

## Biographical Sketch

NAME Dr. FORST, Christian	POSITION TITLE Assistant Professor
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### Education

INSTITUTION AND LOCATION	DEGREE	YEAR(S)	FIELD OF STUDY
University of Vienna, Vienna, Austria	B.S.	1989	Astronomy
University of Vienna, Vienna, Austria	M.S.	1990	Chemistry
University of Vienna, Vienna, Austria	Ph.D.	1993	Theoretical Chemistry

### Research and Professional Experience

Feb. 2008-present: **Assistant Professor.** Department of Clinical Sciences, UT Southwestern Medical Center, Dallas, TX

Nov. 1999-Jan. 2008: **Staff Member: Computational Biology.** Bioscience Division, Los Alamos National Laboratory, Los Alamos, NM

Nov. 1997-Oct. 1999: **Postdoctoral Research Associate: Bioinformatics.** Theoretical Biophysics Group, Beckman Institute / UIUC, Urbana, IL

Oct. 1997: **Visiting Scientist: Theory of Molecular Evolution.** Institute of Theoretical Biology, Humboldt University, Berlin, Germany

April 1994-Sept. 1997: **Group Leader: Theory of Evolutionary Dynamics.** Department of Molecular Evolutionary Biology, Institute of Molecular Biotechnology, Jena, Germany

Sept. 1993-Sept. 1997: **Scientist: Theory of Evolutionary Dynamics.** Department of Molecular Evolutionary Biology, Institute of Molecular Biotechnology, Jena, Germany

Aug. 1993: **System Administrator: Installation of a UNIX computer network.** Institute of Molecular Biotechnology, Jena, Germany

April 1993-Aug. 1993: **Postdoctoral Fellow: Nonlinear Systems.** Institute of Operations Research, University of Technology, Vienna, Austria

### Professional Service

Ad hoc Reviewer: *Adv. Complex Systems, American Naturalist, AMS Microbiology, Bioinformatics, BioMed Central Bioinformatics, BioMed Central Systems Biology, BioSilico, Bull. Math. Biol., Cell Biochemistry and Biophysics, Expert Opinion on Drug Discovery, Gene, CIBCB 2006, Genome Biology, ISMB Conferences, J. Theor. Biol., Molecular Biology and Evolution, Molecular Systems Biology, PloS Comp. Bio., Proteins, The New Scientist, Virology Research Netherlands Organisation for Scientific Research (2009), US Defense Threat Reduction Agency (2009), EU Program ERA-NET PathoGenoMics (2008), Biotech. and Biol. Sci. Res. Council, UK (2007), Human Frontiers Science Program (2007), European Systems Biology Program (2006), US National Science Foundation (2004)*

Editorial Board: International Journal of *Cancer Genomics and Proteomics*

Organizing Committees: 7<sup>th</sup> International Conference on Anticancer Research  
New Mexico Bioinformatics Symposium 2007

Review Panels: National Institute of Health, 2012  
National Institute of Health, 2011  
National Science Foundation, 2007  
US Department of Energy, 2002  
Life Science Informatics Program of IUCRP, Univ. of California, 2000-present

### Honors and Awards

2006 LANL Distinguished Performance Award  
2004 – 2006 Los Alamos National Laboratory LDRD-ER Award  
2002 – 2004 Grant sponsored by The Procter & Gamble Company  
1996 Travel Award by The German Science Foundation (DFG)  
1993 Dissertation with Magna Cum Laude: Univ. of Vienna, Austria  
1990 Distinguished Performance Scholarship: Univ. of Vienna  
1989 Elected student participant of 1989 Nobel Laureate Conference, Lindau/Bodensee, Germany

**Professional Memberships**

International Society of Computational Biology

**Journal Publications (from a total of 44)**

Orvedahl A., Sumpter R., Xiao G, Ng A., Zou Z., Tang Y., Narimatsu M., Gilpin C., Sun Q., Roth M., **Forst C.V.**, Wrana J.L., Zhang Y.E., Luby-Phelps K., Xavier R., Xie Y., and Levine B.: **Image-Based Genome-Wide siRNA Screen Identifies Host Factors Involved in Selective Autophagy.** *Nature*, doi:10.1038/nature10546, 2011.

Mata M.A., Satterly N., Versteeg G.A., Frantz D., Wei S., Williams N., Schmolke M., Brugarolas J., **Forst C.V.**, White M.A., Garcia-Sastre A., Roth M.G., Fontoura B.M.A.: **Chemical Screen Identifies Inhibitors of Pathogenic Viruses Revealing REDD1 as Host Defense Factor.** *Nat. Chem. Biol.*, doi:10.1038/NCHEMBIO.645, 2011.

Sohaee N., and **Forst C.V.**: **Identification of functional modules in a PPI network by bounded diameter clustering** *J. Bioinf. Comput. Biol.*, Vol. 8, pp. 471-489, 2010.

Tatebe K., Zeytun A., Ribeiro R.M., Hoffmann R., Harrod K.S., and **Forst C.V.**: **Response network analysis of differential gene expression in human epithelial lung cells during avian influenza infections.** *BMC Bioinf.*, Vol. 11, pp. 170, 2010 (HIGHLY ACCESSED PAPER).

Stadler P., Prohaska S.J., **Forst C.V.**, and Krakauer D.C.: **Defining Genes: A Computational Gene Definition.** *T. Biosci.*, DOI 10.1007/s12064-009-0067-y, 2009.

**Forst C.V.**, Cabusora L., Mawuenyega K.G., and Chen X.: **Biological Systems Analysis by a Network Proteomics Approach and Subcellular Protein Profiling.** *Adv. Complex Sys.*, Vol. 9, pp. 299-314, 2006.

**Forst C.V.**, Flamm C., Hofacker I.L., Stadler P.F.: **Algebraic Comparison of Metabolic Networks, Phylogenetic Inference, and Metabolic Innovation.** *BMC Bioinformatics*, 2006, Vol. 7, p.67, 2006.

Cabusora L., Sutton E., Fulmer A., **Forst C.V.**: **Differential Network Expression During Drug and Stress Response.** *Bioinformatics*, Vol. 21, pp. 2898-2905, 2005.

Mawuenyega K.G., **Forst C.V.**, Dobos K.M., Belisle J.T., Chen J., Bradbury M.E., Bradbury A., Chen X.: ***Mycobacterium tuberculosis* network analysis by global subcellular protein profiling.** *Mol. Biol. Cell*, Vol. 16, pp. 396-404, 2005.

**Forst C.V.**, and Schulten K.: **Phylogenetic Analysis of Metabolic Pathways.** *J. Mol. Evol.*, Vol. 52, pp. 471-489, 2001.

**Refereed Conference Papers**

Sohaee N., and **Forst C.V.**: **Modular Clustering of Protein-Protein Interaction Networks.** In: Proceedings of the 2010 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology, Montreal, Canada, May 2-5, 2010.

Sohaee N., and **Forst C.V.**: **Bounded Diameter Clustering Scheme for Protein Interaction Networks.** In: Proceedings of the International Conference in Computational Biology, October 2009 (BEST PAPER AWARD).

Ullrich A., and **Forst C.V.**: **k-PathA: k-shortest Path Algorithm.** In: *Proceedings of the HiBi09 - High Performance Computational Systems Biology Workshop*, Trento, Italy, 14-16 Oct. 2009.

**Refereed Book Chapters**

**Forst C.V.**: **Host-Pathogen Systems Biology.** In: *Infectious Disease Informatics* (V. Sintchenko ed.) Springer Verlag, 2009.