

PROGRAM

SUSTAINABLE MSDs PREVENTION: NEW CHALLENGES FOR RESEARCH AND PRACTICE

5-7 MAY 2026

Centre de congrès Prouvé,
Nancy, France



WELCOME

I am delighted to invite you to the international conference organised by the INRS on the prevention of musculoskeletal disorders (MSDs).

MSDs have been one of the leading causes of illness, loss of work capacity and workplace accidents in most countries for many years.

Occupational health challenges therefore persist and are even taking on new forms. The profound changes in the world of work that we have been observing over the past decade are altering exposure profiles in ways that are sometimes unexpected. The development of digital technology, new technologies, forms of remote working, algorithmic management, and the emergence of new sectors linked to the green transition are all realities that raise new questions. These transformations, which may present opportunities, thus require an update of the knowledge and strategies used to manage risks.

The aim of this international event is to highlight the wealth and diversity of recent research findings and multidisciplinary approaches aimed at preventing MSDs and supporting change in the workplace.

The programme is extensive and will feature presentations across a range of disciplines: ergonomics, epidemiology, occupational medicine, physiology, psychology, biomechanics, and more. These will help to better understand the new challenges involved in sustainably reducing exposure to MSD risk factors.

This conference is open to all professionals involved in the prevention of MSDs worldwide, including scientists, experts, practitioners and occupational health and safety professionals.

We look forward to seeing you in Nancy from 5 to 7 May.

JEAN THEUREL

Head of the Department
of Applied Sciences in Work
and Organisations



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TUESDAY, 5 MAY 2026 (PM)

13:00 - 14:00 Registration and welcome

14:00 - 14:30 **OPENING INRS*** – Auditorium 300, Level 1

14:30 - 15:30 **KEYNOTE PRESENTATION*** – Auditorium 300, Level 1

“Musculoskeletal disorders in the digital era - Epidemiology, risk factors and tools for prevention”

P. Madeleine (Aalborg University, Denmark) & Y. Roquelaure (Université d'Angers, CHU Angers ; Université de Rennes, Inserm, EHESP ; IRSET, France)

15:30 - 16:00 Coffee break

16:00 - 17:30 **PARALLEL SESSIONS**

01. ORAL COMMUNICATIONS:

NEW TECHNOLOGIES – EXOSKELETONS*

– Auditorium 300, Level 1

16:00 - 16:20 – #100

Sensorimotor adaptations to the use of a passive shoulder occupational exoskeleton during repeated training sessions for an overhead work task

K. Desbrosses, C. Hayot*

16:20 - 16:40 – #115

The Impact of Training and Extended Use of Back-Support Exoskeletons on Worker Biomechanics, Discomfort, and Perceived Workload in Logistics

*L. Jakobsen, A. Samani, K. Desbrosses, M de Zee, B. Steinhilber, P. Madeleine**

16:40 - 17:00 – #52

Workers' opinions on exoskeletons and their ability to reduce MSDs: a cross-section of the literature and a field study

M.Gonella, I.Berger, D. Denis*

17:00 - 17:20 – #87

Postural awareness as a precondition for safe, task-specific use of industrial exoskeletons and as a lever to develop it

C. Vignola, C. Pigni, A. Pagano*

02. SYMPOSIUM:

“STATUS QUO ON INDUSTRIAL EXOSKELETON RESEARCH”

U. Glitsch, T. Luger

– Room 103, Level 1

The updated German medical guideline on exoskeletons for preventing work-related musculoskeletal disorders

T. Luger, K. Heinrich, S. Weiler, J. Hegewald, N.S. Korrapati, P. Schwenkreis, S. Middeldorf, U. Glitsch, F. Liebers, A. von Glinski, T.A. Schildhauer, G. Winter, G. Schnalke, S. Wischniewski, M. Peters, I. Schalk, D. Kern, R. Schick, M. Jäger, U. Daub, B. Steinhilber*

Evaluation and implementation of exoskeletons in the workplace

I. Schalk, U. Glitsch, S. Huis, D. Kern, K. Steindorf, G. Winter, L. Ralfs, R. Schick*

Analysis of the relief of the lumbar spine by different back-support exoskeletons during lifting and holding

U. Glitsch, J. Johns, K. Heinric*

Using musculoskeletal simulation for knowledge-based selection of industrial exoskeletons

D. Scherb, T. Drees, B. Kuhlentötter, R. Weidner*

Shoulder exoskeletons in aircraft assembly: a field study on potential long-term effects

K. Heinrich, R. Grzeszick, M. Kaufmann, T. Wagner, C. Böhm*

03. ORAL COMMUNICATIONS:

NEW AND ATYPICAL FORMS OF WORK AND ORGANIZATION

– Room 104, Level 1

16:00 - 16:20 – #82

Onset of low back pain, depressive symptomatology and teleworking conditions during lockdown in France: a structural equation modelling approach

N. Fouquet, C. Ménard, M. Fadel, J. Bodin, Y. Roquelaure*

16:20 - 16:40 – #53

Sedentary behaviour and physical activity during hybrid work

K. Wechsler, R. Ellegast, B. Webee*

16:40 - 17:00 – #50

The reality of home workstation: When self-assessment meets ergonomist evaluation

F. Kern, N. Cianferoni*

04. ORAL COMMUNICATIONS:

RISK ASSESSMENT AND HEALTH EFFECTS -

INDINGS FROM COHORT AND EMERGING METHODS

– Room 105, Level 1

16:00 - 16:20 – #103

Do cumulative work exposures affect the risk of knee meniscus surgery in the CONSTANCES cohort?

A. Descatha, M. Fadel, R. Colvin, A. Marie Dale, C. Ribet, A. Leclerc, B. A Evanoff*

16:20 - 16:40 – #107

Use of a Job Exposure Matrix to study both recent and past work exposures on the incidence of carpal tunnel release surgery in the CONSTANCES cohort

B. A Evanoff, M. Fadel MD, R. Colvin, C. Ribet, A. Leclerc, A. Descath*

16:40 - 17:00 – #93

Identification of questions characterizing the margin of manoeuvre from an epidemiological point of view

J. Bodin, M.E. Major, S. Caroly, A. Cuny, N. Vézina, Y. Roquelaure*

17:00 - 17:20 – #58

Towards Standardized Assessment of Sedentary Behavior and Physical Activity at Work: Metrics and Methods Using Thigh-Worn Sensors

B. Weber, K. Wechsler, I. Hermanns-Truxius, R. Ellegast*



* French translation ** Session in French with English translation

WEDNESDAY, 6 MAY 2026

08:30 - 09:00 Coffee Welcome

09:00 - 10:00 **KEYNOTE PRESENTATION*** – Auditorium 300, Level 1

“Population and sector diversity and MSD: what do we know, what don’t we know, and where do we go?”

J.N. Côté (Ottawa University, Canada) & B. Evanoff (Washington University of Medicine, USA)

10:00 - 10:30 Coffee break

10:30 - 12:00 **PARALLEL SESSIONS**

**01. ORAL COMMUNICATIONS:
POPULATION AND SECTOR SPECIFIC APPROACHES –
INTERVENTIONAL STUDIES***

– Auditorium 300, Level 1

10:30 - 10:50 – #55

**The Weight of Precariousness: MSD Risk Factors in Temporary
Construction Jobs**

B. Langard, G. Plançon*

10:50 - 11:10 – #90

**Work organization and MSDs in the liberal health profession.
The case of ophthalmologists**

W. Buchmann, E. Fortineau, E. Ribaute, A. Brézi*

11:10 - 11:30 – #81

**Playing with Uncertainty: When the Unexpected Overloads
Performing Artists**

A. Landry, E. Laneyrie*

**02. ORAL COMMUNICATIONS:
NEW TECHNOLOGIES – DIGITAL TOOLS**

– Room 103, Level 1

10:30 - 10:50 – #74

**The health and performance dilemma in the logistics sector: challenges
for the prevention of musculoskeletal disorders**

A. Sicco, A. Landry, M.E Bobillier Chaumon*

10:50 - 11:10 – #72

**Design and deployment of a workplace-based mobile health application:
a multidimensional approach to employee health**

N. Roger, P. Delignieres, T. Lelard, F. Telliez*

11:10 - 11:30 – #109

**Comparison of three approaches to understanding the challenges
of human activity around a farm management software. What lessons
can be learned for the design?**

M. Salifou, N. Tricot, F. Coutarel*

03. ORAL COMMUNICATIONS: RISK ASSESSMENT AND HEALTH EFFECTS – SECTOR SPECIFIC APPROACHES

– Room 104, Level 1

10:30 - 10:50 – #84

Work organization, bus ergonomics, and musculoskeletal disorders in Swiss bus drivers: Evidence from the TRAPHEAC cohort

D. Petrovic, V. F M Remy, I. Guseva Canu*

10:50 - 11:10 – #44

Impact of tool handling changes on posture and know-how

M.A. Gilles, J. Dellai, I. Clerc-Urmès, E. Quillerou, G. Dietrich*

11:10 - 11:30 – #65

Exploring the risks of musculoskeletal disorders associated with baggage handling in baggage room at an international airport

E. Goubault, M. Gonella, C. Jolly, D. Bulet-Vienney*

04. SYMPOSIUM: “UNDERSTANDING THE LONG-TERM CONSEQUENCES OF EXOSKELETONS IN MSD PREVENTION: A CROSS-DISCIPLINARY PERSPECTIVE”

S. Lemonnier, A. Bucchieri, P. Maurice*

– Room 105, Level 1

Transparency and intuitiveness of an active exoskeleton of the upper-limb

*N. Vignais**

The biomechanical adaptation to exoskeleton use: from the familiarization to the acceptance

G. Mornieux, C. Thevenot, A. Favennec*

Persistent effects of upper-limb exoskeletons on inter-joint coordination

O. Dubois, R. Parry, R. Roby-Brami, G. Brunelli, N. Jarrassé*

Long-term adoption of professional exoskeletons: a five-year research review

L. Wioland, J-J. Atain Kouadio, I. Clerc-Urmès, F. Biraud, M. Dufraisse*

Ten years of exoskeleton integration: lessons learned and success factors

B. Gourmaud, M. Brout*

12:00 - 13:30 Lunch break

13:00 - 13:30 **POSTER SESSION**

13:30 - 14:30 **KEYNOTE PRESENTATION*** – Auditorium 300, Level 1

“Research challenges in developing sustainable intervention strategies for the prevention of musculoskeletal disorders”

F. Coutarel (Clermont Auvergne University, France) & M-E. Major (Laval University, Canada)



* French translation ** Session in French with English translation



14:30 - 15:30

PARALLEL SESSIONS

01. ORAL COMMUNICATIONS:

IMPLEMENTATION AND EVALUATION OF PREVENTIVE INTERVENTIONS (1)**

– Auditorium 300, Level 1

14:30 - 14:50 – #56

Musculoskeletal disorders as an opportunity to foster a global approach to prevention

N. Balthazard, A. Pery*

14:50 - 15:10 – #46

MSDs in primary prevention: Reflective approach in inter-company occupational health and safety service

C. Zind, R. Codron*

15:10 - 15:30 – #98

Skill development of WMSDs ambassadors within member companies of an intercompany occupational health and prevention service in Lyon

M. Limoges, B. Rouzé*

02. ORAL COMMUNICATIONS:

NEW TECHNOLOGIES – HUMAN ROBOT INTERACTIONS

– Room 103, Level 1

14:30 - 14:50 – #79

Biomechanical assessment of human-robot collaboration in virtual reality and on a real workstation

G. Personeni, D. Danilovskii, A. Savescu*

14:50 - 15:10 – #67

Measuring the Cognitive and Psychosocial Dimensions of Professional Gestures: A Method for designing Human–Robot Collaboration to reduce WMSD exposure

M. Krausz, A. Landry, A. Cherubini, M. Nstame Sima*

03. ORAL COMMUNICATIONS:

POPULATION AND SECTOR SPECIFIC APPROACHES – DESCRIPTIVE STUDIES

– Room 104, Level 1

14:30 - 14:50 – #83

Evaluation of musculoskeletal disorders in a meat-processing plant: results of a cross-sectional study

N. Roger, T. Lelard, F. Telliez*

14:50 - 15:10 – #97

Typology of musculoskeletal occupational wear and tear: a latent class analysis in the CONSTANCES cohort

G. Morvan, J. Bodin, N. Fouquet, H. Bouziri, M.E. Major, Y. Roquelaure*

15:10 - 15:30 – #111

Return-to-work and retention of health and social care workers with MSDs: from research to practice

L. Munar, P. Berastegui*

04. ORAL COMMUNICATIONS: SOCIO-ECOLOGICAL CHALLENGES

– Room 105, Level 1

14:30 - 14:50 – #110

Agroecological transition and prevention of musculoskeletal disorders: a case study among organic vegetable farmers

S. Caroly, M.E. Major*

14:50 - 15:10 – #77

Cars dismantling in the context of ecological transition. An opportunity to design sustainable work?

W. Buchmann, O. Richal, B. Daille-Lefevre, A. Savescu, F. Barcellini*

15:30 - 16:00 Coffee break

16:00 - 17:30 **PARALLEL SESSIONS**

01. ORAL COMMUNICATIONS: IMPLEMENTATION AND EVALUATION OF PREVENTIVE INTERVENTIONS (2)**

– Auditorium 300, Level 1

16:00 - 16:20 – #63

From cocoa dust exposure to sustainable MSD prevention: professional dialogue as a resource for work transformation in a chocolate factory

Y. Lestrade, D. Cromer, A. Bonnemain, F. Coutarel*

16:20 - 16:40 – #36

Air France x Axomove Innovating Musculoskeletal Disorder Prevention for Employees

T. Davergne, S. Sutter*

16:40 - 17:00 – #35

New Belgian regulations (2024) to better prevent musculoskeletal disorders (MSD), supplementing the European directives of the 1990s

A. Piette, N. Cock*

17:00 - 17:20 – #37

One Year After the Implementation of the New Belgian Decree on Ergonomics and MSD Prevention: Observations and Field Realities

N. Cock, A. Piette*

02. ORAL COMMUNICATIONS: RISK ASSESSMENT AND HEALTH EFFECTS – CO-EXPOSURE

– Room 103, Level 1

16:00 - 16:20 – #106

Carpal tunnel release surgery and occupational co-exposure to biomechanical factors and neurotoxic chemicals: findings from the Constances cohort

J. Bodin, C. Rapicault, A. Descatha, M. Fadel, F. Gilbert, B. Evanoff, N. Bonvallot, M. Goldberg, M. Zins, Y. Roquelaure*

16:20 - 16:40 – #112

Analysis of data on multiple exposure to biomechanical factors and neurotoxic substances

F. Clerc, L. Claudon*



* French translation ** Session in French with English translation



16:40 - 17:00 – #105

Between Dust and MSD: Worker Trade-Offs in Sustainable Prevention Strategies

B. Langard, E.S. Mariko*

17:00 - 17:20 – #75

Prevalence and psychosocial determinants of musculoskeletal disorders among workers in a tire manufacturing plant: a cross-sectional study

T. Capet, A. Nourry, P. Crozet, F. Telliez*

03. SYMPOSIUM:

“ASSISTIVE TECHNOLOGY OR PERSONAL PROTECTIVE EQUIPMENT? IMPLEMENTATION QUESTIONS FOR EXOSKELETON SOLUTION”

M. Fray, S. Bassford

– Room 104, Level 1

Laboratory study evaluating a series of exoskeletons for repeated lifting and overhead torque wrench use

K. O’Keefe, M. Fray, A. Lloyd, S. Bassford*

The Toyota Motor Europe approach for preparing the company for exoskeleton implementation

*S. Bassford**

Exploration of the implementation of exoskeletons in 3 EU manufacturing locations

K. O’Keefe, M. Fray, A. Lloyd, S. Bassford*

Laboratory study to explore the benefits of exoskeletons on varied activities in healthcare

A. Yangsap, M. Fray, A. Lloyd*

Between Assistive Technology and Personal Protective Equipment: Understanding Exoskeletons in Nursing Practice

X. Lin, M. Fray, S.Hodder*

04. SYMPOSIUM:

“PREVENT MSDS BY THE DEVELOPMENT OF SOCIO-TECHNICAL, ORGANISATIONAL AND SITUATIONAL OPERATIONAL LEEWAY: WHY AND HOW?”

A. Cuny-Guerrier, S. Caroly

– Room 105, Level 1

Contribution of socio-technical, organizational and situational leeway into msds prevention

A. Cuny-Guerrier, A. Aublet-Cuvelier, Y. Roquelaure, F. Coutarel*

Developing operational leeway to prevent musculoskeletal disorders among care assistants in nursing homes for the elderly

S. Poncet, S. Caroly, Y. Roquelaure*

How professional gesture analysis promote the development of employees’ empowerment and socio-technical organisational leeway in professional training? The case of gravediggers

*P. Simonet, A. Savescu**

Training to operational leeway for MSD prevention with an educational video

A. Vasselín*, L. Querelle*, A. Cuny-Guerrier

18:00 Visit Nancy Tour

19:30 **GALA DINNER** – Hotel de ville, Place Stanislas, Nancy

THURSDAY, 7 MAY 2026 (AM)

08:30 - 09:00 Coffee Welcome

09:00 - 10:00 **PROSPECTIVE VIEW*** – Auditorium 300, Level 1

“MSDs and the future of work: risk factors and prevention opportunities”

A. Hauke (IFA, Germany) & M. Malenfer (INRS, France)

10:00 - 10:30 Coffee break

10:30 - 12:00 **CONFERENCE SESSION*** Young Researcher Nominees – Auditorium 300, Level 1

10:30 - 10:50 – #114

Motor Strategies in Human–Robot Interaction: A Muscle Synergy Approach
Risk assessment and health effects

E.M. Fiorino*, D. Bibbo, S. Conforto, A. de Nobile, S. Ranaldi, M. Schmid

10:50 - 11:10 – #89

Field assessment of a passive back exoskeleton in the aeronautics industry: effects on muscle activity and perceived discomfort

T. Albouy*, M. Zare, E. Chin, G. Mornieux

11:10 - 11:30 – #80

Measurement-based assessment of the load on the distal upper extremity during manual therapy techniques in physical therapy

T. Braun*, S. Campos, U. Glitsch, O. El-Edrissi, D. Gräßle, M. Wanstrath, A. Nienhaus, K. Heinrich

11:30 - 11:50 – #59

Physical exercises at work in the construction industry; from analysis to co-design of sessions to open up to a global approach to MSD prevention

C. Troussier-Thevenot*, B. Langard, P. Girardot, Y. Roquelaure, F. Coutarel

12:00 - 12:30 **CLOSING CONFERENCE*** Scientific Contributions and Perspectives, INRS

YOUNG RESEARCHER AWARD CEREMONY* – Auditorium 300, Level 1

* French translation ** Session in French with English translation



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