Application of self organizing Kohonen Map to detection of surgeon motions during endoscopic surgery

Petlenkov, Eduard; Nõmm, Sven; Vain, Jüri; Miyawaki, Fujio 2008 International Joint Conference on Neural Networks
(IJCNN2008), 2008 IEEE World Congress on Computational Intelligence (WCCl2008): June 1-6, 2008, Hong Kong 2008 / p. 2807-2812 https://ieeexplore.ieee.org/document/4634193

# Application of volume bounding box decomposition for surgeon's hand gestures recognition

Nõmm, Sven; Leibak, Alar; Vain, Jüri; Miyawaki, Fujio IECON 2010 : 36th Annual Conference on IEEE Industrial Electronics Society: Glendale, Arizona, USA, 07 - 10 November, 2010 : proceedings 2010 / p. 1076-1080 : ill <a href="https://ieeexplore.ieee.org/document/5675518">https://ieeexplore.ieee.org/document/5675518</a>

# Application of volume bounding box decomposition for surgeon's hand gestures recognition

**Nõmm, Sven**; **Leibak, Alar**; **Vain, Jüri**; Miyawaki, Fujio Abstracts IECON 2010 - ICELIE 2010 : 36th Annual Conference of the IEEE Industrial Electronics Society, 4th International Conference on E-Learning in Industrial Electronics, IES Industry Forum 2010 : Arizona, USA, 7-10 November 2010 2010 / p. 102 <a href="https://ieeexplore.ieee.org/document/5675518">https://ieeexplore.ieee.org/document/5675518</a>

# Human-robot interaction learning using timed automata

Vain, Jüri; Miyawaki, Fujio; Nõmm, Sven; Totskaya, Tatiana; Anier, Aivo ICCAS-SICE 2009: ICROS-SICE International Joint Conference 2009: Fukuoka City, Japan, August 18-21, 2009: final program and papers 2009 / p. 2037-2043 <a href="https://ieeexplore.ieee.org/document/5334368">https://ieeexplore.ieee.org/document/5334368</a>

#### Hybrid approach to detection of the surgeon's hand motions during endoscope surgery

**Nõmm, Sven**; **Vain, Jüri**; **Petlenkov, Eduard**; Miyawaki, Fujio; Yoshimitsu, Kitaro ICIEA: 4th IEEE Conference on Industrial Electronics and Applications: Xi'an, 25-27 May 2009 2009 / p. 3488-3492 <a href="https://ieeexplore.ieee.org/abstract/document/5138854">https://ieeexplore.ieee.org/abstract/document/5138854</a>

# Integration of 'Central' and 'Peripheral' Nervous Systems in Scrub Nurse Robot and Comparison Between 'Voluntary' and 'Reflex' Movements

Miyawaki, Fujio; Suzuki, Miho; Anier, Aivo; **Vain, Jüri** IFAC-PapersOnLine 2019 / p. 229-234 : ill <a href="https://doi.org/10.1016/j.ifacol.2019.12.103">https://doi.org/10.1016/j.ifacol.2019.12.103</a> Conference proceedings at Scopus Article at Scopus Article at WOS

# Model learning for reactive motion planning in assisting robots

**Vain, Jüri**; Miyawaki, Fujio Modelling, Identification and Control (MIC2008): February 11-13, 2008, Innsbruck, Austria 2008 / p. 596-809 https://dl.acm.org/doi/10.5555/1722415.1722493

# Neural network based system for real-time organ recognition during surgical operation

Artemtšuk, Igor; Petlenkov, Eduard; Miyawaki, Fujio Proceedings of the 18th IFAC World Congress: Milano, Italy, August 28 - September 2, 2011 2011 / p. 6478-6483 <a href="https://www.sciencedirect.com/science/article/pii/S1474667016446458#cekeyws10">https://www.sciencedirect.com/science/article/pii/S1474667016446458#cekeyws10</a>

# Recognition of the surgeon's motions during endoscopic operation by statistics based algorithm and neural networks based ANARX models

**Nõmm, Sven**; **Petlenkov, Eduard**; **Vain, Jüri**; Belikov, Juri; Miyawaki, Fujio; Yoshimitsu, Kitaro Proceedings of the 17th World Congress The International Federation of Automatic Control: Seoul, Korea, July 6-11, 2008 2008 / p. 14773-14778 <a href="https://www.sciencedirect.com/science/article/pii/S1474667016413662">https://www.sciencedirect.com/science/article/pii/S1474667016413662</a>

Scrub nurse robot system - intraoperative motion analysis of a scrub nurse and timed-automata-based model for surgery Miyawaki, Fujio; Masamune, Ken; Suzuki, Satoshi; Yoshimitsu, Kitaro; **Vain, Jüri** IEEE transactions on industrial electronics 2005 / 5, p. 1227-1235 : ill <a href="https://ieeexplore.ieee.org/abstract/document/1512454">https://ieeexplore.ieee.org/abstract/document/1512454</a>

# Supervised training of voting automata for the surgeon's motion recognition during laparoscope surgery

Vain, Jüri; Nõmm, Sven; Anier, Aivo; Miyawaki, Fujio; Totskaya, Tatiana IEEE International Conference on Control and Automation: ICCA 2009: Christchurch, New Zealand, December 9-11, 2009 2009 / p. 1503-1508