Forword

We would like to welcome all of you to the 1999 IEEE-EURASIP Workshop on Nonlinear Signal and Image Processing (NSIP'99), June 20-23, 1999, Antalya, Turkey. This is the fourth in a series of international workshops sponsored by IEEE and EURASIP.

We believe that the NSIP'99 workshop provides a good opportunity for researchers and practitioners to present, as well as keep abreast of the latest developments in nonlinear signal and image processing. An excellent technical program has been put together which was selected from a large number of submitted papers and invited special sessions. The technical program covers the theory and applications of nonlinear techniques in signal and image processing. Specific topics addressed include order statistic type filters and filter banks, morphological signal and image processing and analysis, neural networks for signal processing, Volterra and general polynomial type filters, implementation of nonlinear systems, chaotic and fuzzy systems in signal and image processing, nonlinear techniques for waveform coding, robust methods for detection and estimation, stochastic nonlinear image processing, and nonlinear techniques for color images and image sequences. In addition to regular sessions six plenary talks are presented by Stephane Mallat, H. J. Trussell, Ahmed H. Tewfik, Edward R. Dougherty, James A. Cadzow, and Rui J. P. deFigueiredo. Also, special invited sessions on fractional Fourier transform, transforms in signal and image processing, DSP education, and blind and non-blind channel equalization are organized. We thank T. Akgül, J. Astola, K. Egiazarian, H. Krim, S. Mitra, B. Onaral, H. Özaktas, A. H. Sayed, L. Yaroslavsky, and M. Zeytinoglu for organizing the special sessions.

We greatfully acknowledge the financial contributions of TURKCELL, SUN-GANTEK, TÜBITAK, HAVELSAN, ASELSAN, Bilkent University, Bogaziçi University, Isik University, IEEE, and EURASIP. Without their financial support the organization of the workshop would not be possible.

We thank the technical program committee, NSIP board members, reviewers and most importantly authors for their contributions. In addition, we are grateful to Ömer N. Gerek, Mürüvet Parlakay and Khaled Ben Fatma for their assistance.

We hope to see all of you again in the next NSIP workshop
to be held in 2001!

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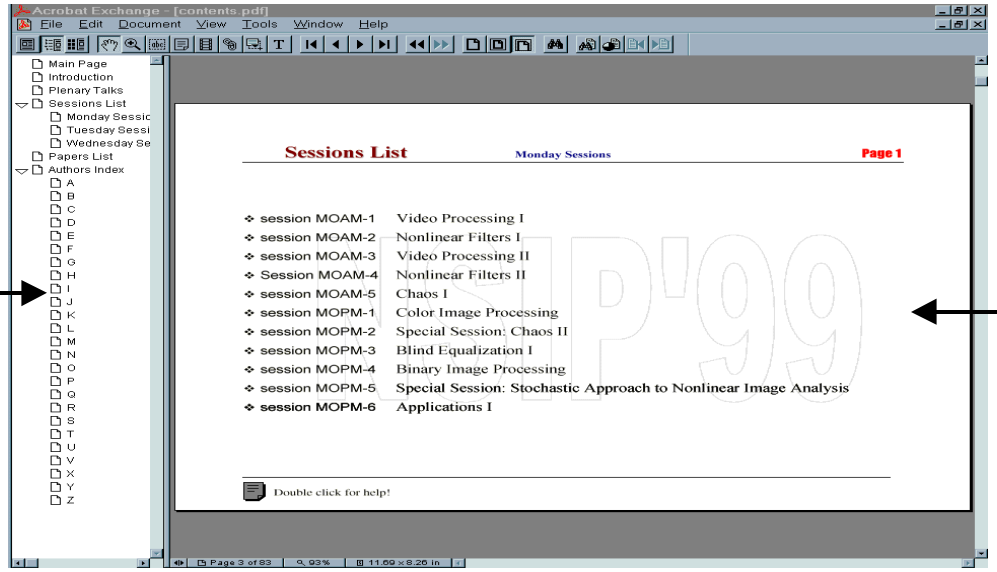

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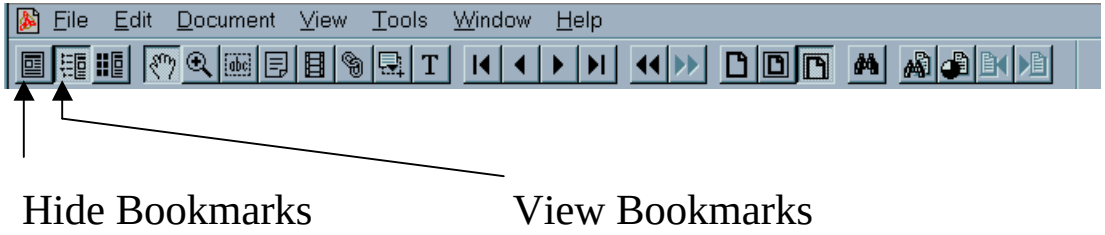

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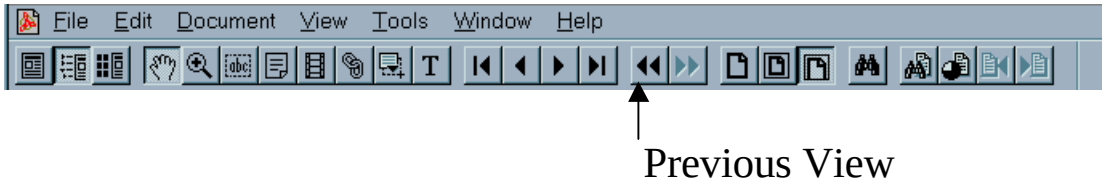

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Ecole Polytechnique, France

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Rui J. P. deFigueiredo
University of California, USA

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Ahmed H. Tewfik
University of Minnesota, USA

4 **Nonlinear filters in genomic control**
E. R. Dougherty(1), M. L. Bittner(2), Y. Chen(2), S. Kim(1), K. Sivakumar(3), J. Barrera(4), P. Meltzer(2), and J. M. Trent(2)
(1) Texas A&M University, USA
(2) National Human Genome Research Institute, USA
(3)Washington State University, USA
(4) Universidade de Sao Paulo, Brazil

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Vanderbilt University, USA

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H. J. Trussell(1) and M. J. Vrhel(2)
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(2) Tampere University of Technology, Finland
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Tampere University of Technology, Finland

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(1) State Aerospace University, Ukraine
(2) Tampere University of Technology, Finland

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(1) French Naval Academy, France
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(2) Groupe GRIF, France
(3) Centre Hospitalier Regional Universitaire de LILLE, France

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(1) Institut National des Telecommunications, France
(2) Universite Rene Descartes, France
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Alexandre Ulisses Silva(1) and Luis Corte-Real(2)
(1) INESC-PORTO, Portugal
(2) Universidade do Porto, Protugal

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