Dr. rer. nat. Alexander Mojaev

Background

- 1994 received Dipl.-Ing. from the Belorussian State University for Informatics and Electronics in Minsk (BSUfIE)
- since 1994 postgraduate student at the Dept. of Radiotechnic Systems at the BSUfIE
- since Oct. 1996 research stay at the Dept. of Computer Architecture of the University of Tübingen

Research interests

- Sensors integrating, environment modelling and navigation for mobile robots
- Neural networks
- Signal processing and information coding

Current projects

- Visual object tracking and recognition for mobile robots.
- Object tracking using Gabor Wavelet Templates
- Sonar mapping
- Fast navigation and localisation for mobile robots
- Adaptive motion control and collision avoidance

Publications

Real-Time Face Tracking using Discriminator Technique on Standard PC Hardware>
Alexander Mojaev and Andreas Zell
in Proceedings of the 2004 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2004) Sept.28-Oct.6, 2004, Sendai, Japan, pp.1335-1339

Tracking Control and Adaptive Local Navigation for Nonholonomic Mobile Robot
Alexander Mojaev, Andreas Zell
in Proceedings of the IAS-8 conference, 10-13 March 2004, Amsterdam

Image Decomposition and Tracking with Gabor Wavelets
Alexander Mojaev, Andreas Zell
in Special Issue on Robotics Technologies for Intelligent Vehicles of the MIROC (Machine Intelligence and Robotics Control) Int. Journal (edited by Cyber Scientific, Japan), Vol. 5, No. 3 September 2003, p. 113.

Real-Time Scale Invariant Object and Face Tracking using Gabor Wavelet Templates
Alexander Mojaev, Andreas Zell
in Tagungsband zum 18. Fachgespräch AMS (Autonome Mobile Systeme) (R.Dillman H.Wörn T.Gockel eds.), Karlsruhe, 4.-5.Dez. 2003, pp. 12-20

Real-Time Object and Face Tracking with Gabor Wavelets
Alexander Mojaev, Andreas Zell
Proceedings of the 11th IEEE International Conference on Advanced Robotics (ICAR 2003) Coimbra, Portugal, Jun.30 - Jul.3 2003, pp. 1178-1183

Aufbau topologischer Karten und schnelle globale Bahnplanung für mobile Roboter
Alexander Mojaev & Andreas Zell
in Tagungsband zum 17. Fachgespräch AMS (Autonome Mobile Systeme), Stuttgart, 11.-12.Nov. 2001, pp. 164-170

Umgebungswahrnehmung, Selbstlokalisation und Navigation mit einem mobilen Roboter
Alexander Mojaev
Ph.D Thesis, Shaker Verlag, 2001, ISBN 3-8265-8820-7

Robuste reaktive Bahnregelung und Kollisionsvermeidung eines autonomen mobilen Roboters

Alexander Mojaev & Andreas Zell
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Online-Positionskorrektur für mobile Roboter durch Korrelation lokaler Gitterkarten
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in Tagungsband zum 14. Fachgespräch AMS (Autonome Mobile Systeme) (H.Wörn
R.Dillmann D.Henrich eds.), Karlsruhe, 30.Nov.-1.Dec. 1998, pp. 93-99

Sonardaten-Integration für autonome mobile Roboter
Alexander Mojaev & Andreas Zell
in Tagungsband zum 20. DAGM-Symposium Mustererkennung, (P.Levi, R.-J.Ahlers, F.May
M.Schanz eds.) 29.Sept.-1.Oct., Stuttgart, 1998, pp. 556-563

A strong winner-take-all neural network in analogue hardware
Ralf Möller & Jörg Tomes & Alexandr Mojaev & Marinus Maris
Neuromorphic Systems: Engineering Silicon from Neurobiology (L. S. Smith & A. Hamilton
eds.), World Scientific, 1998

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