

US Annual Medical Device Human Factors and Usability Engineering Conference

The only dedicated conference for
Medical Device Human Factors and
Usability Engineering professionals



7th & 8th February 2024
Hilton Back Bay, Boston USA

REGISTER NOW

us.medtechhumanfactors.com



Conference Overview

The **US Annual Medical Device Human Factors and Usability Engineering Conference** is designed to bring together experts, professionals, and researchers from various disciplines to explore the critical role that human factors and usability engineering play in ensuring medical devices' safety, effectiveness, and user satisfaction. Get ready to dive deep into the heart of design and development, where innovation and user-centricity reign supreme!

The field of medical device engineering is undergoing a seismic shift, with an increased emphasis on optimizing user experiences, enhancing patient safety, and improving overall device performance.

This conference is your exclusive invitation to delve into the intricate world of human factors and usability

engineering, where we will explore groundbreaking methodologies, emerging trends, and best practices that are revolutionizing the landscape.

We're here to celebrate collaboration, ignite inspiration, and share invaluable knowledge that will shape the future of healthcare. Join us now! Let's empower innovation, redefine user experiences, and shape a future where medical devices seamlessly integrate with the needs and aspirations of those who rely on them.

This is your gateway to securing the future of medical device technology. Don't miss this opportunity to deepen your understanding of best practices in the field and expand your professional network.

Reserve your spot today and be part of the movement!

Companies Presenting

varian

 **FRESENIUS
MEDICAL CARE**

 **GE HealthCare**

GMED
LNE GROUP

 **BD**


Edwards







stryker



Distinguished Speakers



Christine Heyninck-Jant
VP of R&D
EDWARDS LIFESCIENCES



Barbara Spanton
Director of User Experience
VARIAN MEDICAL SYSTEMS



Eleanore Dias
Lead Human Factors
Engineer
GE HEALTHCARE



Dawn Rountree
Senior Human Factors
Engineering Expert
MERIDIAN MEDICAL



Neilo Drumond
Associate Director, Lead
Process Scientist
TAKEDA



Daniel Sloat
Director of User Experience
Strategy
FRESENIUS MEDICAL CARE



Zhonghai (John) Li
Associate Director Human
Factors
MERCK



Jac Mestel
UX/UI Product Designer
NXSTAGE MEDICAL INC.



Randal McCarthy
Associate Vice President
Science and Technology
MERCK



Tamera Scholz
Director of Human Factors
Engineering
EDWARDS LIFESCIENCES



Mike Peachock
Senior Design Quality
Engineer
STRYKER



Dominika Kulinski
Director of Human Factors
and Usability Engineering
FRESENIUS MEDICAL CARE



Sylvine Raverdy-Wilson
Medical Affairs Manager
BD

What makes all our programmes unique?

01

Keynotes

Our keynotes serve as a compass in the ever-evolving landscape of medical devices, providing you with market intelligence and expert guidance that transcends borders, illuminating a global perspective. These engaging sessions paint a visionary picture of the industry's future, ensuring that professionals are not just informed but inspired to navigate and shape healthcare.



02

Roundtables

Immerse yourself in the future of medical device innovation with our interactive roundtables, where leading minds converge to drive transformative breakthroughs and redefine the boundaries of healthcare technology. Join us to be a part of the conversation shaping the next era of medical advancements.



What makes all our programmes unique?

03

Panel discussions

Elevate your professional standing in our panel discussions, where you'll explore emerging trends, offer valuable feedback, and brainstorm solutions for the latest in medical devices. These discussions are not just about sharing knowledge; they're about building connections that can make a real difference in patient care.



04

Facilitated networking with peers

Expand your network to foster unprecedented collaboration among the brightest minds, leading to breakthroughs that hold the potential to save countless lives. In the dynamic exchange of ideas and expertise, the partnerships forged here last beyond the conference, creating a powerful ecosystem for innovation and growth.



What attendees are saying

“

A very organized & smooth-running conference with great topics & speakers.

Principal Cybersecurity Regulatory & Program Analyst
INTUITIVE SURGICAL

Excellent



“

Well rounded!



A wonderful opportunity to meet experienced, skilled, and open-minded people willing to share solutions in this ever-changing medical device environment.

Senior Design Assurance Manager
VERYAN MEDICAL



“

A very good look into today's challenges and the future opportunities of the medical industry.

CTO Vice President R&D
INVACARE CONTINENTAL

Engaging



What attendees are saying

“

My first time experiencing a conference in this format. It was better than I expected. I would repeat a similar conference in the near future if possible.

Director of Product Lifecycle Management

B BRAUN Melsungen AG

Excellent



“

Well rounded!



Seeing a successful model utilized by a successful company was gold dust.

Global Product Manager
COOK MEDICAL



“

Overall, a very good conference with so many interesting and fruitful discussions, especially the open and interactive Q&A sessions, which were very informative.

Product Manager
OCCLUTECH

Engaging





Schedule —

Day 01

Wednesday, 7th February 2024

8:00 – 17:30 (EST)

7 February 2024

Morning

Wednesday

8.00 US EDT

REGISTRATION AND REFRESHMENTS

9.00 US EDT

WELCOME REMARKS AND ICE-BREAKER

9.10 US EDT

BEST PRACTICES FOR CAPTURING AND TRANSFERRING USER EXPERIENCE INTO THE DESIGN PROCESS



- A review of regulatory requirement fundamentals
- Overview of the various forms of design and development
- An explanation of the various user needs/requirements
- Tools for translating user needs into technical requirements

Christine Heyninck-Jant, Vice President of R&D, **EDWARDS LIFESCIENCES**

9.45 US EDT

MOVING BEYOND THE IDEALISTIC CONCEPT OF 'DOING MEANINGFUL WORK' IN TERMS OF USER EXPERIENCE



- Understanding the shift in design professionals' focus towards helping humanity
- Challenges in creating impactful work and design
- Anticipating and navigating common obstacles in human factors
- Applying skills to solve meaningful problems and finding effective coping mechanisms

Barbara Spanton, Director of User Experience, **VARIAN MEDICAL SYSTEMS**

10.20 US EDT

CRAFTING HUMAN-CENTERED SOLUTIONS THROUGH HFE AND CSR INTEGRATION



- Exploring the synergistic potential of integrating Human Factors Engineering (HFE) and Corporate Social Responsibility (CSR)
- Creating solutions that prioritize both user needs and sustainability goals
- How to cultivate successful projects that embody a human-centered and environmentally-conscious design
- Strategies for navigating challenges and leveraging the combined power of HFE and CSR for impactful outcome

Dominika Kulinski, Director of Human Factors and Usability Engineering, **FRESENIUS MEDICAL CARE**

7 February 2024

Morning

Wednesday

10.55 US EDT

NETWORKING COFFEE BREAK

11.25 US EDT

LEVERAGING PATIENT FACTORS AND INHALATION DEVICE USABILITY VIA THE PATIENT-CENTRIC DRUG PRODUCT DESIGN APPROACH



- Understanding why a high incidence of handling errors during the administration of inhalation therapies is still reported
- Development of inhalation products that do not consider patient needs will fail
- How to develop inhalation devices directly with the patients from the early stage to commercialization, including feedback post-market launch
- How the strategic roles of patient-centric drug product design and digital technology promote successful inhalation therapy

Neilo Drumond, Associate Director, Lead Process Scientist, **TAKEDA**

12.10 US EDT

DESIGN FOR USER EXPERIENCE AND PATIENT SAFETY: A PERSPECTIVE FROM THE PHARMACEUTICAL INDUSTRY



- How to consider all product users' needs and safety, including pharmacists and nurses, in addition to patients and caregivers
- Utilising an effective interaction between pharmacists and patients
- Understanding the impact of drug form/appearance and packaging on medication adherence and medication error
- Design perspective for special patient populations, including geriatric, pediatric, patients with disabilities and unique diseases

Zhonghai (John) Li, Associate Director Of Human Factors, **MERCK**
Randal McCarthy, Associate Vice President Science and Technology, **MERCK**

12.45 US EDT

NETWORKING LUNCH BREAK

7 February 2024

Afternoon

Wednesday

13.45 US EDT

FIRESIDE CHAT – CULTIVATING CROSS-DEPARTMENTAL HARMONY TO EMPOWER DEVICE DESIGN EXCELLENCE



- Exploring the transformative potential of fostering collaboration across departments to elevate device design processes
- Strategies for breaking down silos and creating synergistic workflows among diverse teams
- Discussing the impact of cross-departmental harmony on device design outcomes
- Overcoming communication barriers and aligning diverse expertise to create cohesive and user-centered designs

Speakers:

Dawn Rountree, Senior Human Factors Engineering Expert, **MERIDIAN MEDICAL**

14.30 US EDT

CRACKING THE CODE: DECODING FAILURES IN HUMAN FACTORS VALIDATION



- Exploring common reasons behind the failure of human factors validation efforts
- Analyzing the intricate interplay between design, user behavior, and validation outcomes
- Highlighting real-world instances of human factors validation challenges
- Strategies for pre-emptively identifying potential pitfalls and addressing validation roadblocks

Eleanore Dias, Lead Human Factors Engineer, **GE HEALTHCARE**

15.05 US EDT

NETWORKING COFFEE BREAK

15.35 US EDT

DESIGNING DIVERSITY: APPLYING DIVERSE HUMAN FACTORS ROADMAPS IN DIFFERENT PRODUCT DEVELOPMENT PROCESSES



- Exploring the power of diversity in human factors roadmaps and how they can revolutionize product development
- Learning how to tailor human factors approaches for a wide range of products, from tech gadgets to medical devices and more
- Discovering real-world case studies showcasing the impact of diverse human factors strategies on product success
- Gaining insights into the future of inclusive design and the role of human factors in driving innovation and meeting diverse user needs

Sylvine Raverdy-Wilson, Medical Affairs Manager, **BD**

7 February 2024

Afternoon

Wednesday

16.10 US EDT

ROUNDTABLE DISCUSSION

ROUNDTABLE 1: AMPLIFYING DEVICE SAFETY THROUGH EFFECTIVE USE-RELATED RISK MITIGATION

- Unveiling the Crucial Intersection between regulatory guidance and user-centric hazard mitigation
- Leveraging Usability Engineering for Comprehensive Use-Related Risk Management
- Tackling Key Challenges in Developing and Integrating Use-Related Risk Analysis (URRA) for Holistic Human Factors Engineering
- Best Practices for Implementing ISO 14791-Compliant Use-Related Risk Analysis
- Maximizing Limited Resources to Forge a Resilient Foundation for User-Centric Risk Mitigation Strategies

ROUNDTABLE 2: ELEVATING HUMAN FACTORS ENGINEERING VALIDATION FOR UNPARALLELED EFFECTIVENESS

- The unveiling of HF usability testing and validation in the new user experience landscape
- Resolving pervasive challenges in human factors usability testing and validation
- Precision in early formative testing by selecting critical clinical data
- Proactively preventing HFE summative validation failures: Root cause analysis
- Decoding regulatory preferences through pre-submission collaborations
- Mastering best practices for robust HF validation testing to ensure unmatched usability

ROUNDTABLE 3: REVOLUTIONIZING MDSW THROUGH AN AGILE HFE AND USABILITY TESTING PARADIGM

- Discovering the synergy between agile HFE, usability testing, and user-centered MDSW design
- Bridging agile requirements via MDSW user stories with usability testing and validation
- Pioneering agile testing: Fostering quality and compliance early in the MDSW development cycle
- Empowering agility in risk management, cost efficiency, and testing protocols
- Unlocking the treasury of agile practices for HFE and usability testing excellence

ROUNDTABLE 4: UTILISING JOURNEY MAPPING TO VISUALISE PATIENT EXPERIENCES FOR QUALITY IMPROVEMENT INITIATIVES

- Understanding how journey mapping can benefit healthcare quality improvement initiatives and highlighting its role in understanding the end-to-end patient experience
- Discussing how journey mapping can inform the development of quality metrics and performance indicators
- Explaining how journey mapping is an ongoing process, not a one-time effort and sharing best practices

17.25 US EDT

CLOSING REMARKS & DAY 1 CONCLUSION



Schedule —

Day 02

Thursday, 8th February 2024

8:30 – 16:40 (EST)

8 February 2024

Morning

Thursday

8.30 US EDT

REGISTRATION AND REFRESHMENTS

9.00 US EDT

WELCOME REMARKS

9.15 US EDT

OPTIMUM RECRUITMENT STRATEGIES FOR FORMATIVE AND SUMMATIVE RESEARCH



- Approaches to maximize participant recruitment for formative and summative research studies
- Tailoring recruitment methods to align with the unique objectives of formative and summative research phases
- Challenges and variables in recruitment to ensure representative and actionable results
- Best practices, and ethical considerations for optimizing recruitment strategies in formative and summative research contexts

Tamera Scholz, Director of Human Factors Engineering, **EDWARDS LIFESCIENCES**

9.50 US EDT

USABILITY AND RISK MITIGATION DURING CHANGE CONTROL



- Overview of the change control process in regulated industries
- Importance of change control in ensuring product quality and safety
- How human factors expertise can improve change control procedures
- Integration of usability principles to enhance user-friendliness in change control systems
- Demonstrating the impact of user-centered design on risk reduction

Mike Peachock, Senior Design Quality Engineer, **STRYKER**

10.25 US EDT

AI REVOLUTION: TRANSFORMING UI DESIGN AND USABILITY RESEARCH FOR MEDICAL DEVICES



- Unveiling the groundbreaking synergy between AI and UI design in the realm of usability engineering
- Exploring AI-powered tools that enhance user interface design and usability assessment
- Showcasing successful integration of AI algorithms for improved user experience
- Navigating the potential challenges and ethical considerations in leveraging AI for UI design and usability research
- Future possibilities and trends in the dynamic landscape of AI-driven usability enhancements

Speaker to be announced

11.00 US EDT

NETWORKING COFFEE BREAK

8 February 2024

Morning

Thursday

11.30 US EDT

ESTABLISHING USABILITY DEPARTMENTS FROM THE GROUND-UP



- Guiding the process of creating robust usability departments, starting from the foundation and scaling for success
- Key considerations in organizational structure, staffing, and skill sets when establishing usability departments
- Real-world case studies illustrating successful journeys of building usability departments from scratch
- Navigating challenges and seizing opportunities in aligning usability goals with overarching business objectives

Daniel Sloat, Director of User Experience Strategy, **FRESENIUS MEDICAL CARE**

12.15 US EDT

NAVIGATING REMOTE USABILITY TESTING WITH REGULATORY COMPLIANCE ACROSS BORDERS



- In-depth exploration of the intricacies in achieving regulatory compliance for remote usability testing
- Comparative analysis of domestic and international regulatory frameworks impacting remote usability testing
- Navigating ethical considerations, data privacy, and cultural nuances in remote usability testing compliance
- Approaches to ensure regulatory adherence while conducting remote usability testing across different jurisdictions

Speaker to be announced

12.50 US EDT

NETWORKING LUNCH BREAK

8 February 2024

Afternoon

Thursday

PANEL DISCUSSION

13.50 US EDT

UNLEASHING HUMAN FACTORS FOR INNOVATIVE MEDICAL
DEVICE SOFTWARE DESIGN AND PRIVACY ARCHITECTURE



- Exploring the critical role of human factors in medical device software design
- Leveraging human-centered approaches to drive innovation and user satisfaction
- Navigating privacy architecture challenges in medical device software
- Ensuring data security and patient confidentiality without compromising usability
- Collaboration strategies between design, development, and regulatory teams
- User experience as a catalyst for improved medical device outcomes
- Unleashing the full potential of design thinking in healthcare technology
- Interactive discussion on best practices, challenges, and future trends in the field

Panel members:

Daniel Sloat, Director of User Experience Strategy, **FRESENIUS MEDICAL CARE**

14.50 US EDT

NETWORKING COFFEE BREAK

15.20 US EDT

BRINGING MEDICAL DEVICES INTO THE DIGITAL AGE USING
HUMAN-CENTRED EXPERIENCE DESIGN



- Discussing where hardware meets the software world
- How to follow a 'Design Thinking' methodology
- Understanding the ROI of UX approaches
- Key differences in purpose: De-risking vs. Innovating
- Diving into what HF professionals and product designers can change

Jac Mestel, UX/UI Product Designer, **NXSTAGE MEDICAL INC.**

15.55 US EDT

OPEN FLOOR DISCUSSION

The Open Floor Discussion is a dynamic and interactive session designed to foster engaging and collaborative dialogue among our attendees. It provides an opportunity for participants to actively share their perspectives, insights, and experiences on the questions coming from all our attendees.

This format encourages active participation, constructive debate, and a free exchange of ideas. It'll create an inclusive environment where attendees can engage in a stimulating conversation and collectively contribute to the advancement of knowledge in the conference domain.

16.30 US EDT

CLOSING REMARKS & DAY 2 CONCLUSION

Key Conference Highlights

1

COMBINING HF AND
IMMERSIVE TECHNOLOGIES
TO REVOLUTIONIZE MEDICAL
DEVICE DESIGN

2

DECODING FAILURES IN HUMAN
FACTORS VALIDATION

3

SEAMLESS INTEGRATION OF HF
THROUGHOUT THE SYSTEMS
ENGINEERING LIFECYCLE

4

HOW TO ALWAYS BE
COMPLIANT WHILE COMPLYING
WITH USER-CENTRIC PRODUCT
DEVELOPMENT

5

AI IN UI DESIGN AND
USABILITY RESEARCH

6

CROSS-DEPARTMENTAL
HARMONY TO EMPOWER
DEVICE DESIGN EXCELLENCE

Why attend a TT conference?

The invite-only conference is a dedicated **Medical Device Conference For Human Factors And Usability Engineering Professionals**

15+

Distinguished Speakers

15+

Solution-Focused Sessions

7

Hours of Networking

4

Interactive Roundtable Discussions

2

Days of Knowledge Sharing

Who should attend?

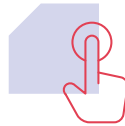
Attending these 2 days will offer a unique opportunity to meet and interact with attendees from the following roles and departments:



Human Factors and Ergonomics



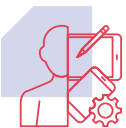
Research and Development



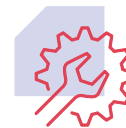
Usability Engineering



Design Engineering



User Experience & User Interface



Product Development



Design Quality



Software Engineering

To find out more about the event
please don't hesitate to get in touch:

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us.medtechhumanfactors.com

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