

## Biographical Sketch

### Harry Joseph Mangalam

Research Computing Specialist/Programmer

Network and Academic Computer Services in the Office of Information Technology

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#### A. PROFESSIONAL PREPARATION

University of British Columbia, Vancouver	Zoology	B.S., 1980
University of British Columbia, Vancouver	Zoology	M.S., 1983
University of California, San Diego	Physiology/Pharmacology	Ph.D., 1989
Salk Institute, La Jolla	Drosophila Genetics	Postdoc 1989-1991

#### B. APPOINTMENTS

2006-present	Research Computing Specialist/Programmer, Networking and Academic Computing Services, Office of Information Technology, UC Irvine, Irvine, California
2005-2006	Research Associate, Earth System Science, UC Irvine
2002-2005	Principal, tacg Informatics LLC, Irvine, California
2002	Sr. Bioinformatics Scientist, Acero Inc.
2001	Principal, tacg Informatics LLC, Irvine, California
2000-2001	Senior Research Scientist & Project Manager, Gene Expression, National Center for Genome Resources, Santa Fe, NM.
1999-2000	Principal, tacg Informatics LLC, Irvine, California
1996-1998	Senior Analyst for Research Computing, Developmental and Cell Biology, School of Biological Sciences, University of California, Irvine.
1993-1996	Director of Biocomputing, College of Medicine and Associate Specialist, Microbiology and Molecular Genetics, University of California, Irvine.
1991-1993	Sequence Analysis Specialist for the Dept of Biocomputing at the Salk Institute

#### C. PRODUCTS

##### (i) Five products closely related to proposed project

Zender, C.S. and Mangalam, H.J. (2007) Scaling Properties of Common Statistical Operators for Gridded Datasets. *Int. J. High Perform. Comput. Appl.* **21**(4):485-498.  
(online: <http://hpc.sagepub.com/cgi/content/abstract/21/4/485>)

Mangalam, H.J. (2002) tacg, a grep for DNA. *BMC Bioinformatics*: 3:8 (online: <http://www.biomedcentral.com/1471-2105/3/8> ).

Mangalam, H.J. (2002). "The Bio\* toolkits — a brief overview". *Brief Bioinform* (3): 296-302.  
(online: <http://bib.oxfordjournals.org/content/3/3/296.short>)

Mangalam, H.J., Stewart, J.E., Zhou, J., Schlauch, K.A., Waugh, M.E., Chen, G., Farmer, A.D., Colello, G.D., and Weller, J.W. (2001). "GeneX: an Open Source gene expression database and integrated toolset." *IBM Systems J.* **40**(2):552-569. (online: <http://www.research.ibm.com/journals/sj/402/mangalam.html>)

Long, A.D, Mangalam, H.J., Chan, R.Y.P., Toller, L, Hatfield, G.W., and Baldi, P. (2001). "Improved statistical inference from DNA microarray data using analysis of variance and a Bayesian statistical framework." *J. Biological Chem.* **276**(23):19937-44. (online: <http://www.jbc.org/cgi/content/abstract/276/23/19937>)

(ii) *Five other significant products*

Mangalam, H.J., V.R. Albert, H.A. Ingraham, M.S. Kapiloff, L. Wilson, C. Nelson, M.G. Rosenfeld. (1989). "A pituitary POU domain protein, Pit-1, transcriptionally activates both growth hormone and prolactin promoters." *Genes Dev*, **3**:946-958 (online: <http://www.genesdev.org/cgi/content/abstract/3/7/946>)

Ingraham, H.A., R. Chen, H.J. Mangalam, H.P. Elsholtz, S.E. Flynn, C. Lin, D.M. Simmons, L. Swanson, M.G. Rosenfeld. (1988). "A tissue-specific transcription factor containing a homeodomain specifies a pituitary phenotype." *Cell*, **55**:519-529. (online: <https://www.cell.com/content/article/abstract?uid=PII0092867488900384>)

Elsholtz, H.P., H.J. Mangalam, E. Potter, V.R. Albert, S. Supowit, R.M. Evans, and M.G. Rosenfeld. (1986). "Two different *cis*-active elements transfer the transcriptional effects of both EGF and phorbol esters." *Science*, **234**:1552-1557. (online: <http://www.sciencemag.org/cgi/content/abstract/234/4783/1552>)

## D. SYNERGISTIC ACTIVITIES

1: Introductory Linux Classes. Previously with the Office of Information Technology and now in association with the [Data Sciences Initiative](#), I have been teaching introductory classes in Linux on the HPC Cluster, with over 300 students attending. Both [lecture slides](#) and the [tutorial script](#) are available online. A follow-on introductory course on BigData is also being taught. [Lecture slides](#) are also available online.

2: I have written several other online documents, about various subjects in technical computing, among them:

- [How to transfer large amounts of data via network.](#)
- [Distributed Filesystems: Fraunhofer vs Gluster](#)
- [The Perceus Provisioning System](#)
- [How to Evaluate Open Source Software](#)

3: I have written some useful Open Source applications, including the Bioinformatics pattern matching application *tacg* (see Products, above), [clusterfork](#), a cluster administration tool, [parsyncfp](#), a parallel, load-balancing wrapper for rsync, and [scut](#), a regular-expression-aware data slicer.

4: I have recently been accepted as an [XSEDE Campus Champion](#) to help disseminate techniques and awareness about their resources around campus.

## E. COLLABORATORS AND OTHER AFFILIATIONS

### Collaborators and Co-Editors

None

### Graduate and Postdoctoral Advisors

**BSc, (1980), MSc (1985) UBC, - Dr. David R. Jones, Dept of Zoology, Univ. of British Columbia (deceased).**

**PhD (1989) UCSD – Dr. Michael G. Rosenfeld, MD, Howard Hughes Medical Institute, School of Medicine, UCSD.**

**Post Doctoral Advisor: (1989-1991) Dr. John B Thomas, The Salk Institute.**

**Thesis Advisor and Postgraduate Scholar Sponsors over the Last Five Years:**

None.