

FIKRET ERCAL, Ph.D.

Professor, Computer Science Department

Missouri University of Science & Technology, Rolla, MO, 65401

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EDUCATION:

B.S. (E.E.) Istanbul Tech. University, Turkey, June 1979 (first-class honors)

M.S. (E.E.) Istanbul Tech. University, Turkey, July 1981

M.S. (Comp. and Info. Sci.), The Ohio State University, Cols, OH, March 1985

Ph.D. (Comp. and Info. Sci.), The Ohio State University, Cols, OH, June 1988

ACADEMIC EXPERIENCE:

Aug 2005 - Jan. 2008: Interim Chairman, Computer Science Department, Missouri University of Science & Technology.

Jan 2004 - Aug 05: Associate Chairman, Computer Science Department, Missouri University of Science & Technology.

June 1999 - present: Professor, MO Science & Technology, CS Dept.

July 1995 - June 1999: Associate Prof., MO Science & Technology, CS Dept.

August 1990 - July 1995 : Assist. Prof., MO Science & Technology, CS Dept.

July 1988 - August 1990 : Assistant/Associate Prof., Bilkent U., Ankara.

RESEARCH INTERESTS:

Parallel and distributed processing, bioinformatics, image processing, computer vision and neural networks.

HONORS/AWARDS:

Meritorious Service Award; IEEE Computer Society, February 2002.

Faculty Excellence Awards - MST, 1995-96, 1997-98, and 1998-99.

Distinguished Service Award; Istanbul Technical Univ. Alumni Association, 1997 and 2000.

IEEE Golden Core Member: awarded in March 2002

Best Paper Award - Intl. Conf. on Artificial Neural Networks in Eng., Nov. 1994

Turkish Scientific and Technical Research Council scholarship (full scholarship for Ph.D. studies in the U.S.), 1982 - 1988

SELECTED PROFESSIONAL ACTIVITIES:

Member: University of Missouri Research Board (2002-06)

Editorial Board: Intl. Journal of Parallel and Distributed Systems and Networks (1998-2003); Selcuk Journal of Applied Mathematics (2003-present).

Program Committee co-chair - BioSP3 and NiDISC Workshops, 1998-2004. *Executive Committee Member* - IEEE Tech. Committee on Parallel Proc (1996-2002) *co-Guest Editor*: Special Issue of the J. of Future Computer Systems, 1998, 2001 *Program Committee member* and *session chair* for many international conferences

Board of Directors and founding member, ITU Alumni Assoc. - Intl. Branch, 1993-2000

Honorary member: Phi Eta Sigma (1998-present)

SUMMARY OF RESEARCH GRANTS:

Total Research Grants: \$6 Million (\$1 Million F. Ercal's part)

SUMMARY OF PUBLICATIONS:

4 edited books, over 25 refereed journal/magazine articles and book chapters, over 50 refereed conference publications

SELECTED PUBLICATIONS:

R. Frank, C. Kandoth, and F. Ercal, "Validation of an NSP-based (Negative Selection Pattern) gene family identification strategy," to appear in *BMC Bioinformatics*.

R. Frank, A. Mane, and F. Ercal, "An Automated Method for Rapid Identification of Putative Gene Family Members in Plants," *BMC Bioinformatics*, 2006, Volume 7, Suppl 2:S19

R. Frank and F. Ercal, "Evaluation of Glycine max mRNA clusters," *BMC Bioinformatics*, 2005 Jul 15, Volume 6, Suppl 2:S7

R. Mudhireddy, F. Ercal, and R. Frank, "Parallel Hash-Based EST Clustering Algorithm For Gene Sequencing," *DNA and Cell Biology*, Oct 2004, Vol. 23, No. 10: 615-623.

J. Stone and F. Ercal, "Workstation Clusters for Parallel Computing," *IEEE Potentials*, pp.31-33, April/May 2001.

Solutions to Parallel and Distributed Computing Problems: Lessons from Biological Sciences, John Wiley, New York, 304pp., 2000, Editors: A. Zomaya, F. Ercal, and S. Olariu.

F. Ercal, M. Allen, and H. Feng, "A Systolic Image Difference Algorithm for RLE-Compressed Images," *IEEE Transactions on Parallel and Distributed Computing Sys.*, Vol. 11, no.5, pp.433-443, May 2000.

F. Ercal and H. C. Lee, "Time-efficient maze routing algorithms on reconfigurable mesh architectures," *Journal of Parallel and Distributed Computing*, 44(2):133-140, August 1997.

F. Ercal, H. C. Lee, W. V. Stoecker, and R. H. Moss, "Skin Cancer Classification Using Hierarchical Neural Networks and Fuzzy Systems," *Intl. J. of Smart Eng. Sys. Design*, Vol. 1, pp. 273-289, 1999.

M. Moganti and F. Ercal, "Sub-Pattern Level Inspection System for Printed Circuit Boards," *Computer Vision and Image Understanding*, Vol. 70, No. 1, pp. 51-62, April 1998.

P. Sadayappan, F. Ercal, and J. Ramanujam, "Partitioning graphs on message-passing machines by pairwise mincut," *Information Sciences*, Elsevier, Vol. 111, pp. 223-237, Nov. 1998.

M. Moganti and F. Ercal, "Segmentation of Printed Circuit Board Images into Basic Patterns" *Computer Vision and Image Understanding*, Vol. 70, No. 1, pp. 74-86, April 1998.

M. Moganti, F. Ercal, C. H. Dagli, and Shou Tsunekawa, "Automatic PCB Inspection Algorithms: A Survey," *Computer Vision and Image Understanding*, Vol. 63, No. 2, pp. 287-313, March 1996.

F. Ercal, A. Chawla, W. V. Stoecker, H. C. Lee, and R. H. Moss, "Neural Network Diagnosis of Malignant Melanoma From Color Images," *IEEE Transactions on Biomedical Engineering*, Vol. 41, No. 9, pp. 837-845, September 1994.