

FIKRET ERCAL, Ph.D.

Professor of Computer Science
University of Missouri, Rolla, MO, 65401
PH: (573) 341-4857 FAX: (573) 341-4501 E-mail: ercal@umr.edu

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 Chair, U. of Missouri-Rolla, CS Dept.
Jan. 2004 – Aug. 2005: Associate/Acting Chair, U. of Missouri-Rolla, CS Dept.
June 1999 - present: Professor, U. of Missouri-Rolla, CS Dept.
July 1995 - June 1999: Associate Prof., U. of Missouri-Rolla, CS Dept.
August 1990 - July 1995 : Assist. Prof., U. of Missouri-Rolla, CS Dept.
July 1988 - August 1990 : Assistant/Associate Prof., Bilkent U., Ankara.

RESEARCH INTERESTS:

Parallel and distributed computing, bioinformatics image processing and computer vision

HONORS/AWARDS:

Faculty Excellence Awards - UMR, 1995-96, 1997-98, and 1998-99.
Meritorious Service Award ; IEEE Computer Society, February 2002.
IEEE Golden Core Member : awarded in March 2002
Distinguished Service Award; Ist. Technical Univ. Alumni Assoc, 1997 and 2000.
Best Paper Award - Intl. Conf. on Artificial Neural Nets in Eng., Nov. 1994
Scholarship from Turkish Scientific and Technical Research Council, 1982-1988.

SELECTED PROFESSIONAL ACTIVITIES:

Member: University of Missouri Research Board (2002-2006)
Associate Editor: Intl. J. of Par. And Dist. Sys. and Networks (1998-2003)
Editorial Board: Selcuk Journal of Applied Mathematics (2003-present)
Program Committee co-Chair: (1998-2004) Intl. Workshop on Nature Inspired Dist. Comp. (NIDISC)
co-Guest Editor: Special Issue J. of Future Computer Sys, (1998, 2001)
Program Committee member and session chair for many international conferences.
Gave many Invited talks/seminars at academic institutions and workshops.
Board of Directors and founding member, ITU Alumni Assoc. - Intl. Branch, 96-02
Honorary member: Phi Eta Sigma (1998-present)

SUMMARY OF RESEARCH GRANTS AND THESIS SUPERVISED:

Total Research Grants: ~\$6 Million (~\$1 Million F. Ercal's part)
Thesis Supervised: Ph.D.: 3, M.S.: 23

Current and Previous Research Funding Agencies:

NSF, NIH, NASA, DARPA, DOE, Univ. of Missouri Research Board, Intel, NATO

SUMMARY OF PUBLICATIONS:

Total Publications: 5 books (edited), 3 book chapters, 21 journal, and over 50 conference publications

SELECTED PUBLICATIONS:

C. Kandoth, F. Ercal, and R. Frank, "A framework for automated enrichment of functionally significant inverted repeats in whole genomes", *BMC Bioinformatics*. Oct. 2010, 11(Suppl 6):S20

R. Frank, C. Kandoth, and F. Ercal, Validation of an NSP-based (Negative Selection Pattern) gene family identification strategy," *BMC Bioinformatics*, Sept. 2008.

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.

S.R. Subramanya, P. Narayanan, and F. Ercal, "An Improved Submesh Allocation Scheme Using Dominant Free Submeshes," Proc. ISCA 18th Intl. Conf. on Par. and Dist. Comp. Sys. (PDCS-2005), LV, Sept 2005.

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

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.

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.

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

Parallel Computing on Distributed Memory Multiprocessors
Eds: Fusun Ozguner and Fikret Ercal, Springer-Verlag, Berlin, 1993.