

## Annual Report of IEA Technical Committee 2016

Name of Technical Committee: **Human Factors and Sustainable Development**

Website (URL): <http://www.iea-kl.de/>

Chair: **Andrew Thatcher**

Appointment date of chairperson: **August 2015 (TC Meeting Melbourne)**

Co-chair (if more than one co-chair, please provide all names and appointment dates): /

Appointment date of co-chairperson: /

Secretary (optional): /

Appointment date of secretary: /

Reporting Year	Work Group / Executive Members	Current Membership	Activities accomplished for the reporting year 2016	Activities planned for the following year 2017	Support requested from IEA Executive Committee, Standing Committees or other Technical Committees for the following year 2017
2016/2017	<p>The Technical Committee consists of the following leadership members:</p> <p><b>TC Chair:</b> Andrew Thatcher, South Africa</p> <p><b>Sub-Committee 1: Theoretical perspectives on human factors and sustainable development:</b> Ivan Bolis and Claudio Brunoro, Brazil</p> <p><b>Sub-Committee 2: Sustainability and risk management:</b> Sylvie Nadeau and Barthelemy Ateme-Nguema, Canada</p> <p><b>Sub-Committee 3:</b></p>	<p>A Full Member List together with Sub-Committee membership is attached</p>	<p><b>Special Issue of Applied Ergonomics, 2016, Volume 57</b></p> <p>Thatcher and Yeow “Human factors for a sustainable future”; Lortie et al. “Holistic Sustainable Development: Floor-Layers and Micro-Enterprises”; Engvist et al. “Perspectives on recycling centres and future developments”; Franke et al. “Individual differences in BEV drivers’ range stress during first encounter of a critical range situation”; Kalantzis et al. “Mental models of a water management system in a green building”; Revell and Stanton “Mind the gap: deriving a compatible user mental model of the home heating system to encourage sustainable</p>	<p>A State of Science paper for the journal Ergonomics has been submitted on how HFE has addressed global problems.</p> <p>A second book on HFSD has been accepted by Taylor &amp; Francis with the following chapters: Chapter 1. How has HFE responded to the global challenges of sustainability (Thatcher, Zink, and Fischer) Chapter 2. What is the ultimate purpose of HFE? Quality of life and decent work. (Hancock) Chapter 3. HFE and the global sustainable development goals</p>	<p>None anticipated</p>

	<p><b>Human factors and sustainable development in global value creation:</b> Klaus Zink and Klaus Fischer, Germany</p> <p><b>Sub-Committee 4: Ergonomics and design for sustainability</b> Antonio Marano and Giuseppe di Bucchianico, Italy</p>		<p>behaviour; Saravia-Pinilla et al. “A comprehensive approach to environmental and human factors into product/service design and development. A review from an ergoecological perspective”; Bolis et al. “Work for sustainability: case studies of Brazilian companies”; Poon et al. “River and fish pollution in Malaysia: A green ergonomics perspective”; Samadhram et al. “Towards a new paradigm: activity level balanced sustainability reporting”.</p> <p><b>Edited book: “Ergonomics and human factors for a sustainable future: current research and future possibilities” (anticipated publication in late 2017)</b> “Responsible consumption: behavioural change for electronic-waste reduction”; “Human factors and ergonomics in interactions with sustainable appliances and devices”; “Human factors and ergonomics in biophilic design: human connections with nature”; “The role of institutions in green ergonomics”; “HFE in the adoption and use of EVs/BEVs/HEVs”; “Green buildings: the role of human factors and ergonomics”; “HFE in supply chain</p>	<p>(Sznelwar, Bolis, Brunoro, Giannini, and Kawazaki) Chapter4. HFE and the NAE’s grand challenges (unallocated) Chapter 5. Sustainability, values, and ethics for HFE (Lange, Garcia-Acosta, and Thatcher) Chapter 6. Sustainability, HFE, and developing world problems (Christie, Hutchings, and Todd)</p> <p>Chapter 7. Social lifecycle analysis (Jentsch and Zink) Chapter 8. Product life cycles and HFE (Garcia-Acosta, Saravia, and Daza) Chapter 9. Applying sustainable system-of-systems for HFE (Thatcher and Yeow) Chapter 10. unallocated yet Chapter 11. Global value creation and supply chain ergonomics (Fischer) Chapter 12. Crowdwork, outsourcing, and decent work (Zink) Chapter 13. Corporate sustainability and lean manufacturing (unallocated) Chapter 14. HFE, and participatory approaches</p>	
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			<p>management and sustainable global supply chains”;  “Lives we have reason to value”;  “Complex system-of-systems approach to understanding sustainability in human factors and ergonomics”;  “Policymakers’ challenges in driving green technologies: political will and information asymmetries”;  “Building sustainable organisations: contributions from ergonomics &amp; psychodynamics of workions”;  “Defining sustainable and ‘decent’ work for human factors and ergonomics”.</p> <p>The Human Factors and Ergonomics Society’s theme for their annual prize was sustainability/resilience in 2015/16. HFSD TC member, Thomas Franke and his team, from the Technical University of Chemnitz won the award for a paper entitled “Which factors can protect against range stress in everyday usage of battery electric vehicles? Toward enhancing sustainability of electric mobility systems”. This paper appeared in the journal Human Factors.</p> <p>HFES2016: Panel discussion “This changes everything? Macroergonomics and sustainability” with panellists:</p>	<p>for organisational sustainability (Imada and Imada)</p> <p>Chapter 15. Complex, interrelated sustainability problems and the role of HFE in the Persian Gulf (Meshkati and Tabibzadeh)  Chapter 16. Social sustainability in the Chilean forestry industry (Meyer and Apud)  Chapter 17. Integrating HFE into the sustainability of the East Cape community (Moore)  Chapter 18. Sustainable development and energy systems: the Francophone approach (Guibourdenche et al)  Chapter 19. “Shut the fridge door”: sustainable socio-technical design for the retail industry (Waterson)  Chapter 20. Implementation of ergonomics in green building design (Hedge and Dorsey)</p> <p>An HFSD Symposium has been accepted for the ACE-ODAM Conference in July 2017 with 5 presentations.</p>	
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	<p><b>Sub-Committee 2: Sustainability and risk management</b> SC Chairs: Sylvie Nadeau, <a href="mailto:sylvie.nadeau@etsmtl.ca">sylvie.nadeau@etsmtl.ca</a> Barthélémy Ate- Nguema, <a href="mailto:Barthelemy-hugues.ate-&lt;br/&gt;nguema@uqat.ca">Barthelemy- hugues.ate- nguema@uqat.ca</a></p>		<p>Andrew Thatcher, Patrick Waterson, Peter Hancock, Klaus Zink, Antony Hilliard, and Matt Davis.</p> <p>The French Association for Research in Ergonomics Psychology and Ergonomics (ARPERGE) launched its sub-committee "Concevoir pour le Développement Durable" (or Design for Sustainable Development). This sub-committee is Chaired by HFSD TC member Julien Guibourdenche from the University of Technology of Troyes</p> <p><b>Conference papers</b></p> <p>Randelin, M., Mäkitalo, M., Järvelin-Pasanen, S. (2016) Ergonomics in Theory and Practice Through the Ergonetti Learning Program. NES2016 (Nordic Ergonomics and Human Factors Society) held in Kuopio, Finland 14.-17. August 2016.</p> <p>Boudreau-Trudel, B, Nadeau, S., Zaras, K. (2015) Introduction of mining equipment: key factors for sustainable development ». In The Proceedings of the 19th Triennial Congress of the International Ergonomics Association. Melbourne, 9-14 August, 2015 (Melbourne,</p>	<p>The TC is now making active plans for joint sessions at IEA2018. So far we have had discussions with the ATWAD TC and the Building &amp; Construction TC, and with EQUID. Other options are also being discussed.</p>	
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			<p>Australia, Aug. 9-14, 2015) International Ergonomics Association.</p> <p>Bouzid, A.H. (2015) Safety and reliability assessment of a miniature steam generator . In Proceedings 19th Triennial Congress of the International Ergonomics Association (Melbourne, Australia, Aug. 9-14, 2015) International Ergonomics Association.</p> <p>Chim, J.M.Y. (2015). Effective Ergonomics Project on Implementation of FITS Office Ergonomics Program. In Proceedings 19th Triennial Congress of the International Ergonomics Association (Melbourne, Australia, Aug. 9-14, 2015) International Ergonomics Association.</p> <p>Chim, J.M.Y. (2015). Healthy Computing and Ergonomics: Review of Musculoskeletal Health Problems and Workplace Setting. Poster no. 1651, 19th Triennial Congress of the International Ergonomics Association (Melbourne, Australia, Aug. 9-14, 2015).</p> <p>Desire, E. et Nadeau, S. et Boudreau-Trudel, B. (2015) Design of control panels for underground mining equipment:</p>		
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			<p>Why open innovation should be promoted as a sustainable approach to development. Poster no. 349, 19th Triennial Congress of the International Ergonomics Association (Melbourne, Australia, Aug. 9-14, 2015).</p> <p>Hallé, S., Fatisson, J., Nadeau, S., Vinches, L. (2015) Cooling technologies for reducing thermal constraints in deep under-ground mines : OHS challenges. In The Proceedings of the 19th Triennial Congress of the International Ergonomics Association. Melbourne, 9-14 August, 2015 (Melbourne, Australia, Aug. 9-14, 2015) International Ergonomics Association.</p> <p>Nadeau, S. , Morency, F., Nsangou, J.R. (2015) The contextualisation of lean manufacturing in the mining sector: foreseeable challenges to occupational health and safety. In The Proceedings of the 19th Triennial Congress of the International Ergonomics Association. Melbourne, 9-14 August, 2015 (Melbourne, Australia, Aug. 9-14, 2015) International Ergonomics Association.</p> <p>1. <b>Conference/Seminar/Workshop</b></p>		
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	<p><b>Sub-Committee 3: Human Factors and Sustainable Development in Global Value Creation</b></p> <p>Chairs: Klaus J. Zink (<a href="mailto:klaus.j.zink@ita-kl.de">klaus.j.zink@ita-kl.de</a>); Klaus Fischer (<a href="mailto:Klaus.fischer@ita-kl.de">Klaus.fischer@ita-kl.de</a>);</p>		<p>Conference "Fortschritte in der Nachhaltigkeitsforschung" [Progress of Sustainability Research] (TU Kaiserslautern, February 2016): Lecture: "Nachhaltigkeit in globalen Lieferketten: Einflussmechanismen und aktuelle Fragestellungen" [Sustainability in Global Supply Chains: Mechanisms and State of the Art] (Klaus J. Zink) (conference paper with the same title is in print);</p> <p>HFES Internal Annual Meeting 2016 (Washington D.C., September 2016): Panel Discussion with Klaus J. Zink: "This Changes Everything: Macroergonomics and the Future of Sustainability"</p> <p><b>2. Research</b> Accomplishment of a 3-year research cooperation with AUDI AG "CR im Beschaffungsmanagement" [Corporate Responsibility in purchasing management];</p> <p>Study "Einflussmechanismen auf Nachhaltigkeit in globalen Lieferketten" [Governance Mechanisms for Sustainability in Global Supply Chains] for GIZ (German Development Organization)</p> <p><b>3. Publications</b></p>	<p>The SC is currently in a process of restructuring; together with a (hopefully remaining) core group, future activities will be planned, mainly with regards to Florence 2018</p>	
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			Jentsch, M.; Zink, K. (2016, in print): Strategische Bedeutung eines nachhaltigen Lieferkettenmanagements [Strategic Relevance of Sustainable Supply Chain Management]. In Wunder, T. (Ed.): CSR und strategisches Management [CSR and strategic management]. Berlin, Heidelberg: Springer.		
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Have you held a TC meeting at the IEA 2015 World Congress in Melbourne? **Yes**

Thomas Alexander, STP chair