CURRICULUM VITAE
Prof. Aleš Procházka
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Employment: Institute of Chemical Technology, Faculty of Chemical Engineering
Department of Computing and Control Engineering
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Degrees: 2000 Professor in Technical Cybernetics (Czech Technical University (CTU), Prague)
1990 Assoc. Prof. in Automatic Control Systems (Institute of Chemical Technology (ICT), Prague)
1983 PhD in Technical Cybernetics (Institute of Chemical Technology, Prague)
1971 M.Sc. in Technical Cybernetics (Czech Technical University, Faculty of Electrical Engineering)

Educational Activities: Lectures in Digital signal and image processing, Neural Networks, Mathematical methods in engineering, Multimedia signal processing

Research: Digital signal and image processing, time and frequency domain signal analysis, wavelet transform, segmentation, classification and prediction of time series, signal decomposition and reconstruction, digital filters, application in biomedical image processing and environmental signal analysis

Activities:
Vice-dean for external relations and information technologies, ICT Prague (1997-2010)
Head of the Department of Computing and Control Engineering (1997-2003, 2008-2012)
Member of Scientific Boards of the Faculty of Chemical Engineering ICT Prague (1996-), Faculty of Food Technology ICT Prague (1991-2000), Czech Technical University Prague (2000-2006), Faculty of Electrical Engineering CTU Prague (2000-2006, 2010-2011)
Member of Research Boards of the study programme „Technical Cybernetics" of the ICT (1992-) and Czech Technical University (Faculty of Electrical Eng., Faculty of Mechanical Eng.) and Research Boards of „Measuring Engineering" (1996-), „Theoretical Electrical Engineering" (1995-) and „Electrotechnics and Informatics" (2007-) of the Fac. of Electrical Eng. CTU Prague
Member of Examination Boards of „Information and Control Eng." (1990-) and „Applied Information Eng." of the ICT Prague and „Measuring Engineering", „Technical Cybernetics" and „Theoretical Electrical Engineering" of the CTU Prague (1992-)
Member of international scientific societies: IEEE (senior member, Signal Processing Society, Computer Society, Computational Intelligence Society), IET (Institute of Engineering and Technology), EURASIP (European Association for Signal and Image Processing)

Grants:
- Grant No.201/94/0130 „New Approach to Neural Networks in Digital Signal Processing for Application in System Identification and Modelling", GA ČR 1994-1996
- Grant No 0804/2 „Software Tools of Modern Methods of Signal Processing", FRVŠ, 1994
- Grant No PR96152 „Organization of International Conference ECSAP-97", MŠMT, 1996
- Grant No 23-96002-331 „Tools of Digital Signal Processing Methods", Fond rozvoje VŠ, 1996
- Grant No 639/2001 „Information Technologies in Remote Signal and Image Processing", FRVŠ 2001
- Grant No 444/2010 „The New Approach IT using virtualization and distributed processing", FRVŠ 2010

Selected Papers:

[1] Procházka A., Mudrová M., Štorek M.: Wavelet Use for Noise Rejection and Signal Modelling, In Signal Analysis and Prediction, Ed. A.Procházka, J.Uhlíř, P.J.W.Rayner, N.G.Kingsbury, Birkhauser, Boston, 1998
[2] Procházka A., Ptáček J., Šindelárová I.: Wavelet Transform in Signal and Image Restoration. In Proceedings of Conference CONTROL 2004, IEE, pages ID064/1-5, Bath, UK, 2004
[3] Procházka A., Ptáček J.: Wavelet Transform Application in Biomedical Image Recovery and Enhancement. In Proc. of the 8th Multi-Conf. Systemics, Cybernetics and Informatics, vol.6, Orlando, USA, 2004
[4] Procházka A., Gavlasová A., Vyšata O.: Texture Segmentation and Classification in Biomedical Image Processing. In Proceedings of the 6th Int. Conference RASC-2006, Canterbury, U.K., 2006
[5] Hošťálková E., Procházka A.: Zpracování biomedicínských signálů a obrazů pomocí wavelet transformace. Automatizace, 50, 6, 2007.
[6] Hošťálková E., Vyšata O., Procházka A.: Multi-Dimensional Biomedical Image De-Noising Using Haar Transform. In Proceedings of the 15th Int. Conference DSP-2007, Cardiff, U.K., 2007
[7] Vysata O., Pazdera L, Kukal J., Procházka A.: Non-linear dependency between EEG channels in Alzheimer's disease. Journal of Neurology, 256, S68, 2009.
[8] Vyšata O., Pazdera L., Procházka A., Kukal J.: EEG synchr. and desynchronization pattern changes during cholinesterase inhibitors treatment in Alzheimer's disease. Journal of Neuropsychopharmacology,13, 2010
[9] Procházka A., Gráfová L.,Vyšata O.: Three-Dimensional Wavelet Transform in Multi-Dimensional Biomedical Volume Processing. In Proc.of the IASTED Int. Conf. Graphics and Virtual Reality, Cambridge, UK, 2011
[10] Procházka A., Mudrová M., Vyšata O., Gráfová L., Suarez Araujo C.P.: Computation Intelligence in Multi-channel EEG Signal. In Recent Advances in Intelligent Engineering Systems. Springer Verlag, C.17, 2011
[11] Vyšata O., Kukal J., Procházka A., Pazdera L., Valis M.: Age-Related Changes in the Energy and Spectral Composition of EEG, Journal of Neurophysiology, Vol 44, No 1, 63-66, 2012