Selected Publications

Life-time summary (count) according to the following categories:

- Books edited..... 2
- Refereed Chapters in books..... 3
- Papers in refereed journal..... 20
- Papers in non-refereed journals or trade journals ……16
- Papers in refereed conference proceedings. 24
- Major invited contributions and/or technical reports 3
- Abstracts workshops presented ..... > 60

Books edited:

1) Famili, A. Kok J, Pena, J.M, Siebes A., and Feelders A. (Editors) Advances in Intelligent Data Analysis VI, Springer, 2005, 522 pages.
2) Famili, A., Nau, D., and Kim, S. (Editors). Artificial Intelligence Applications in Manufacturing. MIT/AAAI Press, Cambridge, MA. 1992. 450 pages.

Refereed Chapters in Books:

1) Tchagang AB, Y Pan, F Famili, AH Tewfik, and PV Benos (2010) Biclustering of DNA microarray data: theory, evaluation, and applications. In: LA Liu, D. Wei, and Y. Li (eds.) Handbook of Research on Computational and Systems Biology: Interdisciplinary Applications Chapter 29, IGI Global book (16 pages).
2) Famili, A., and Turney, P. Application of Machine Learning to Industrial Planning and Decision Making. In "Artificial Intelligence Applications in Manufacturing" A. Famili, D. Nau, and S. Kim (Editors). MIT/AAAI Press, Cambridge, MA. 1992. pp. 1-16. NRC 33150. (16 pages)
3) Famili, A., and Vernadat F. Integrity Constraints in Manufacturing Databases. In "Control and Programming in Advanced Manufacturing" by K. Rathmill (Editor). IFS Publications, Springer Verlag, 1988. (20 pages)

Papers in refereed journals (most recent- selected)

1) S. Maldonado, R. Weber, and F. Famili, *Feature selection for high-dimensional class-imbalanced data sets using Support Vector Machines*, Journal of Information Sciences, accepted for publication to appear in Summer 2014.
2) Alain B. Tchagang, Fazel Famili and Youlian Pan. *Subspace clustering of DNA Microarray Data: Theory, Evaluation, and Applications.* International Journal of Computational Models and Algorithms in Medicine, 2014.

3) Alain B. Tchagang, Sieu Phan, F. Famili, and Youlian Pan (**2011**). "Mining biological information from 3D short time-series gene expression data: the OPTricluster algorithm". *BMC Bioinformatics, 2012 13:54* (17 pages).
4) Tchagang AB, A Gawronski, H Bérubé, S Phan, F Famili, and Y Pan (2010). GOAL: A Software Tool for Assessing Biological Significance of Genes group. *BMC Bioinformatics* 11: 229. (11 pages)
5) Liu Z, S Phan, F Famili, Y Pan, AEG Lenferink, C Cantin, C Collins, MD. O'Connor-Mccourt (2010). A multi-strategy approach to informative gene identification from gene expression data. *Journal of Bioinformatics and Computational Biology* 8: 19-23. (4 pages)
6) Phan S, Famili, F, Tang, Z, Pan, Y, Liu, Z, Ouyang J., Lenferink, A, and McCourt-O'connor, M., A novel pattern based clustering methodology for time-series microarray data, to appear in the Journal of Computer Mathematics, 2007. (9 pages)
7) Pan Y, Pylatuik J D, Ouyang J, Famili A, and Fobert PR, (2004). Discovery of functional genes for systemic acquired resistance in Arabidopsis thaliana through integrated data mining. Journal of Bioinformatics and Computational Biology Vol 2(4): 639-655 NRC 46550. (16 pages)
8) Famili, A., Liu, G., and Liu, Z., Evaluation and Optimization of Clustering in Gene Expression Data Analysis. Journal of Bioinformatics, Oxford University Press, Vol 20(10), July 2004, NRC 46534. (6 pages)
9) Walker, P., Smith, B. and Liu, Q., Famili, A., Valdes, J., Liu, Z., and Lach, B., Data Mining of Gene Expression Changes in Alzheimer Brain. Journal of Artificial Intelligence in Medicine, Elsevier Science (Elsevier) Vol 31 (2) June 2004, NRC 45838. (7 pages)

Papers in Refereed Conference Proceedings (most recent- selected)

1) Tulpan, D. Léger, S. Lund, A. Pan, Y. Famili F. "Prediction of flowering time orthologous genes in A. tauschii, B. distachyon, S. bicolor and T. urartu", Poster presentation, Plant Genomics Congress, Feb 24-25, 2014
2) Tulpan, D. Belacel, N. Famili F. and K. Ellis, "Experimental Evaluation of Four Feature Detection Methods for Close Range and Distant Airborne Targets for Unmanned Aircraft Systems Applications", accepted for the 2014 International Conference on Unmanned Aircraft Systems (6 pages).

3) Famili F, S. Phan, and Z. Liu, Discovering and disseminating interesting patterns from imbalanced clinical data – a case study, IJCAI-NetMed workshop, IJCAI-2013, Beijing, China (10 pages).
4) Alain B. Tchagang, Sieu Phan, Fazel Famili, Adrian J. Cutler and Jitao Zou and Youlian Pan. *A Generic Model of Transcriptional Regulatory Networks: Application to Plants under Abiotic Stress*. 2013 IEEE International Workshop on Genomic Signal Processing and Statistics. **November** 17–19, 2013, Houston, Texas, USA (8 pages).
5) Alain B. Tchagang, Sieu Phan, Fazel Famili, Daiqing Huang, Jitao Zou, Adrian J. Cutler, and Youlian Pan. *Global Analysis of the Transcriptional Regulatory Networks in Oryza sativa and Arabidopsis thaliana under Abiotic Stress*. Sixth Annual RECOMB/ISCB conference on Regulatory and Systems Genomics, with DREAM Challenges. Toronto, Ontario, Canada, November 8 - 12, 2013 (10 pages).
6) Famili F, Z. Liu, A. Bravi, A. Seely, Searching for patterns in clinical data – Choosing the right data mining approach, ECAI 2012, Montpellier, France. (6 pages)
7) Famili F, Z Liu and S Phan, (2011) Identifying informative genes in highly imbalanced gene expression data, ECML-PKDD 2011, Atens, Greece. (8 pages)

8) Pan Y, AB Tchagang, H Bérubé, S Phan, H Shearer, Z Liu, P Fobert, and F Famili (2010) Integrative data mining in functional genomics of *Brassica napus* and *Arabidopsis thaliana*. 23rd International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems (IEA-AIE 2010) – special session on "New Frontiers in Data Analysis, Optimization and Visualization for Bioinformatics and Neuroscience", June 1-4, Córdoba, Spain. (8 pages)
9) Famili F, S Phan, F Fauteux, Z Liu and Y Pan (2010) Data Integration and Knowledge Discovery in Life Sciences. 23rd International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems (IEA-AIE 2010) – special session on "New Frontiers in Data Analysis, Optimization and Visualization for Bioinformatics and Neuroscience", June 1-4, Córdoba, Spain. (8 pages)
10) Bérubé H, A Tchagang, Y Wang, Z Liu, S Phan, F Famili and Y Pan (2010). Poster presentation at the 18th International Conference on Plant and Animal Genome (PAG'10), San Diego, California, USA, January 9-13, 2010. (10 pages)
11) Famili F, S Phan, Z Liu and Y Pan (2010). The impact of gene expression analysis on the classification and prediction of patients' medical conditions (ICDM 2010). In: Proceedings of Industrial Conference on Data Mining (ICDM 2010), July 11-14, Berlin, Germany. (8 pages)
12) Pan Y, Zou J., Huang, Y., Liu, Z., Phan S. and Famili F. (2009) Goal driven analysis of cDNA microarray data. Proceedings of the 2009 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB 2009), March 30-April 2, Nashville, TN, USA. NRC50745 (8 pages)
13) Famili, F. Phan, S, Liu, Z., Knowledge discovery in bioinformatics: identifying the right path, European Mini Conf on Bioinformatics, September 2008. (6 pages)
14) Pan Y, Zou J, Huang Y, Tchagang AB, Fobert P, Shearer H, Phan S, Liu Z, Bérubé H, Famili AF (2008). Integrative approaches in knowledge discovery from plant omics data. NRC Genomics and Health Initiative 8th Annual General Meeting, Saskatoon, Sept 21-24. (6 pages)
15) Tchagang AB, Fobert P, Shearer H, Phan S, Famili AF, Pan Y (2008). Triclustering of Arabidopsis short time-series gene expression data. Poster, NRC Genomics and Health Initiative 8th Annual General Meeting, Saskatoon, Sept 21-24. (6 pages)
16) Pan Y, S Phan, and AF Famili, AEG. Lenferink, ML Jaramillo, M O'connor-Mccourt (2008). Do orthologous genes have orthologous promoters? Poster, 16th Annual International Conference Intelligent Systems for Molecular Biology (ISMB2008), Toronto, July 19-23. (9 pages).
17) Pan Y, S Phan, and AF Famili (2008). An integral framework in plant omics. Poster, 6th Canadian Plant Genomics Workshop (CPGW2008), Toronto, June 23-26 (5 pages).
18) Phan, S. Famili, F. Liu, Z. and Pena-Castillo L., Bio-Intelligence - A research program facilitating the development of new paradigms for tomorrow's patient care, IIT revolutions conf, Venice, Dec 18, 2008 (5 pages).
19) Pena-Castillo L , Phan, S. and Famili, F. An integrated bioinformatics approach for knowledge discovery, , IIT revolutions conf, Venice, Dec 18 2008. (6 pages)
20) Kiritchenko, S., Famili F, Matwin, S, and Nock R, Learning and evaluation in the presence of class hierarchies: Application to text categorization, 19th Canadian conf. on AI, June 7-9, 2006 (7 pages).
21) Famili A. Liu Z., Carmona-Saez, P. and Mullick A. Knowledge Discovery in the identification of differentially expressed genes, 6th International Symposium on Intelligent Data Analysis, Madrid, Spain September 8-10, 2005, NRC 48129, (11 pages).
22) Ouyang Junjun, Famili A. and Xu W. An Approach to Automated Knowledge Discovery in Bioinformatics, Second International conference on Artificial Intelligence Applications and Innovations - AIAI 2005, China September 7-9, 2005. (8 pages)

23) Kiritchenko, S., Matwin, S., Famili, A.. "Hierarchical Text Categorization as a Tool of Associating Genes with Gene Ontology Codes," Second European Workshop on Data Mining and Text Mining for Bioinformatics held during 5th European Conference on Machine Learning (ECML) and the 8th European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD). Pisa, Italy. September 24, 2004. NRC 48050. (7 pages)
24) Famili, A. Ouyang J., Kryworuchko M., Alvarez-Maya I., Smith B. [3] and Diaz-Mitoma F., Knowledge discovery in Hepatitis C Virus transgenic mice, presented at the IEA-AIE 2004 conference, May 2004, Ottawa, ON. NRC 46545. (6 pages)
25) Famili, A., Liu, Z., Ouyang J., Walker P.R., Smith B., O'connor, M., and Lenferink A., Data Mining for Gene Response Analysis, presented at the ECAI-04 workshop on Data Mining in Genomics and Proteomics, 2004, NRC 47142. (9 pages)