

SICE Systems and Information Division

Technical Committee on Man-Machine Systems

Technologies for Mutual Understanding between Humans and Machines **- Inference of Human Intent and Recognition of Environment -**

• Aim:

- To share problems and latest research topics on human-machine systems

• Problems:

- Human-error evoked by multifunctional interface, Inappropriate interaction between humans and automated machines, Automation-induced surprises, Risk-compensation behavior, Too much trust in or distrust of highly reliable machines

• Technical area:

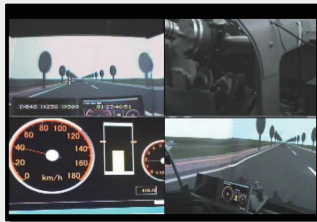
- Human-machine interface, Psychophysiological analyses, Pattern recognition and statistical learning, Reliability and risk engineering

• Activity:

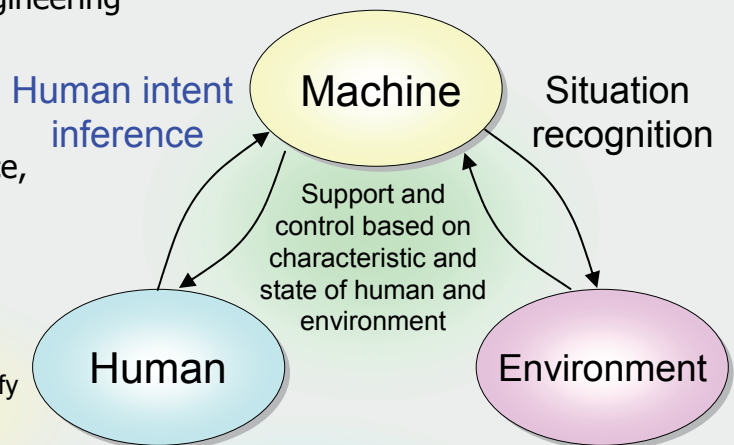
- Research meetings on human-machine systems (Three or four times per year)
 - In the meetings, various professional researchers provide hot topics about problems concerning human-machine systems and the countermeasures, and all the participants discuss about the topics actively.
- Research meetings on risk perception systems (Three or four times per year)
 - The meetings will provide a place to exchange opinions interactively and casually for young researchers and students who are interested in risk engineering and the related areas in order to increase their level of research.
- Special seminars / Technical tours
- Collaboration with other societies, technical divisions, and technical committees related to life science and risk engineering

• Keywords:

- Human-machine symbiosis, Recognition, Probabilistic inference, Risk engineering, Human behavior monitoring



Driving simulator experiments to verify effects of collision warning on driving behavior



Measurement of Train Driver's Brain Activity by Near-Infrared Spectroscopy (NIRS)



[Committee members]

- Chairperson: Toshihiro Hiraoka (Kyoto University)
- Co-chairperson: Yoshitaka Marumo (Nihon University)
- Secretary: Genya Abe (Japan Automobile Research Institute)
- Other members: about 30 persons from various universities and companies