



INVITED SESSION SUMMARY

Title of Session:

Longevity@Home powered by Electronic Systems

Name, Title and Affiliation of Chair:

Chair: **Petra Friedrich**

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Co-Chair: **Yeongmi Kim**

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Co-Chair: **Ralf Seepold**

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Co-Chair: **Bernhard Wolf**

Technical University Munich, Steinbeis-Transferzentrum Medizinische Elektronik und Lab on Chip-Systeme (Germany), wolf@tum.de

Details of Session (including aim and scope):

Demographic change is advancing inexorably worldwide. Healthcare and nursing systems in many countries are already overburdened and no longer positioned for the future. The shortage of needs-based care is becoming increasingly apparent in many areas. Therefore, it is absolutely necessary to empower citizens through technical assistance systems so that they can live and grow old in their own homes for as long as possible. And all this while maintaining the highest possible quality of life.

Technical, electronic, and digitally supported assistance systems can already contribute to this today, as has been successfully demonstrated in the CARE REGIO project (www.care-regio.de), among others.

This session deals with intelligent electronic and mechatronic systems for longevity at home. Priority will be given to areas of life such as health, living, mobility and social interaction. Particular importance is attached to the early sensory detection of health problems with statistically proven relevance, such as falls, water retention, high blood pressure, and other events.

Topics of interest for submission include, but are NOT limited to:

- Consumer Systems for Healthcare and Wellbeing
- Data Science, Algorithm
- Data Warehouse
- Digital services for health, care, and household tasks
- Embedded Systems
- Falldetection, early recognition, prediction of risk of falls, prevention
- Hardware as Sensors and Actuators, Wearables, Smart Devices, Robotics etc.
- Human-Machine Interaction and User Experience
- Machine Learning, Deep Learning and AI, e.g. for fall prevention and early detection
- Rehabilitation for Longevity
- Software, Architecture, Design, Apps, etc.
- Smart Home Systems
- Studies, use cases, literature reviews
- Usability, User Experience
- Virtual Reality, Augmented Reality, Mixed Reality

Important Deadlines

Submission of Papers Deadline: **April 15th, 2026**

Notification of Acceptance: **May 16th, 2026**

Final Submission Receipt of Publication Files: **June 1nd, 2026**

Authors who submit and present their work will have their work published and indexed internationally by Elsevier's Procedia Computer Science

<http://www.journals.elsevier.com/procedia-computer-science/>

Main Contributing Researchers / Research Centres (tentative, if known at this stage):Program chairs and their research groups

Prof. Dr. Petra Friedrich (UAS Kempten, Germany)

Prof. Dr. Yeongmi Kim (MCI Internationale Hochschule GmbH, Innsbruck, Austria)

Prof. Dr. Natividad Martínez Madrid (University of Reutlingen, Germany)

Dr. Felix Piazzolo (2PCS Solutions GmbH, Sistrans, Austria)

Prof. Dr. Ralf Seepold (HTWG Konstanz, Germany)

Prof. Dr. Albert Vette (University of Alberta, Canada)

Prof. Dr. Bernhard Wolf (Technical University Munich, Steinbeis-Transferzentrum Medizinische Elektronik und Lab on Chip-Systeme, Germany)

Website URL of Call for Papers (if any):

Conference: <http://kes2026.kesinternational.org/index.php>

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