

# NES 2022 Work Well – Ergonomics in an unpredictable world

Sunday, 23 October      Norrlands Nation Fest & Konferens

17:00	Registration opens
18:00 - 20:00	Get-together session

Monday, 24 October      Norrlands Nation Fest & Konferens

08:00 - 09:00	Registration
09:00 - 09:15	<p><b>Welcome address and opening ceremony</b>  <i>Robin Strand, Professor of computerized image analysis and Deputy head of the IT department, Uppsala University</i>  <i>Denis A. Coelho, NES President and Cecilia Österman, EHSS President</i></p>
09:15 - 09:45	<p><b>KEYNOTE</b> Digitalisation and the work environment  <i>Åsa Cajander, Professor of human-computer interaction, Uppsala University</i></p>
09:45 - 10:15	<p><b>KEYNOTE</b> Human Factors in the age of autonomous systems  <i>Ole Andreas Alsos, Associate professor of interaction design, Norwegian University of Science and Technology (NTNU)</i></p>
10:15 - 10:30	Coffee break & Exhibitions

Session 1	ROOM: Gamla salen	ROOM: Strömholm	ROOM: Inre läsrummet
10:30 - 12:00	<p><b>Occupational safety and health management</b>  <i>Chair: Viktoria Wahlström</i></p>	<p><b>WORKSHOP: Using fatigue failure based exposure assessment tools to evaluate the risk of distal upper extremity MSDs</b>  <i>Sean Gallagher, Mark Schall and Peter Johansson</i></p> <p>This workshop will give some background regarding fatigue failure theory, and will provide hands-on analysis of the Distal Upper Extremity Tool (DUET). DUET is a new risk assessment tool for hand-intensive occupational tasks. It is easy to use and can identify tasks responsible for higher proportion of risk (most in need of intervention).</p>	<p><b>Transport systems</b>  <i>Chair: Anna-Lisa Osvalder</i></p>
	Managers organisational and social work environment during the pandemic in Sweden <i>Rachael Tripney Berglund</i>		Safety and human factors implications of RPAS introduction in controlled airspace: a case study <i>Vittorio Sangermano</i>
	Organisational capabilities for developing the system operator role in the Norwegian power grid <i>Asgeir Drøivoldsmo</i>		Training non-technical competences - potential benefits and perceived needs for improvement <i>Karolina Stark</i>
	The key role of the employee in incident prevention and ergonomics as a tool to achieve a safe working environment <i>Petr Koutný</i>		A roadmap for UX in rail: Changing tracks in train traffic research <i>Mikael Laaksoharju</i>
	Leadership quality - video-assisted work analysis of leaders' behaviours <i>Simon Elvnäs</i>		Transferring tacit knowledge among operators in safety-critical systems <i>Anna-Lisa Osvalder</i>
	With the stable as a workplace – about attractive, healthy and sustainable employments in the Swedish equine sector <i>Åsa Bergman Bruhn</i>		How human skills and technology overcome accidents in space , in the air and on land building systems resilience <i>Brenda Coutinho</i>

12:00 - 13:00	Lunch break & Exhibitions		
Session 2	ROOM: Gamla salen	ROOM: Strömholm	ROOM: Inre läsrummet
13:00 - 14:30	<p><b>SPECIAL SESSION: Activity-based work environments – Perspectives on the implementation process and employee well-being</b>  <i>Chairs: Annu Haapakangas &amp; Pii Markkanen</i></p>	<p><b>Physical ergonomics</b>  <i>Chair: Liyun Yang</i></p>	<p><b>SPECIAL SESSION: A user-centered product development and evaluation of an equipment vest with integrated ballistic protection for the Swedish police force</b>  <i>Chair: Louise Bæk Larsen</i></p>
	<p>Users' insight of what promotes or hinders health among office workers  <i>Ulrika Florin</i></p>	<p>Importance of good working gloves - ErgoSleeve in validating the gloves and measuring arm muscle load  <i>Riitta Simonen</i></p>	<p>A user-centered product development and evaluation of an equipment vest with integrated ballistic protection for the Swedish police force – a participative project  <i>Louise Bæk Larsen</i></p>
	<p>Effects of workplace change on work engagement and perceived work-environment fit – The role of change management  <i>Pia Sirola</i></p>	<p>A comparative study regarding noise and hand-arm vibration exposure during self-compacting and conventional concrete casting  <i>Inga Mikhaltchouk</i></p>	<p>Vest design and development process  <i>Linéa Stenfors, Sweden</i></p>
	<p>The important process when relocating to activity-based workplaces  <i>Eva Bergsten</i></p>	<p>An objective approach for assessment of hand-arm vibration dose  <i>Guilherme Elcadi</i></p>	<p>Pressure measurements between shoulders and vest - Method  <i>Roy Tranberg</i></p>
	<p>Tools for creativity in co-design workshop – Applying participatory design process to support workplace satisfaction and need-supply fit formation  <i>Pii Markkanen</i></p>	<p>Feasibility of electromyographic measurements with a new inexpensive wearable Bluetooth device  <i>Mikael Forsman</i></p>	<p>Pressure measurements between shoulders and vest - Result  <i>Louise Bæk Larsen</i></p>
	<p>Workspace use, perceived work environment and employee well-being – A case study of an activity-based office  <i>Annu Haapakangas</i></p>	<p>Application of low-cost accelerometers in risk assessment of low back pain due to whole body vibrations  <i>Pasan Hettiarachchi</i></p>	<p>Usability evaluation of an equipment vest with integrated ballistic protection  <i>Kristina Eliasson</i></p>
		<p>Interactive individual ergonomic report as means for risk assessment and ergonomic education among surgeons  <i>Melanie Hensel</i></p>	<p>Physical activity patterns among uniformed police officers  <i>Peter Johansson</i></p> <p>Effects of an equipment vest without integrated ballistic protection as a rehabilitation measure for police officers with low back pain  <i>Teresia Nyman</i></p>

Monday, 24 October

Norrlands Nation Fest & Konferens

14:30 - 15:00	<b>Coffee break &amp; Exhibitions</b>		
Session 3 15:00 - 16:00	<b>ROOM: Gamla salen</b>	<b>ROOM: Strömholm</b>	<b>ROOM: Inre lärummet</b>
	<b>NES Student Prize session</b> <i>Chair: Kristina Eliasson</i>	<b>SPECIAL SESSION: The European Work Environment Authorities</b> <i>Chair: Elin Vidlund</i>	<b>SPECIAL SESSION: Occupational health challenges in the Arctic</b> <i>Chair: Jens Wahlström</i>
	Visor adapted for headlamps, for ear-nose-throat doctors <i>Gustav Brogren, Sweden</i>	Ergonomic Risk Management Strategy in Ireland: A focus on Risk Exposure reduction <i>Frank Power, Health and Safety Authority, Ireland</i>	Cold exposure and MSD – a prospective population-based study <i>Charlotte Lewis</i>
	Sole entrepreneur's networking and wellbeing at work at the Savo region <i>Piia Kauhanen, Finland</i>	Improving ergonomic risk assessments in the Norwegian Oil and Gas Industry <i>Brit Gullesen, Petroleum Safety Authority, Norway</i>	Nordic cooperation for promoting occupational health and safety research and education in the Arctic <i>Hans Pettersson</i>
	Managing bereaved employees at the workplace <i>Maria Bang Jensen, Denmark</i>	What is going on at the Swedish Work Environment Authority regarding the prevention of MSDs? <i>Elin Vidlund, Swedish Work Environment Authority</i>	Carpal tunnel syndrome and cold exposure – a population based study <i>Jens Wahlström</i>
16:00 - 17:00	<b>NES Annual General Meeting in Strömholm</b>		
19:00	<b>Conference dinner at Norrlands Nation</b> NES Student Prize Winner announced		

**08:30 - 09:00** **KEYNOTE** Meet the world – the extended family tree of the Ergonomics and Human Factors professional  
*Cecilia Berlin, Associate professor of production ergonomics and socially sustainable workplace design, Chalmers University of Technology*

**09:00 - 09:30** **KEYNOTE** Research and development for future working life  
*Magnus Svartengren, Professor of occupational and environmental medicine, Uppsala University*

**09:30 - 10:00** **Coffee break & Exhibitions**

<b>Session 4</b>	<b>ROOM: Gamla salen</b>	<b>ROOM: Strömholm</b>	<b>ROOM: Inre läsrummet</b>
<b>10:30 - 12:00</b>	<b>Advanced risk management tools</b> <i>Chair: Liyun Yang</i>	<b>Ergonomics in healthcare</b> <i>Chair: Päivi Kekkonen</i>	<b>Human factors in design</b> <i>Chair: Catherine Trask</i>
	Improving safety culture in occupational contexts: an actionable toolkit <i>Gabriella Duca</i>	Management of well-being at work in large Finnish healthcare companies according to corporate social responsibility reports <i>Päivi Kekkonen</i>	Building safety into the lifecycle: the potential for building information modelling (BIM) to enhance occupational health and safety <i>Catherine Trask</i>
	A usability study of the SRA Index (Sustainable Risk Awareness Index), a KPI for Management Support <i>Helena Franzon</i>	Digitalisation in primary healthcare - the barriers and facilitators for digital patient- and work management to work well <i>Susanne Frennert</i>	Ergonomic evaluation and social construction of a petroleum refining unit project (in times of a pandemic) <i>Cynthia Alhadeff</i>
	The RAMP 2.0 project – Towards an enhanced MSD risk management tool <i>Linda M Rose</i>	Meeting the challenges of home care in small residential bathrooms: creation of the bathroom aid inventory <i>Brenda Rodrigues Coutinho</i>	Ergonomics early in the design phase at Scania <i>Kerstin Tegbrant</i>
	Systematic risk management with RAMP for risk assessment and adapted changes - an implementation study <i>Mikael Forsman</i>	Digitalization of home care and home care nursing during the Covid-19 pandemic: initial findings <i>Christofer Rydenfält</i>	Building information modelling and integration of occupational health and safety in construction project design <i>Kari Anne Holte</i>
	Results from biomechanical risk assessment aboard fishing vessels <i>Alessio Silvetti</i>	Can journey mapping be used to visualize information sharing in home care? <i>Johanna Persson</i>	Comfort, seat belt fit and misuse for older adults when travelling in cars <i>Melina Makris</i>
			Evaluation of comfort and fit of personal protective equipment <i>Anna-Lisa Osvalder</i>

**12:00 - 13:00** **Lunch break & Exhibitions**

	ROOM: Gamla salen	ROOM: Strömholm	ROOM: Inre läsrummet
<b>Session 5</b> 13:00 - 14:30	<b>SPECIAL SESSION: Work well – by improving working condition after risk assessment with reliable technical methods</b> <i>Chair: Mikael Forsman</i>	<b>Modern digitalisation technologies</b> <i>Chair: Steven Mallam</i>	<b>Applications in ergonomics</b> <i>Chair: Petr Koutný</i>
	Back bending at work influence risk of long-term sickness absence <i>Nidhi Gupta &amp; Liyun Yang</i>	On a Quest: The conundrums of designing a scientific study of office tasks in a VR environment <i>Cecilia Berlin</i>	Effects of prismatic loupes on surgeons' postural and muscular neck workload <i>Xuelong Fan</i>
	ActiPASS a new improved tool to measure physical behaviours 24/7 from thigh worn accelerometers <i>Peter Johansson</i>	Ergonomics of office Work in a VR environment: a state-of-the-art review <i>Maral Babapour Chafi</i>	Methodologies for a Performance Based Approach to Ergonomics Programs <i>Rachel Michael</i>
	Effectiveness of vibrotactile feedback training to reduce postural exposure in manual sorting <i>Liyun Yang</i>	The use of STEP analysis supported by virtual simulations in concept development <i>Johan Nordström</i>	Resilience and preparedness in maritime training – current approaches and research gaps <i>Gesa Praetorius</i>
	A new generation of smart t-shirts with automatic direct reports <i>Jörgen Eklund &amp; Viktoria Wahlström</i>	Exploring augmented reality for advanced maritime operations <i>Henrik Aasgaard Carho</i>	Objective risk assessment of glare and subjective rating of the frequency of glare – a visual ergonomics risk assessment, VERAM <i>Hillevi Hemphälä</i>
	A sensor-based smartphone app for cost and time effective wrist velocity measurements <i>Mikael Forsman</i>	Heuristics for human multi-purpose robot interaction <i>Susanna Aromaa</i>	Headaches in combination with visual ability, eye- and musculoskeletal strain in connection with visually demanding work tasks <i>Hillevi Hemphälä</i>
			Financial effects of suggested work environment improvements – Examples from applied Masters students' projects <i>Linda Rose</i>
14:30 - 14:45	<b>Coffee break &amp; Exhibitions</b>		

Session 6	ROOM: Gamla salen	ROOM: Strömholm	ROOM: Inre läsrummet
14:45 - 15:45	<b>WORKSHOP: Hands-on training to use smart work clothes</b> <i>Chairs: Jörgen Eklund &amp; Mikael Forsman</i>	<b>WORKSHOP: Crisis information design with a human factors/ergonomics perspective</b> <i>Chair: Bijan Aryana</i>	<b>WORKSHOP: Visual ergonomics and lighting</b> <i>Chair: Hillevi Hemphälä &amp; Cecilia Österman</i>
	<p>Smart work clothes have been developed to measure work postures. Based on these measurements an automatic risk assessment for MSDs can be obtained. Also, this system can be used for self-training of work technique.</p> <p>The participants in the workshop will get an opportunity to practice the use of smart work clothes for risk assessment and work technique training. They will start up the system, perform simulated work sessions, get the automated result analysis and discuss the findings.</p> <p>The workshop will partly be a demonstration and partly an applied hands-on training session.</p>	<p>The human variable in societal resiliency to disasters: the perspective of CORE project <i>Gabriella Duca</i></p> <p>Many people are subject to information gap during a crisis due to functional variations, age, and even language. Join us in this workshop to see how human factors and ergonomics can contribute to an inclusive information design for crisis.</p>	<p>Good lighting is important for visual comfort, safety and productivity in workplaces. But what is good lighting and how do we know if a lighting solution is good?</p> <p>This workshop includes a lecture and practical demonstrations. A brief review will be given of lighting recommendations and standards of for the visual environment and how these can be sourced. A short Visual Ergonomics checklist will also be presented with instructions how to use the checklist. It is suitable for all wishing to gain an understanding of visual ergonomics for workplaces.</p>
15:45 - 16:00	<p style="text-align: center;"><b>Closing session</b>  <i>Jessica Lindblom &amp; Cecilia Österman, Organising committee</i>  <i>Denis A Coelho, NES President</i></p>		