Energy Institute seeks PhD proposals to raise energy industry safety performance

The Energy Institute (EI) seeks PhD proposals into new research to help the energy industry improve its safety performance. Tuition and subsistence fees will be available for a three year full time study to commence 2020, using profits from the sale of the *Hearts and Minds* safety culture toolkit (www.energyinst.org/heartsandminds).

Background

The *Hearts and Minds* toolkit was developed by Shell, based on research funded between 1980 and 2000 (key texts referenced below). The Toolkit was published by the EI in 2004, and is used extensively in the energy industry and other industries to help improve safety culture, by engaging the workforce to help improve behaviour. Within the broad remit of safety culture, the Toolkit focuses on issues such as supervision skills, managing rule breaking, and risk assessment.

The EI is a non-profit organisation, and will use some of the profits from the sale of the *Hearts and Minds* Toolkit to fund new research to energy industry improve its safety performance. This new research may potentially turn into a new tool and form part of the Toolkit.

Topic area

The theme of the research should be on **improving health, safety, and environment (HSE) performance, with a focus on heuristics and biases.**

The impact of cognitive biases (including system 1 and 2 thinking) on decision making are well known. This PhD should progress this topic with a focus on the safety implications of biases, and on how biases can be overcome.

- Explore various solutions for overcoming or mitigating biases, e.g. raise awareness of biases, encourage inquiry and dissenting voices, promote collaboration (to see biases in others).
- Consider the applicability of 'Nudge Theory' to this topic, including in solutions.
- Consider risk normalisation.
- How to measure biases, and how to measurably make a difference.
- Can focus on frontline workforce or leadership, or both.

While the research is valuable for its own sake, the intention is that the research will form the basis for a **practical tool** to help industry improve safety performance.

Proposal format

Proposals should:

- Be set out clearly and succinctly, and be no more than 10 pages A4 in total.
- Identify the proposed university of study.
- Include a full CV of programme supervisor.
- Include a full CV of the PhD candidate (if available).
- Identify the level of engagement with industry (e.g. requiring just an external supervisor or also case study sites).
- Describe the topic of study, the problem it intends to address, the hypothesis, the method of research, the expected deliverables, and a bibliography of key texts the project will draw upon.
- Provide project cost, including tuition fees, student bursary, and disbursements.
- Provide start/completion dates.

Selection criteria

Proposals that garner the interest of the EI's industry partners will be shortlisted, at which stage the

selection may be narrowed further through interview. Only one study can be funded, with an expected start date of second half of 2020.

Submittal instructions

Please submit your proposal, via email (PDF or MS Word document) to Stuart King
e: sking@energyinst.org tel: +44 (0)207 467 7163

Closing date for submission is 29th June 2020

Bibliography of key 'Hearts and Minds' texts

Doctoral theses

W.L.G.Verschuur, *Bending the Rules: The causes of Violation Behaviour.* Thesis U. Leiden. Expected September 2004

M.Lawrie, *Developing measures of organisational safety culture and readiness to change in a multinational organisation*,. Thesis Manchester U. January 2004

Mustafa, *Critical Success Factors that affect the Implementation of Innovation: A Multinational's Experience*. Thesis. R.U.Leiden. January 2000 *

J. Groeneweg. *Controlling the Controllable*. Thesis. R.U.Leiden. October 1992.

Roger. *Safety leadership in the Energy Industry: The development and testing of a framework outlining key behaviours of senior managers*. Thesis. University of Aberdeen. 2013.

D. Lukic. *Learning from incidents – a social approach to reducing incidents in the workplace*. Thesis. Glasgow Caledonian University. July 2012

Murphy, V. L. *Learning from incidents and implementing action: Exploring expectations and contradictions in the energy sector*. Thesis. The Open University, UK. 2020

Key published papers

Sneddon, A., Hudson, P.T.W., Parker, D., Lawrie, M., Vuijk, M.,Â & Bryden, R. (2005) A Comprehensive Model for Human Behaviour in Industrial Environments. *The XIIth European Congress on Work and Organizational Psychology.*

Hudson, P.T.W.,., Croes, S.C., Parker, D., Lawrie, M., v d Graaf, G.C., Bryden, R. & Malone, C. (2004) Improving the quality of supervision in the workplace. *Proceedings 7th SPE International Conference on Health Safety and Environment in Oil and Gas Exploration and Production*. Richardson TX: Society of Petroleum Engineers

Hudson, P.T.W., v d Graaf, G.C. & Bryden, R. (2004) Integrating organisational safety and human factors. *Proceedings 7th SPE International Conference on Health Safety and Environment in Oil and Gas Exploration and Production*. Richardson TX: Society of Petroleum Engineers

Hudson, P.T.W., Parker, D., Lawrie, M., v d Graaf, G.C. & Bryden, R. (2004) How to win Hearts and Minds: The theory behind the program. *Proceedings 7th SPE International Conference on Health Safety and Environment in Oil and Gas Exploration and Production*. Richardson TX: Society of Petroleum Engineers

Parker, D. & Malone, C. (2004) Influencing driver attitudes and behaviour. *Proceedings 7th SPE International Conference on Health Safety and Environment in Oil and Gas Exploration and Production*. Richardson TX: Society of Petroleum Engineers

Bryden, R.,Â Hudson, P.T.W., v d Graaf, G.C. &. Vuijk, M (2004) Why did I do that?â€• From Unsafe Acts to Working Safely. *Proceedings 7th SPE International Conference on Health Safety and Environment in Oil and Gas Exploration and Production*. Richardson TX: Society of Petroleum Engineers

Parker, D., Lawrie, M. and Hudson, P. (2006) Developing a framework of organisational safety culture maturity. Safety Science, 44, 551-62

Lawrie, M., Parker, D. and Hudson, P. (2006) Investigating employee perceptions of a framework of safety culture maturity. Safety Science, 44, 259-76

Aune, S., Bryden R., Cairn, D., Van Dam, P., Dekker, G. Lauvstad, B., v.d. Wal, J.Â (2004) Culture Change and Breakthrough Safety Performance: A European Example. *Proceedings 7th SPE International Conference on Health Safety and Environment in Oil and Gas Exploration and Production*. Richardson TX: Society of Petroleum Engineers

Reason, J. and Hobbs, A. (2003) *Managing Maintenance Error: A Practical Guide* AshgateISBN 075461591X.

Hudson, P.T.W. (2003) Applying the lessons of high-risk industries to medicine. *Quality and Safety in Health Care*. 12, 7-12

Hudson, P.T.W. (2003) Aviation safety culture. *Journal of Aviation Management*. 4, 27-48.

Hudson, P.T.W. & Guchelaar, H.J. (2003) Risk assessment in clinical pharmacy. *Pharmacy World & Science*.25, 98-103

Harry, J. & Hudson, P.T.W. (2002) Safety, Evaluation and Transparency. Workshop on Safeguards and Nuclear Materials Management: R&D Responses tot he new Safeguards Environment. Proceedings 24th Annual Meeting ESARDA Luxembourg. European Commission Report EUR 20385. EU Commission, Luxembourg. Pp 387-400.

Hudson, P.T.W., Parker, D., Lawton, R., & v d Graaf, G.C. (2002) Managing non-compliance: Moving from theory to practice. In *Proceedings 6th SPE International Conference on Health Safety and Environment in Oil and Gas Exploration and Production*. Richardson TX: Society of Petroleum Engineers

Hudson, P.T.W., Parker, D., & v d Graaf, G.C. (2002) The Hearts and Minds Program: Understanding HSE culture. In *Proceedings 6th SPE International Conference on Health Safety and Environment in Oil and Gas Exploration and Production*. Richardson TX: Society of Petroleum Engineers

v d Graaf, G.C. & Hudson, P.T.W. (2002) Hearts and Minds: The status after 15 years research. In *Proceedings 6th SPE International Conference on Health Safety and Environment in Oil and Gas Exploration and Production*. Richardson TX: Society of Petroleum Engineers

Hudson, P.T.W. (2001) They didn't see it coming: Hindsight and foresight on the road to disaster. In E.R. Mullaer & C.J.J.M. Stolker (Eds.) *Ramp en Recht: Beswchouwingen over rampen, verantwoordelijkheid en aansprakelijkheid*. Boom Juridische Uitgevers: Den Haag. Pp 91-102

Harry, J, & Hudson, P.T.W. (2001) Strengthening safeguards information evaluation. *Proceedings of Institute of Nuclear Materials Management 42nd Annual Meeting*, Palm Springs CA.

Hudson, P.T.W. (2001) Safety Management and Safety Culture: The Long, Hard and Winding Road. In W. Pearse, C. Gallagher & L. Bluff (Eds.) *Occupational Health and Safety Management Systems*. Crowncontent, Melbourne, Australia. Pp 3-32.

Hudson, P.T.W. (2001) Safety Culture: Theory and Practice In *The Human Factor in System Reliability*. Nato Series RTO-MP-032. North Atlantic Treaty Organisation: Brussels.

Hudson, P.T.W. (2000) Safety culture and human error in the aviation industry: In search of perfection. In B.J. Hayward & A.R. Lowe (Eds.) *Aviation Resource Management*. Aldershot: Ashgate. Pp 19-31

Hudson, P.T.W. (2000) Bending the rules in the air. In R. Jensen, B. Cox, J. Callister, and R. Lavis(Eds.) Proceedings of the Tenth International Symposium on Aviation Psychology. International Journal of Aviation Psychology.

Hudson, P.T.W. & Stephens, D. (2000) Cost and benefit in HSE: A model for calculation of cost-benefit using incident potential. In *Proceedings SPE International Conference on Health Safety and Environment in Oil and Gas Exploration and Production*. Richardson TX: Society of Petroleum Engineers

Hudson, P.T.W. & Willekes, F.C. (2000) The Hearts and Minds project in an operating company: Developing tools to measure cultural factors. In *Proceedings SPE International Conference on Health Safety and Environment in Oil and Gas Exploration and Production*. Richardson TX: Society of Petroleum Engineers

Hudson, P.T.W., Parker, D., Lawton, R., Verschuur, W.L.G., van der Graaf, G.C. & Kalff, J. (2000) The Hearts and Minds Project: Creating intrinsic motivation for HSE. In *Proceedings SPE International Conference on Health Safety and Environment in Oil and Gas Exploration and Production*. Richardson TX: Society of Petroleum Engineers

Hudson P.T.W., van der Graaf, G.C., Parker, D., Lawton, R. & Verschuur, W.L.G. (2000) HSE tools: Which tools are appropriate? In *Proceedings SPE International Conference on Health Safety and Environment in Oil and Gas Exploration and Production*. Richardson TX: Society of Petroleum Engineers

Hudson, P.T.W. (2000) The cost of safety: Quantifying risk in terms management understands. In J.J.Speyer (ed.) *Proceedings 11th Airbus Human Factors Symposium - Melbourne*. Toulouse, Blagnac: Airbus Industrie

Hudson, P.T.W. (2000) Non-adherence to procedures: Distinguishing errors and violations.. In J.J.Speyer (ed.) *Proceedings 11th Airbus Human Factors Symposium - Melbourne*. Toulouse, Blagnac: Airbus Industrie

Karwal, A., van Es, G., & Hudson, P.T.W. (2000) Non-adherence to standard operating procedures. In *Proceedings Conference on Human Computer Interaction* Toulouse 6 pp.

Hudson, P.T.W., Verschuur, W.L.G., Parker, D., Lawton, R., van der Graaf, G.C. , & Kalff, J. (2000) Bending the Rules: Violation in the workplace. *Exploration and Production Newsletter*, EP2000-7001, 42-44. The Hague: Shell International

van der Graaf, G.C. , Kalff, J., & Hudson, P.T.W. (2000) Intrinsic motivation for HSE: The Hearts and Minds HSE Research Programme (Part 1). *Exploration and Production Newsletter.EP2000-7004*, 41-42 The Hague: Shell International

van der Graaf, G.C. , Kalff, J., & Hudson, P.T.W. (2000) Moving towards a generative safety culture: The Hearts and Minds HSE Research Programme (Part 2). *Exploration and Production Newsletter.EP2000-7006*,38-40 The Hague: Shell International

Hudson, P.T.W. (1999) *Safety Culture - The Way Ahead? Theory and Practical Principles*. In L.Hartley, E.Derricks, S. Nathan & D. McLeod (eds.) Profiting through Safety: Proceedings of the 1st International Aviation Safety Management Conference, ISMF: Perth, Australia.

Hudson, P.T.W. (1998) Menselijk Falen op de Intensive Care Afdeling/CCU *Cordiaal*, 4, 129-132.

31. Hudson, P.T.W. (1998) Safety Culture and Human Error in the Aviation Industry: In Search of Perfection. In B.Hayward (Ed.) *Proceedings of the Aviation Psychology Conference*. Ashgate, Melbourne. pp 13.

Hudson, P.T.W. (1998) Human Factors in Aircraft Maintenance: Human Error and its Management. In A.Poduval (Ed.) *Proceedings of the Bangkok Symposium on Human Factors in Aviation*. IATA, Montreal pp 10.

Hudson, P.T.W. & van der Graaf, G.C. (1998) The Rule of Three: Situation Awareness in Hazardous Situations. Paper SPE 46765 *Proceedings of the 1998 International Conference on Health, Safety and Environment in Oil and Gas Exploration and Production*. Caracas. CD-ROM Society for Petroleum Engineers, Richardson, Texas. pp 4.

Hudson, P.T.W. & Verschuur, W.L.G. (1998) Perceptions of Procedures by Operators and Supervisors. Paper SPE 46760 *Proceedings of the 1998 International Conference on Health, Safety and Environment in Oil and Gas Exploration and Production*. Caracas. CD-ROM Society for Petroleum Engineers, Richardson, Texas. pp 4.

Hudson, P.T.W. , Riley, E.D. & Gidley, J.K. (1998) A New Model for Integrity in Management Systems Paper SPE 46694 *Proceedings of the 1998 International Conference on Health, Safety and Environment in Oil and Gas Exploration and Production*. Caracas. CD-ROM Society for Petroleum Engineers, Richardson, Texas. pp 4.

Wagenaar, W.A. & Hudson, P.T.W. (1998) Industrial Safety. In P.J.D.Drenth, H.Thierry & C.J.de Wolff (Eds.) *Handbook of Work and Organizational Psychology*. Psychology Press, Hove, England. pp 65-88

Reason, J. (1997). *Managing the risks of organisational accidents* Ashgate, Aldershot

Hudson, P.T.W. (1997) Detection of Hidden Problems and Comprehensive Presentation of Diverse Data in Nuclear Safeguarding.In C. Foggi (Ed.) *Proceedings 19th Annual Symposium on Safeguards and Nuclear Material Management*. ESARDA - EU JRC Ispra. pp 287-291.

Hudson, P.T.W. (1996) Detecting latent failures: A statistical approach to diagnosis of hidden safety problems applied to nuclear safeguarding. In C. Foggi (Ed.) *Proceedings Workshop on Science and Modern Technology for Safeguards*. EU-JRC report EUR 17264, Ispra. pp 287-291

Hudson, P.T.W., Reason, J.T., Wagenaar, W.A., Bentley. P.D., Primrose, M & Visser, J.P. (1994) Tripod Delta: Proactive Approach to Enhanced Safety. *Journal of Petroleum Technology*, 46,58-62.

Wagenaar, W.A., Groeneweg, J., Hudson, P.T.W. & Reason, J.T. (1994) Promoting Safety in the Oil Industry. *Ergonomics*, 37, 1999-2013

Hudson, P.T.W., Primrose, M. & Edwards, C. (1994) The Management of Safety: Implementing Tripod-DELTA in a Major Contractor. *Proceedings of the 2nd SPE Health, Safety and Environment in Oil & Gas Exploration and Production Conference*, Society of Petroleum Engineers, Richardson, Texas. pp 699-700

Hudson, P.T.W., Primrose, M. & Cranmore. R.C. (1994) Diagnosis and Target Setting in Drilling and Engineering operations using DELTA *Proceedings of the 2nd SPE Health, Safety and Environment in Oil & Gas Exploration and Production Conference*, Society of Petroleum Engineers, Richardson, Texas. pp 653-664

Hudson, P.T.W. (1994) Veiligheidsbeheer in Ziekenhuizen, *Tijdschrift voor Ergonomie*,19, 10-15.

Hudson, P.T.W. (1994) Helicopter Procedures and Human Error: Findings from a study carried out by P Hudson. *Report for Shell Aircraft Ltd London, Westland Helicopters*, Weston Super Mare & GEC-Marconi London. pp 48

P.T.W.Hudson (1993) Human and Organisational Failure in the Petroleum Industry. In R. Flin (Ed) *Managing Offshore Safety*. Robert Gordon's, Aberdeen pp 49-61

Wagenaar, W.A., Souverijn, A.M. & Hudson, P.T.W. (1993) Safety Management in Intensive Care Wards. InB.Wilpert & T.Qvale (Eds) *Reliability and Safety in Hazardous Work Systems*. Lawrence Erlbaum, Hillsdale NJ. pp 157-169

Hudson, P.T.W. (1991) *Prevention of Accidents involving Hazardous Substances: The Role of the Human Factor in Plant Operation*. OECD Environment Monograph nr 41, OECD Paris pp 35 (Also in French pp 45 and Japanese pp 105)

Hudson, P.T.W., Groeneweg, J., Reason, J.T., Wagenaar, W.A., van der Meeren, R.J.W. & Visser, J.P. (1991) Application of TRIPOD to measure latent errors in North Sea gas platforms: Validity of Failure State Profiles. In: *Proceedings of the First International Conference on Health, Safety and Environment*. Society of Petroleum Engineers, pp 725-730

Hudson, P.T.W., Wagenaar, W.A., Reason, J.T., Groeneweg, J., van der Meeren, R.J.W. & Visser, J.P. (1991) Enhancing safety in drilling: Implementing TRIPOD in a desert drilling operation. In: *Proceedings of the First International Conference on Health, Safety and Environment*. Society of Petroleum Engineers, pp 725-730

Hudson, P.T.W. & Groeneweg, J. (1991) The Management of Human Error. *Proceedings of the ISOS Workshop on Human Error*, Bad Homburg, pp 1-4.

Reason, J. (1990). *Human Error* Ashgate, Aldershot

Wagenaar, W.A., Hudson, P.T.W. & Reason, J.T. (1990) Cognitive Failures and Accidents. *Applied Cognitive Psychology*, 4, 273-294.

Hudson, P.T.W. (1988) Risk Management. In: G.C. Molenkamp (Ed.) Mileumanagement: bedrijfsmilieuzorg en milieu-auditing. POGM, Delft. pp 65-80.

Murphy, Victoria; Littlejohn, Allison and Rienties, Bart C. (2020). Social network analysis and activity theory: A symbiotic relationship. In: Froehlich, Dominik E.; Rehm, Martin and Rienties, Bart C. eds. *Mixed methods social network analysis: Theories and methodologies in learning and education.* London, United Kingdom: Routledge, (In press).

Murphy, Victoria L.; Littlejohn, Allison; Rienties, Bart and King, Stuart (2019). Reflecting on incidents: Barriers and tactics. *Petroleum Review*

Murphy, V. L.; Littlejohn, A.; Rienties, B.; King, S. and Bryden, R. (2018). How do you know if you're learning from incidents? In: *SPE International Conference and Exhibition on Health, Safety, Security, Environment, and Social Responsibility*, 16-18 Apr 2018, Abu Dhabi, UAE, Society of Petroleum Engineers.

Murphy, V. L.; Littlejohn, A.; Rienties, B.; King, S. and Bryden, R. (2018). Where does information on incidents come from? In: *SPE International Conference and Exhibition on Health, Safety, Security, Environment, and Social Responsibility*, 16-18 Apr 2018, Abu Dhabi, UAE.

Margaryan, Anoush; Littlejohn, Allison and Lukic, Dane (2018). The development and evaluation of a Learning from Incidents toolkit. *Policy and Practice in Health and Safety*, 16(1) pp. 57–70.

Littlejohn, Allison; Margaryan, Anoush; Vojt, Gabriele and Lukic, Dane (2017). Learning from Incidents Questionnaire (LFIQ): The validation of an instrument designed to measure the quality of learning from incidents in organisations. *Safety Science*, 99(A) pp. 80–93.

Margaryan, Anoush; Littlejohn, Allison and Stanton, Neville A. (2017). Research and development agenda for Learning from Incidents. *Safety Science*, 99(A) pp. 5–13.

Stanton, Neville A.; Margaryan, Anoush and Littlejohn, Allison (2017). Editorial: Learning from Incidents. *Safety Science: Special Issue on Learning From Incidents*, 99(A) pp. 1–4.

Littlejohn, Allison; Lukic, Dane and Margaryan, Anoush (2014). Comparing safety culture and learning culture. *Risk Management*, 16(4) pp. 272–293.

Margaryan, Anoush; Littlejohn, Allison and King, Stuart (2014). Learning from incidents. *Petroleum Review*, 68

Lukic, Dane; Littlejohn, Allison and Margaryan, Anoush (2014). *Learning From Incidents Toolkit.* Energy Institute.

Littlejohn, Allison (2014). Problems focussing on contextualising learning: Guest commentary. In: Fischer, Frank; Wild, Fridolin; Sutherland, Rosamund and Zirn, Lena eds. *Grand Challenges in Technology Enhanced Learning: Outcomes of the 3rd Alpine Rendez-Vous.* Springer, pp. 65–66.

Lukic, Dane; Margaryan, Anoush and Littlejohn, Allison (2013). Individual agency in learning from incidents. *Human Resource Development International*, 16(4) pp. 409–425.

Lukic, D; Littlejohn, Allison and Margaryan, A (2013). Measuring the quality of learning from incidents processes in the workplace. In: *RWL8 - 8th International Conference on Researching Work and Learning 2013: "The Visible and Invisible in Work and Learning"*, 19-21 Jun 2013, Stirling, UK.

Lukic, Dane; Littlejohn, Allison and Margaryan, Anoush (2012). A framework for learning from incidents in the workplace. *Safety Science*, 50(4) pp. 950–957.

Lukic, Dane; Littlejohn, Allison and Margaryan, Anoush (2012). Transferability of learning from incidents. In: *Proceedings of the International Conference on Organisational Learning, Knowledge and Capabilities (OLKC)*, OLKC.

Lukic, Dane; Littlejohn, Allison and Margaryan, Anoush (2012). Learning from incidents. *Petroleum Review*, 66(790) pp. 36–37.

Lukic, Dane; Margaryan, Anoush and Littlejohn, Allison (2011). Key factors in effective approaches to learning from safety incidents in the workplace. In: *Hazards XXII*, Symposium series, IChemE.

Lukic, Dane; Littlejohn, Allison and Margaryan, Anoush (2011). University and industry interaction in learning from incidents. In: *INTED2011 Proceedings*, IATED, pp. 2165–2174.

Lukic, D.; Littlejohn, A. and Margaryan, A. (2011). Feedback loop in learning from incidents at the workplace: Individual input and organisational response. In: *Proceedings of 7th International Conference on Researching Work and Learning (RWL7 2011)*, 4-7 Dec 2011, Shanghai, China.

Lukic, D.; Margaryan, A. and Littlejohn, A. (2011). Learning from incidents in organisations. In: *Proceedings of the 2011 Conference of the European Association of Research in Learning and Instruction (EARLI)*, 2011, Exeter, UK., pp. 702–704.

Lukic, Dane; Margaryan, Anoush and Littlejohn, Allison (2010). How organisations learn from safety incidents: a multifaceted problem. *Journal of Workplace Learning*, 22(7) pp. 428–450.

Roger,Isabella, Flin,Professor Rhona (2011): Safety Leadership from the Top: Identifying the Key Behaviors. In: Proceedings of the Human Factors and Ergonomics Society 55th Annual Meeting , 2011, .pp. 1145-1149. http://pro.sagepub.com/content/55/1/1145

Reid, Helga & Flin, Rhona & Mearns, Kathryn & Bryden, Robin. (2008). Influence from the Top: Senior Managers and Safety Leadership. 3. 10.2118/111762-MS.

Hudson, Patrick & Bryden, Robin & Vuijk, Margot & Biela, Dominika & Cowley, Charles. (2008). Meeting Expectations: A New Model for a Just and Fair Culture. 10.2118/111977-MS.

Bryden, Robin & Flin, Rhona & Hudson, Patrick & Vuijk, Margot & Graaf, Gerard. (2006). Holding Up the Leadership Mirror, Then Changing the Reflection: The "Seeing Yourself as Others See You" Tool. 10.2523/98700-MS.

Bryden, Robin & Flin, Rhona & Hudson, Patrick & Vuijk, Margot & Graaf, Gerard. (2006). Holding up the Leadership Mirror then Changing the Reflection: The Seeing Yourself as Others See You tool. 8th SPE International Conference on Health, Safety and Environment in Oil and Gas Exploration and Production 2006. 2. 10.2118/98700-MS.

van, der & Bryden, Robin & Zijlker, Volkert & Hudson, Patrick. (2004). Hearts And Minds Change Programmes Make A Difference. 10.2118/86589-MS.

Flin, Rhona & Mearns, Kathryn & O Connor, Paul & Bryden, R.. (2000). Measuring Safety Climate: Identifying the Common Features. Safety Science - SAF SCI. 34. 177-192. 10.1016/S0925-7535(00)00012-6.

Sneddon, Anne & Mearns, Kathryn & Flin, Rhona & Bryden, R.. (2004). Safety and Situation Awareness in Offshore Crews. 10.2523/86592-MS.

Bryden, R. & Hudson, Patrick. (2005). Because we want. Safety and Health Practitioner. 23. 51-54.

Plenary Addresses

W.A. Wagenaar. *First International Conference on Health, Safety and Environment*. The Hague. 1991

J.T.Reason. *Second International Conference on Health, Safety and Environment*. Jakarta. 1993

P.T.W. Hudson *4th International Conference on Health, Safety and Environment*. Caracas. 1997

P.T.W. Hudson *7th International Conference on Health, Safety and Environment*. Calgary. 2004