkardt, J-M., **Filtness, A.J.**, Wullems, C., Rakotonirainy, A., Delhomme, P. (2015) Systems-based approach to investigate unsafe pedestrian behaviour at level crossings. Accident Analysis and Prevention, 81, 167-186
- 6. Cain, S.W., **Filtness A.J.**, Phillips, C., Anderson, C. (2015) Enhanced preference for high fat foods following a simulated night shift. Scandinavian Journal of Work, Environment and Health. 41(3), 288-93
- 7. **Filtness A.J.,** Goode N., Cook R. (2014) Causal factors of hot air ballooning incidents: identification, frequency and potential impact. Aviation, Space and Environmental Medicine, 85(12), 1190-1198.

  IF of 0.782 SCImago 2<sup>nd</sup> quartile journal for Public Health, Environmental and Occupational Health (Citations: 1 Google Scholar)
- 8. **Filtness, A. J.**, Mackenzie, J., Armstrong K. (2014). Longitudinal change in sleep and daytime sleepiness in postpartum women. PLOS ONE, 9 (7), e103513.
- 9. Salmon P.M., Lenné M.G., Walker G. Stanton N.A., **Filtness, A. J.** (2014). Using the Event Analysis of Systemic Teamwork (EAST) to explore conflicts between different road user groups when making right hand turns at urban intersections. Ergonomics, 57(11), 1628-1642.
- 10. **Filtness A.J.,** Anund A., Fors C., Ahlström C., Åkerstedt T., Kecklund G. (2014). Sleep related eye symptoms and their potential for identifying driver sleepiness. Journal of Sleep Research, 23(5), 568-575.
- 11. **Filtness A. J.,** Mitsopoulos-Rubens E., Rudin-Brown M (2014). Police officer in-vehicle discomfort: appointments carriage method and vehicle seat features. Applied Ergonomics, 45(4), 1247-1256.
- 12. Salmon P.M., Lenné M.G., Walker G. Stanton N.A., **Filtness, A. J.** (2014) Exploring schemadriven differences in situation awareness across road users: an on-road study of driver, cyclist and motorcyclist situation awareness. Ergonomics, 57(2), 191-209.
- 13. Armstrong K., **Filtness A. J.**, Watling C., Barraclough P., Haworth N. (2013). Efficacy of proxy definitions for identification of fatigue/sleep-related crashes: an Australian evaluation. Transportation Research Part F, 21, 242-252
- 14. **Filtness A. J.,** Rudin-Brown M., Mulvihill C.M., Lenné M.G. (2013). Impairment of simulated motorcycle riding performance under low dose alcohol. Accident Analysis and Prevention, 50, 608-615.
- 15. Rudin-Brown M., **Filtness A. J.**, Allen A., Mulvihill, C.M. (2013). Performance of a cognitive, but not visual, secondary task interacts with alcohol-induced balance impairment in novice

- and experienced motorcycle riders. Accident Analysis and Prevention, 50, 895-904.
- 16. **Filtness A. J.**, Reyner L. A., Horne J. A. (2012). One night's CPAP withdrawal in otherwise compliant OSA patients: marked driving impairment but good awareness of increased sleepiness. Sleep and Breathing, 16(3), 865-871.
- 17. **Filtness A. J.**, Reyner L. A., Horne J. A. (2012). Driver sleepiness comparisons between young and older men during a monotonous afternoon simulated drive. Biological Psychology, 89(3), 580 583.
- 18. **Filtness A.J.**, Reyner L.A., Horne J.A. (2011). Moderate sleep restriction in treated older male OSA participants: greater impairment during monotonous driving compared with controls. Sleep Medicine, 12(9), 838-843.

#### Under review

**Filtness A.J.,** Beanland V., Sleep loss and change detection in driving scenes. Transportation Research Part F.

Walker G., Salmon P., Reed G., Beanland V., Naves L., Stanton N., **Filtness A.J.** Thompson P. Modelling Driver Decision Making at Railway Level Crossings using the Abstraction Decomposition Space. Applied Ergonomics.

Beanland V., Salmon P., **Filtness A.J.**, Lenne M., Stanton N. To stop or not to stop: constrasting compliant and non-compliant driver behaviour at rural rail level crossings. Accident Analysis and Prevention

Watson A., Freeman J., Imberger K., Filtness A.J., Wilson H., Healy D., Cavallo A. The effects of licence disqualification on drink-drivers: Is it the same for everyone? Accident Analysis and Prevention.

Larue G., **Filtness A.J.**, Wood J., Demmel S., Watling C., Naweed A., Rakotonirainy A. Is it safe to cross? Identification of trains and their approach speed at level crossings. Safety Science.

### Peer reviewed Conference Papers

- 1. Talbot R., Waterson P., Spuzlo G., **Filtness A.J.** (2016, June 30 July1) Fatal and Serious Pedal Cycle and Truck Collisions in the UK: A Systems Approach. Paper submitted to European Conference on Human Centre Design for Intelligent Transport Systems.
- 2. Larue, G., **Filtness A.J.**, Wood, J., Demmel, S., Naweed A., Rakotonirainy A. Visual performance at passive level crossing with long sighting distance. Paper to be presented at the Conference on Railway Excellence (CORE), 2016 May 16-18, Melbourne, Australia.
- 3. Han C., Cairney P., Filtness A.J., Larue G., Schramm A., Rakotonirainy A. (2016, Jan). Driver's ability to absorb information from co-located signs along motorways. Paper presented at Transportation Research Board 95<sup>th</sup> Annual Meeting. Washington, USA.
- 4. Hawkins A., **Filtness A.J.** (2015, October). In-vehicle filming of driver fatigue on YouTube: vlogs, crashes and bad advice. Paper presented at Australasian Road Safety Conference. Gold Coast, Australia.
- 5. Watson A., Imberger K., Cavallo A., Healy D., **Filtness A.J.**, Wilson H., Freeman J., Catchpole J. (2015, October). Understanding drink drivers, their re-offence and crash rates and impact of sanctions in Victoria. Paper presented at Australasian Road Safety Conference. Gold Coast, Australia.
- 6. **Filtness A.J.,** Goode N., Cook R. (2015, July 26-30) Incident and near miss reporting culture in recreational hot air ballooning. Paper presented at the Applied Human Factors and Ergonomics conference. Las Vegas, USA.
- 7. Salmon P.M., Lenné M., Beanland V., Young K., **Filtness A.J.**, Stanton N, Read, G. (2014, November 12-14). From the Bush to the Burbs: an on-road study of driver situation awareness at rural and urban railway level crossings. Paper presented at the Australasian Road Safety Research, Policing and Education Conference. Melbourne, Australia.
- 8. Lenné M.G., Salmon P., Walker G. H., **Filtness A. J.** (2013, October 23-25). An On-Road Study of Driver and Rider Situation Awareness at Urban Intersections. Paper presented at the 4th International Conference on Road Safety and Simulation. Rome, Italy.
- 9. **Filtness A. J.,** Lenné M. G., Mitsopoulos-Rubens E. (2013, September 4-6). The impact of interface modality on police officers' visual behaviour when using an in-vehicle system. Paper presented at the 3rd International Conference on Driver Distraction and Inattention.

- Gothenburg, Sweden.
- 10. Mitsopoulos-Rubens E., **Filtness A. J.**, Lenné, M.G (2013, August 28-30). Assessment of police subjective workload and preference for using a voice-based interface during simulated driving. Paper presented at the Australasian Road Safety Research, Policing and Education Conference. Brisbane, Australia.
- 11. Salmon P.M., Lenné M.G., Walker G., **Filtness A. J.** (2013, August 28-30). Complex cognitive interactions in a badly designed world: investigating the underlying causes of collisions between distinct road users. Paper presented at the Australasian Road Safety Research, Policing and Education Conference. Brisbane, Australia.
- 12. Salmon P.M., Lenné M.G., Walker G., **Filtness A. J.** (2013, August 28-30). Investigating the factors influencing cyclist awareness and behaviour: an on-road study of cyclist situation awareness. Paper presented at the Australasian Road Safety Research, Policing and Education Conference. Brisbane, Australia. *Received the Peter Vulcan Award for best research paper for scientific / technical merit of the work; potential contribution to road safety; and originality of approach.*
- 13. Mulvihill C.M, Salmon P.M, **Filtness A. J.**, Lenné M., Walker G. H., Cornelissen M., Young, K.L. (2013, August 28-30). Lane filtering and situation awareness in motorcyclists: an onroad proof of concept study. Paper presented at the Australasian Road Safety Research, Policing and Education Conference. Brisbane, Australia.
- 14. Lenné, M., Salmon P.M., Beanland V., Stanton N.A., **Filtness A. J.** (2013, August 28-30). Onroad driving studies to understand why drivers behave as they do at regional rail level crossings. Paper presented at the Australasian Road Safety Research, Policing and Education Conference. Brisbane, Australia.
- Salmon P. M., Lenné M. G., Walker G., Filtness A. J. (2013, July 21-26). Awesome foursome? The compatibility of situation awareness across drivers, riders, cyclists, and pedestrians.
   15th International Conference on Human-computer interaction. Las Vegas, USA (Citations: 3 Google Scholar) International Collaboration.
- 16. Lenné M.G., Salmon P., Beanland V., Walker G. H., Underwood G., Filtness, A. J. (2013, June 17-20). Interactions between cars and motorcycles testing underlying concepts through integration of on-road and simulator studies. Paper presented at the 7th International Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design. New York, USA.
- 17. **Filtness A. J.,** Rudin-Brown C. M. (2012, October 4-5). Drinking and riding: is subjective workload related to performance? Australasian Road Safety Policing and Education Conference. Wellington, New Zealand.
- 18. Rudin-Brown C. M., Clark B., Allen A., Mulvihill C., **Filtness A. J.** (2011, November 6-9). Do drinking and riding mix? Effects of legal doses of alcohol on balance ability in experienced motorcyclists. Australasian Road Safety Research, Policing and Education Conference. Perth, Australia.

### Scholarly Book Chapters

- Lenné M. G., Beanland V., Salmon P., Filtness A. J., Stanton, N. (2013). Checking for trains: An on-road study of what drivers actually do at level crossings. In Dadashi N., Scott A., Wilson J.R., Mills, A. (Eds.) Rail Human Factors: Supporting reliability, safety and cost reduction. Taylor & Francis. 53-59. (Citations:2 Google Scholar). International Collaboration.
- 2. Salmon P. M., Beanland V., **Filtness A. J.**, Lenné M. G., Stanton N. (2013). Waiting for warning: Driver situation awareness at rural rail level crossings. In Anderson M. (Ed.) Contemporary Ergonomics and Human Factors, Taylor & Francis. 403-410. (*Citations:3 Google Scholar*). *International Collaboration*.

### **Under review**

Bates L., Filtness, A.J., Watson B. Driver education and licensing programs. Chapter 4 in Volume 8: Safe Mobility: Background, Challenges and Solutions.

Research Reports 1. Thomas, P, Filtness, A.J., Talbot, R, Magrin, A (2016, Nov) Project Report - months 1 - 18, Deliverable 1.2 of the H2020 project SafetyCube. Report to the European Commission.

- 2012 present
- 2. Filtness, A.J., Papadimitriou, E, Leskovšek, B, Focant, N, Martensen, H, Sgarra, V, Usami, DS, Soteropoulos, A, Stadlbauer, A, Theofilatos, A, Yannis, G, Ziakopoulos, A, Diamandouros, K, Durso, C, Goldenbeld, C, Loenis, B, Schermers, G, van Petegem, J-H, Elvik, R, Hesjevoll, IS, Quigley, C, Papazikou, E (2016, Oct) Identification of infrastructure related risk factors, Deliverable 5.1 of the H2020 project SafetyCube. Report to the European Commission.
- 3. Filtness, AJ, Thomas, P, Talbot, RK, Quigley, C, Papadimitriou, E, Yannis, G, Theofilatos, A, Aigner-Bruss, E, Kaiser, S, Machata, K, Weijermars, W, Van Schagen, I, Hermitte, T (2016, Oct) The application of systems approach for road safety policy making, Deliverable 8.1 of the H2020 project SafetyCube. Report to the European Commission.
- 4. Hermitte, T., Reed, S., **Filtness, A. J.**, Talbot, R., Thomson, R., Jaensch, M., Johannsen, H., Niewöhner, W., Ancona, L., Martin, O., Vazquez de Prada, J., Papadimitriou, E., Phan, V., Saade, J., Cuny, S., Lesire, P., Leopold, F., Labrousse, M (2016, Oct) Identification of Vehicle Related Risk Factors, Deliverable 6.1 of the H2020 project SafetyCube. Report to the European Commission.
- 5. Talbot, RK, Aigner-Breuss, E, Kaiser, S, Alfonsi, R, Braun, E, Eichhorn, A, Etienne, V, Gabaude, C, Goldenbeld, C, Hay, M, Jansch, M, Leblud, J, Leskovšek, B, Filtness, AJ, Paire-Ficourt, L, Papadimitrious, E, Pilgerstorfer, M, Rußwurm, K, Sandin, J, Soteropoulos, A, Strand, N, Theofilatos, A, Van Schagen, I, Yannis, G, Ziakopoulos, A (2016, Oct) Identification of Road User Related Risk Factors, Deliverable 4.1 of the H2020 project SafetyCube. Report to the European Commission.
- Pérez, K, Weijermars, W, Amoros, E, Bauer, R, Bos, N, Dupont, E, Filtness, A.J., Houwing, S, Johannsen, H, Leskovsek, B, Machata, K, Martin, JL, Nuyttens, N, Olabarria, M, Pascal, L, Van den Berghe, W (2016,Sept) Practical guidelines for the registration and monitoring of serious traffic injuries, D7.1 of the H2020 project SafetyCube. Report to the European Commission.
- 7. Thomas, P, Filtness, AJ, Talbot, RK, Magrin, A (2016, April) Collaboration with other H2020 projects. D1.1 of the European Commission H2020 project SafetyCube. Report to the European Commission.
- 8. Debnath, A., **Filtness., A.J.,** Demmel, S., Haworth, N., Hawkins, A. (2016, Jan) Road user interaction with worksites. Report to Roads and Maritime Services. Brisbane: CARRS-Q.
- 9. Wishart D., Watson A., Rowland B., Filtness A., Fleiter J., Biggs H., Schramm A. (2015, Dec) Reducing the crash involvement of taxis in Queensland. A situational analysis and analysis of crash and exposure data. Report to the Motor Accident Insurance Commission (MAIC) Brisbane: CARRS-Q.
- 10. Watson, A., Freeman, J., **Filtness, A.J.,** Wilson, H. (2015, July) Understanding drink-drivers their re-offence and crash rates and the impact of sanctions. Report to VicRoads. Brisbane: CARRS-Q.
- 11. Larue, G., **Filtness A.J.**, Wood, J., Naweed A., Rakotonirainy A. (2015, July). Testing the limitation of sighting distances in the AS1742 part 7 standard. Report to Australasian Centre for Rail Innovation. Brisbane: CARRS-Q.
- 12. Blackman, R., Demmel, S., **Filtness A.J.**, Wishart, D., Haworth, N., Rakotonirainy A. (2015, Mar). Literature and product review of instrumentation systems for naturalistic riding studies. Report to Transport for New South Wales. Brisbane: CARRS-Q.
- 13. Darvell, M., **Filtness, A.J.,** Rowland, B., Smith, S. (2015, Feb). Literature review of taxi driver fatigue. Report to Transport for New South Wales. Brisbane: CARRS-Q.
- 14. Freeman J., Kiata-Holland E., **Filtness A.J.,** Palk G., Armstrong K., Davey J. (2014, July). A review and comparative analysis of international drug driving policies. Report to Transport for New South Wales. Brisbane: CARRS-Q.
- 15. **Filtness A.J.,** Schramm A., Larue G., Rakotonirainy A. (2014, June). The impact of co-locating electronic and static signs on driver's response in an emergency situation. Report to Australian Road Research Board (ARRB Group Ltd). Brisbane: CARRS-Q.
- Filtness A.J., Sheehan M., Armstrong K., Fleiter J., Freeman J. (2014, January). Options for rehabilitation in interlock programs. Project SS1755.Report to Austroads.Brisbane:CARRS-Q.
- 17. Fleiter J., Filtness A.J., Bates L., Watson B., Williamson A. (2013, Dec). How would changing

- driver training in the Queensland licensing system affect road safety? Deliverable 4: Evidence-based driver education policy options. Report to the Department of Transport & Main Roads. Brisbane: CARRS-Q.
- 18. **Filtness A.J.,** Tones M., Bates L., Watson B., Williamson A. (2013, Dec). How would changing driver training in the Queensland licensing system affect road safety? Deliverable 2: Simulators for skill acquisition training and assessment, and their impact on road safety. Report to the Department of Transport & Main Roads. Brisbane: CARRS-Q.
- 19. Bates L., **Filtness A.J.,** Fleiter J., Watson B., Tones M., Williamson A. (2013, Dec). How would changing driver training in the Queensland licensing system affect road safety? Deliverable 1: Trends in driver education and training. Report to the Department of Transport & Main Roads. Brisbane: CARRS-Q.
- 20. Mitsopoulos-Rubens E., **Filtness A. J.,** Lenné M. G (2013, April). Injuries to police officers associated with police vehicle travel: Report 5: Simulator study. Report to Police Association of New South Wales. Melbourne: MUARC.
- 21. Mitsopoulos-Rubens E., **Filtness A. J.**, Rudin-Brown C. M. (2012, Aug). Injuries to police officers associated with police vehicle travel: Report 4: Seat Usability Study. Report to Police Association of New South Wales. Melbourne: MUARC.
- 22. Young K. L., **Filtness A. J.**, Rudin-Brown C. M. (2013, Feb). Operational pilot of electronic work diaries (EWDs). MUARC Stage 2 Final report HMI guidelines for Electronic Work Diaries. Report to TCA. Melbourne: MUARC.
- 23. Young K. L., **Filtness A. J.**, Rudin-Brown C. M. (2013, Feb). Operational pilot of electronic work diaries (EWDs). MUARC Stage 2 Final report Survey and Targeted interview Results. Report to TCA. Melbourne: MUARC.
- 24. Young K. L., Rudin-Brown C. M., **Filtness A. J.** (2012, June). Operational pilot of electronic work diary (EWD) and speed monitoring systems. Stage 2 Interim report: Survey 1 results. Report to TCA. Melbourne: MUARC.
- 25. **Filtness A. J.**, Young K. L., Rudin-Brown C. M. (2012, May). Operational pilot of electronic work diary (EWD) and speed monitoring systems stage 2 Report 1: Literature review. Report to TCA. Melbourne: MUARC.
- 26. Rudin-Brown C. M., Filtness A. J., Keall M. D., Mulvihill C., Clark B., Allen A., Lenné M.G. (2012, March). Investigation of Zero BAC for all Motorcycle riders in Queensland. Final Report. Report to the Queensland Department of Transport & Main Roads. Melbourne: MUARC.
- 27. **Filtness A. J.**, Trotter M., Mitsopoulos-Rubens E., Rudin-Brown C. M. (2011, August). Injuries to police officers associated with police vehicle travel: vehicle seat design Report 3: expert survey. Report to Police Association of New South Wales. Melbourne: MUARC.
- 28. **Filtness A. J.,** Young K. L., Rudin-Brown C. M. (2011, August). Operational pilot of electronic work diary (EWD) and speed monitoring systems Report 1: targeted literature review. Report to TCA. Melbourne: MUARC.
- 29. Rudin-Brown C. M., Young K. L., **Filtness A. J.** (2011, November). Operational pilot of electronic work diaries (EWDs). Interim report, survey results. Report to TCA. Melbourne: MUARC.
- 30. **Filtness A. J.,** Rudin-Brown C. M., Allen A., Mulvihill C., Lenné M. G. (2011, November). Investigation of zero BAC for all motorcycle riders in Queensland. Simulator and balance studies report. Report to the Queensland Department of Transport & Main Roads. Melbourne: MUARC.
- 31. **Filtness A. J.,** Rudin-Brown C. M., Young K. L. (2011, December). Operational pilot of electronic work diaries (EWDs). Report on telephone interviews with drivers, transport operators and EWD providers. Report to TCA. Melbourne: MUARC.
- 32. Young K. L., **Filtness A. J.**, Rudin-Brown C. M. (2011, December). Operational pilot of electronic work diaries (EWDs). Report on enforcement officer focus groups. Report to TCA. Melbourne: MUARC.

Presentatio ns (peer reviewed abstracts)

- E.(2017, Mar). Obstructive sleep apnoea and crash risk: Case study results within the development of the European road safety Decision Support System. Paper to be presented at 10<sup>th</sup> international conference on Managing Fatigue. San Diego, USA. Paper to be presented at 10<sup>th</sup> international conference on Managing Fatigue. San Diego, USA.
- 2. **Filtness A.J.,** Beanland V., Larue G., Hawkins A (2017, Mar). Sleep loss and change detection: a driving simulator study. Paper to be presented at 10<sup>th</sup> international conference on Managing Fatigue. San Diego, USA.
- 3. **Filtness A.J.**, Beanland, V., Jeans R. (2016, Feb). Sleep-Related impairment at detecting changes in rural driving scenes. Paper to be presented at SomnoSafe. Brussels, Belgium.
- 4. **Filtness A.J.,** Naweed A (2015, Nov). Fatigue in the rail industry: The driver's perspective. Paper presented at the 4<sup>th</sup> International Conference on Driver Distraction and Inattention. Sydney, Australia.
- 5. Beanland V., **Filtness A.J.**, Jeans R. (2015, Nov). Effects of sleep loss on change detection in urban and rural driving scenes. Paper presented at the 4<sup>th</sup> International Conference on Driver Distraction and Inattention. Sydney, Australia.
- 6. **Filtness A.J.**, Armstrong K., Watson A., Smith S. (2015, March 23-26). Sleep-related crashes in high speed environments. Presented at 9th International Conference on Managing Fatigue. Fremantle, Australia.
- 7. Freeman J., Kiata-Holland E., **Filtness A.J.**, Palk G., Armstrong K., Davey J. (2015 March 17-20). Directions for the future: A Comparative analysis of emerging international drug driving policies. Presentation at the 7th Australasian Drug and Alcohol Strategy Conference. Brisbane, Australia.
- 8. Lenné, M., Salmon P.M., Beanland V., Stanton N.A., Filtness A. J. (2014, Nov) The application of decision-making paradigms to map real-world driver decision-making at rail level crossings. Oral presentation, 11th International Symposium of the Australian Aviation Psychology Association, Melbourne, Australia. Recipient of Best Paper Award.
- 9. **Filtness A.J.**, Beanland V. (2014, Sept). Sleep restriction impairs vigilance but not temporal attention. Poster presentation at the European Sleep Research Society meeting, Tallinn, Estonia
- 10. **Filtness A.J.,** Armstrong K., Watson A. (2014, Sept) Sleep related crashes in urban, low speed environments. Poster presentation at the European Sleep Research Society meeting, Tallinn, Estonia.
- 11. Goode N., Salmon P.M., Lenné M.G., Walker G. **Filtness A. J.** (2014, July). An analysis of cyclist situation awareness during near collisions with motor vehicles: failure of the road or road user? Oral presentation, International Conference of Applied Psychology, Paris, France.
- 12. **Filtness A.J.,** Mackenzie J., Armstrong K. (2013, Oct). Hush-a-by mummy: interactions between co-sleeping and maternal sleep disturbance. Poster presentation, Australian Sleep Association Conference, Brisbane, Australia
- 13. Lenné M. G., Beanland V., Salmon P. M., **Filtness A. J.**, Stanton N. A., Triggs, T. J. (2012). Onroad assessment of driver behaviour at regional highway-rail grade crossings. In Proceedings of the 4th International Conference on Applied Human Factors and Ergonomics. San Francisco, USA.
- 14. **Filtness A. J.**, Reyner L. A., Horne J. A. (2011, Oct). One night CPAP withdrawal impairs performance at a driving simulator task faster than sleep restriction to 5 hours with treatment in OSA patients. Poster presentation at the World Sleep Conference, Kyoto, Japan.
- 15. **Filtness A. J.,** Reyner L. A., Horne, J. A. (2011, Oct). Prevalence of risk factors for undiagnosed obstructive sleep apnoea is high in truck drivers on UK roads. Poster presentation at the World Sleep Conference, Kyoto, Japan.
- 16. **Filtness A. J.**, Reyner, L. A. (2010, Sept). Is the two hour recommended maximum driving time appropriate for both healthy older and treated obstructive sleep apnoea drivers? Oral presentation at the European Sleep Research Society meeting, Lisbon, Portugal.
- 17. **Filtness A. J.**, Reyner L. A. (2010, Sept). Continuous Positive Air Pressure treatment for Obstructive Sleep Apnoea patients: effects on sleep quality and quantity as measured by

- Actigraphy. Poster presentation at the European Sleep Research Society meeting, Lisbon, Portugal.
- 18. **Filtness A. J.,** Reyner, L. A. (2010, Sept). Driver sleepiness in younger and older participants. Paper presented at the British Sleep Society annual meeting, Cambridge, UK.
- 19. **Filtness A. J.,** Reyner L. A. (2010, June). Countermeasures to driver sleepiness: is the message getting through? Poster presentation at SLEEP meeting of the American Academy of Sleep Medicine and the Sleep Research Society, San Antonio, USA.
- 20. **Filtness A. J.,** Reyner, L. A. (2009, Sept). Sleep restriction increases driving risk in treated obstructive sleep apnoea patients. Paper presented at the British Sleep Society annual meeting, Cambridge, UK.

### Magazine Articles

- 1. Naweed, A., & **Filtness, A.J.** (2015). <u>Fatigue & sleepiness: Complex bedfellows</u> [Safety]. Track & Signal, 19(1), 60-61. Circulation 7,000
- 2. **Filtness A.J.,** Goode N., Cook R, Eighani G (2015) What causes hot air balloon accidents? Aerostat, Journal of the British Balloon and Airship Club. 46(6), 16-17.
- 3. **Filtness A.J.,** Goode N., Cook R, Eighani G (2015) What causes hot air balloon accidents? Ballooning, Journal of the Ballooning Federation of America. Sept/Oct. 2015, 48(4), 30-32.
- 4. **Filtness A.J.,** Goode N., Cook R, Eighani G (2015) <u>Prepare and prevent, don't repair and repent: Causal factors of hot air ballooning incidents</u>. Aeronotes, the official journal of the Australian Ballooning Federation 37(2), 8-10. ISSN:1036-8264
- 5. **Filtness A.J.,** Goode N., Cook R, Eighani G (2015) When should ballooning incidents be reported? Aeronotes, the official journal of the Australian Ballooning Federation 37(3), 6-7. ISSN:1036-8264

### **Invited Speaker**

- Thomas P., Filtness A.J. (2017, Feb) SafetyCube project. Department for Transport, UK.
- **Filtness A.J** (2016, Oct) SafetyCube project. Queensland Road Safety Research Network. Queensland University of Technology, Brisbane, Australia.
- **Filtness A. J.** (2015, July) Understanding Driver Sleepiness: characteristics, causes and cultural acceptance. Transport Research Laboratory, Wokingham, UK.
  - **Filtness A.J.,** Goode N., Cook R. (2015, June) Causal factors of hot air ballooning incidents and incident reporting culture Sports Aviation Safety Forum of the Civil Aviation Safety Authority. Sydney, Australia
  - **Filtness A.J.,** (2015, June) Older vs Young drivers and the effect of sleep restriction. Queensland University of Technology Community of former Staff Alumni Group.
  - **Filtness A. J.** (2015, Feb) Understanding Driver Sleepiness: characteristics, causes and cultural acceptance. Central Queensland University, Appleton Institute, Adelaide, Australia.
- **Filtness A. J.** (2013, Oct) Obstructive Sleep Apnoea and Daytime Driver Sleepiness. Nottingham University Accident Research Unit, UK.
  - **Filtness A. J.** (2013, Oct) Obstructive Sleep Apnoea and Daytime Driver Sleepiness. Leeds University Institute of Transport Studies, UK.
  - **Filtness A. J.** (2013, Sept) Obstructive Sleep Apnoea and Daytime Driver Sleepiness. Swedish Road Transport Institute (VTI), Linkoping, Sweden.
  - **Filtness A.J.**, Goode N., Cook R. (2013, June) An investigation into the factors contributing to hot air balloon incidents. Sports Aviation Safety Forum of the Civil Aviation Safety Authority. Sydney, Australia.
  - **Filtness A. J.** (2013, April) Obstructive Sleep Apnoea and Daytime Driver Sleepiness. Woolcock Institute of Medical Research, Sydney, Australia.
- Filtness A.J. (2012, Oct) Sleep The most important thing you will do today. Monash University Mental Health week. Melbourne, Australia.
- **Filtness A.J.,** Reyner L.A. (2010, April) Obstructive sleep apnoea and driving. Oral presentation at Leicester Sleep Apnoea Patients Association (LSAPA) annual general meeting. Leicester, UK.

### **Example Media and Publicity**

Oct 6:30PM. Topic: Road safety experts are learning why sleepy drivers crash through YouTube videos.

- Wilding, R (Presenter). 2008. BBC One's The One Show (national). Topic: Obstructive sleep apnoea and driver tiredness.
- Ashby, M (Presenter). 2007. BBC One's Inside Out East Midlands (regional). Topic: Sleepiness in young drivers.

Radio • 98five Sonshine FM (Western Australia). 2014, August 5. [Radio interview with Polly and Moro]. Breakfast show. Topic: New mums still excessively sleepy.

ABC Brisbane (Queensland). 2015, September 15 (Radio interview with Emma Griffiths). Drive show. Topic: Stop and revive those tired eyes http://blogs.abc.net.au/queensland/2015/09/stopand-revive-those-tired-eyes.html

### Online News **Stories**

- Driver sleepiness on YouTube, 2015: Daily Mercury: http://www.dailymercury.com.au/news/videos-show-sleep-drivers-dicing-death/2809353/ Central Telegraph: http://www.centraltelegraph.com.au/news/videos-show-sleep-driversdicing-death/2809353/ Science Daily: http://www.sciencedaily.com/releases/2015/10/151020103837.htm
- Sleep related eye symptoms. 2015: Medical xpress http://medicalxpress.com/news/2015-09sleepy.html Health canal http://www.healthcanal.com/disorders-conditions/sleep/66915-doyou-know-the-signs-of-being-too-sleepy-to-drive-carrs-q-study.html
- New mums excessively tired at four months. 2014: The Australian: http://www.theaustralian.com.au/news/latest-news/new-mums-excessively-tired-at-fourmonths/story-fn3dxiwe-1227010136040 The Daily Telegraph: http://www.dailytelegraph.com.au/news/breaking-news/new-mums-excessively-tired-at-fourmonths/story-fni0xqi3-1227010136040
- Young male drivers more vulnerable than older men to sleepiness: ABC news: http://www.abc.net.au/science/articles/2012/02/29/3441594.htm?site=science/memory&topic=la

Altmetric

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# **Recent Training and development**

2016 Project Management in the Real World. Fistral Training and Consultancy Ltd. 5/12/16.

- Performance Development Reviewer training, parts 1, 2 & 3. 18/11/12 and 2/12/16.
- Difficult conversations for managers. 29/11/16
- Becoming a resilient manger. 2/8/16
- Managing Research projects. 8/6/16.
- Writing successful research grants. 18/5/16.
- Recruitment and Selection training. 26/4/16.
- Non-Academic Probation adviser training. 24/3/16.
- Respecting Diversity 24/3/16.
- Information Security. Online self-learning. 3/2/16.
- Fire Safety Plus. Online self-learning. 2/2/16

ILM Level 5 modules Understanding the Management role to Improve Management Performance. 5-7 Sept. Passed