

Stefan Wuchty

Current Coordinates

Work:

Department of Physics
University of Notre Dame
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Personal Data

Birth: June 11, 1972; Vienna, Austria
Citizenship: Austrian
raised in Tyrol, Vorarlberg, Vienna Austria
resident of Germany from 6/1998 to 7/2002, USA from 8/2002
Marital status: single

Research Fields

CURRENT RESEARCH INTERESTS

Sequence analysis of protein families, protein domains

Analysis of biological/biochemical networks

EARLIER PROJECTS

Structural modeling of RNA

Experience

PostDoctoral Experience 2002 -:

Department of Physics, [University of Notre Dame](#), Notre Dame, IN, USA

Scientific Colaborator 1999 - 2002:

[European Media Laboratory GmbH](#), Heidelberg, Germany

Scientific Colaborator 1998-1999:

Project "Nanosynthest",

[Institute for Physical Hightechnology](#), Jena, Germany

in cooperation with [Merck KGaA](#), Darmstadt, Germany

Laboratory Experience

1995-1996: Laboratory experience in various labs

Renee Schroeder, Institute for Genetics,

Fritz Pittner, Institute for Biochemistry,

Tim Skern, Institute for Biochemistry,

Walter Fontana, Institute for Theoretical Chemistry and Molecular Structural Biology,

all at University of Vienna

Education

PhD 2002:

Doktor rerum naturalium, Theoretical Biochemistry (with honors)

PhD thesis "Connected! The topology of biochemical networks" supervised by

[Peter Schuster](#), [Insitute for Theoretical Chemistry and Molecular Structural Biology](#),

University of Vienna, Austria and

[Ursula Kummer](#) [European Media Laboratory](#), Heidelberg, Germany

PhD studies 1999 - 2002:

University of Vienna, Austria, and European Media Laboratory, Germany

Summer School 1999:

11th Intl. School for Computer Science Researchers "Computational Biology" , Lipari, Italy

Summer School 1997:

6th Intl. Summer School on Biophysics, Rovinj, Croatia

Diploma 1998:

Magister rerum naturalium ("2. Diplomprüfung"), Biochemistry (with honors)

Diploma thesis "Suboptimal structures of RNA" with [Peter Schuster](#) and [Walter Fontana](#),

[Institute for Theoretical Chemistry and Molecular Structural Biology](#), University of Vienna, Austria

Studies in Biochemistry 1991-1997:

University of Vienna, Austria

Military Services 1990-1991:

Mandatory Military Services at "Austrian Bundesheer"

High School graduation 1990

High School 1982-1990:
Secondary and High School with scientific bias, BRG III, Radetzkystraße 2a,
A-1030 Vienna, Austria

Computational experience

Languages: C, Leda, Java, Python

Operating systems: Linux/Unix, Windows

Computer programs

Contribution 1998:

Algorithm for modelling of SUBOPTimal secondary structures of RNA,
integrated to the [VIENNA RNA Package](#),
Institute of Theoretical Chemistry and Molecular Structural Biology, University of
Vienna, Austria

Supervising

Co-supervision 2001:

Katja Wegner,
"Ein Algorithmus zum Vergleich von Proteinsequenzen aufgrund ihrer
Domänenzusammensetzung",
Diploma thesis, FH Senftenberg, Senftenberg, Germany

Co-supervision 2001 - 2002:

Stephan Jansen,
"Sequence alignments of proteins considering recombinations and their
implications for the classification of protein families",
Diploma thesis, University of Konstanz, Konstanz, Germany

Chair 1999:

Sessionchair,
"Workshop on Computation of Biochemical Pathways and Genetic Networks",
EML, Villa Bosch, Heidelberg, Germany

Cooperations

[Ioannis Xenarios](#) (Molecular Biology Institute, UCLA, CA, USA): networks of

interacting proteins

[Peter Stadler](#) (Institute of Theoretical Chemistry and Molecular Structural Biology, University of Vienna, Austria): Centrality measures of networks

[Erik Sonnhammer](#) (Center of Genomics and Bioinformatics, Karolinska Institutet, Stockholm, Sweden): Dissecting proteomes

Gordana Apic (MRC Cambridge, UK): networks of genetic segments

Public

Diploma thesis:

S. Wuchty,

["Suboptimal Secondary Structures of RNA"](#),

Diploma thesis, University of Vienna, Austria, 1998

PhD thesis:

S. Wuchty,

["Connected! The topology of biochemical networks"](#),

PhD thesis, University of Vienna, Austria, 2002

Papers:

A. Schober, G. Schlingloff, D. Tomandl, J.M. Köhler, G. Mayer, A. Gross, S. Wuchty, H. Deppe, B. Diefenbach and H. Wurziger,

"Chemical and Biochemical Synthesis and Screening in Silico",

In H. Reichl, E. Obermaier (eds.), Microsystem Technologies 98,

6th Internat. Conf. on Micro-, Electro-, Opto- and Mechanical Systems and Components, 451-456, Potsdam, (1998)

S. Wuchty, W. Fontana, I. Hofacker and P. Schuster,

["Complete Suboptimal Folding of RNA and the Stability of Secondary Structures"](#),

Biopolymers, 49, 145-165, (1999)

S. Wuchty,

["Scale-free Behavior in Protein Domain Networks"](#),

Mol. Biol. Evol., 18(9), 1694-1702, (2001)

S. Wuchty,

["Interaction and Domain Networks of Yeast"](#),

Proteomics, in press (2002)

K. Wegner, S. Jansen, S. Wuchty and U. Kummer,

"combAlign: A protein sequence alignment algorithm considering recombinations",

submitted (2002)

S. Wuchty,
"Small worlds in RNA structures",
submitted (2002)

S. Wuchty,
"The large scale organization of genomic sequence segments",
submitted (2002)

S. Wuchty, P.F. Stadler,
"Centers of large networks",
submitted (2002)

Posters:

S. Wuchty,
"Scale-free Behavior in Protein Domain Networks",
2nd Workshop on Computation of Biochemical Pathways and Genetic Networks 2001,
Villa Bosch, Heidelberg, Germany

S. Wuchty,
"Scale-free Behavior in Protein Domain Networks",
ISMB 2001,
Copenhagen, Denmark

Invited talks:

Institute for Physical Hightechnology Jena, Spring 1998, Jena, Germany

Notre Dame University, Fall 2001, Notre Dame, IN, USA

Karolinska Insitutet, Fall 2001, Stockholm, Sweden

Max Planck Institute for Physics of Complex Systems, Winter 2002, Dresden,
Germany

Miscellaneous

Languages: German (native), English (fluent)

Drivers license

Stock market speculator

Basketball player and avid sportsman

former social activist (scouts)

former student representative at the faculty of natural sciences at the University
of Vienna

enjoys reading, music, traveling

And ...

complete biography in [[pdf](#)], [[ps](#)] format

[[back](#)]