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Maarja Kruusmaa received her Dipl. Eng. degree in Computer Engineering from Tallinn University of Technology (Tallinn, Estonia) and PhD degree in 2002 in Computer Engineering from Chalmers University of Technology (Göteborg, Sweden) and Halmstad University (Sweden). Her PhD thesis focused on robot learning and mobile robot path planning and navigation.

In 2002 she co-founded an Intelligent Materials and Systems Laboratory in Tartu University Institute of Technology (Estonia), a research group that focused on developing and using smart materials for applications, including robotics.

In 2008 she was invited to establish Centre for Biorobotics in Tallinn University of Technology. The research centre currently focuses on bio-inspired robotics, soft robotics, underwater robotics, experimental fluid dynamics and flow sensing. She is involved in several international collaborative projects for using soft materials in robotic surgery and developing and using bioinspired underwater robots. She was a coordinator of European Union 7th Framework project FILOSE (Fish Locomotion and Sensing) that developed the first flow sensing underwater robot capable of controlling itself with respect to flow signals and coordinates H2020 project LAKHsMI (sensors for Large Scale Hydrodynamic Imaging) and BONUS FISHVIEW (Assessing fish passability using a robotic fish sensor and hydrodynamic imaging). She is an author of over 60 research publications and has supervised 9 Ph.D thesis and 4 postdoc researchers.

Prof. Kruusmaa is a co-founder of a start-up company Fits.me, offering virtual fitting rooms for online retailers with the help of robotics technology. As the R&D director of Fits.me she was responsible for developing the concept technology of shape-changing bio-robotics mannequins for imitating different body shapes. Fits.me has grown to a multinational company with headquarters in London.

Prof. Kruusmaa serves as a program committee member in various journals and conferences, such as Living Machines, Biomimetic and Biohybrid Systems, Journal of Soft Robotics, IEEE Conferences of Advanced Robotics, etc. She is a member of DG CONNECT Advisory Board on ICT research at European Union, analyzing and shaping the research agenda of the European Union Horizon 2020 program.