

## HEINZ-BERND SCHÜTTLER

### FIELD OF ENDEAVOR:

Applications of Statistical Mechanics in Computational Biology and Computational Condensed Matter Physics

### PROFESSIONAL PREPARATION:

Technische Universität München	Physics	Diplom, 1981
University of California, LA	Physics	M.S., 1982
University of California, LA	Physics	Ph.D., 1984

### APPOINTMENTS:

1997 - present	Professor, Department of Physics and Astronomy, The University of Georgia
2000 – 2006	Head, Department of Physics and Astronomy, The University of Georgia
1992 – 1997	Associate Professor, Dept. of Physics and Astronomy, The University of Georgia
1987 - 1992	Assistant Professor, Dept. of Physics and Astronomy, The University of Georgia
1986 - 1987	Postdoctoral Researcher, Argonne National Laboratory, Argonne, IL
1984 - 1986	Postdoctoral Researcher, University of California, Santa Barbara, CA
1981 - 1981	Research Associate, Argonne National Laboratory, Argonne, IL

### PUBLICATIONS RELATED TO THE PROPOSED PROJECT:

- “A genetic network for the clock of *Neurospora crassa*” Y. Yu, W. Dong, C. Altimus, X. Tang, J. Griffith, M. Morello, L. Dudek, J. Arnold and H.-B. Schüttler, Proc. Natl. Acad. Sci. (USA) **104**, 2809-2814 (2007) + Supporting Information (11 pages + 3 Figures).
- “Genome-wide expression analysis of genetic networks in *Neurospora crassa*,” D. A. Logan, A. L. Koch, W. Dong, J. Griffith, R. Nilsen, M. E. Case, H.-B. Schüttler, and J. Arnold, Bioinformatics **1** (10), 390-395 (2007).
- “Systems biology of the *Neurospora* biological clock”, W. Dong, X Tang, Y Yu, J Griffith, R. Nilsen, D Choi, J Baldwin, L Hilton, K Kelps, J McGuire, R Morgan, M Smith, M Case, J Arnold, H-B Schüttler, Q Wang, J Liu, J Reeves, and D Logan, IET Systems Biology **1**, 257-265 (2007)
- *Metabolomics*. Chapter 22 in Handbook of Industrial Mycology, 597-634, Arnold, J., H.-B. Schüttler, D.A. Logan, D. Battogtokh, J. Griffith, B. Arpinar, S. Bhandarkar, S. Datta, K.J. Kochut, E. Kraemer, J. A. Miller, A. Sheth, G. Strobel, T. Taha, B. Aleman-Meza, Marcel-Dekker, NY, NY (2004).
- “An Ensemble Method for Identifying Regulatory Circuits with Special Reference to the *qa* Gene cluster of *Neurospora crassa*”, D. Battogtokh, D.K. Asch, M.E. Case, J. Arnold, and H.-B. Schüttler, Proc. Natl. Acad. Sci. (USA) **99**, 16904-16909, (2002).

## **OTHER SIGNIFICANT PUBLICATIONS:**

- “Perfect Stochastic Summation in High Order Feynman Graph Expansions,” J. Corcoran, U. Schneider and H.-B. Schüttler, *Int. J. Mod. Phys. C* **17**, 1527-1550 (2006).
- “Behavior of Damage Spreading in the Blume-Capel Model”, C.-J. Liu and H.-B. Schüttler, *Phys. Rev. E* **65**, 056103-056109 (2002).
- “Screened-Interaction Expansion for the Hubbard Model and Determination of the Quantum Monte Carlo Fermi Surface”, G. Esirgen, H.-B. Schüttler, C. Gröber, and H.G. Evertz, *Phys. Rev. B* **64**, 195105-195116 (2001).
- “*d*-Wave Pairing in the Presence of Long-Range Coulomb Interactions”, G. Esirgen, H.-B. Schüttler and N.E. Bickers, *Phys. Rev. Lett.* **82**, 1217-1220 (1999).
- “The isotope effect in *d*-Wave superconductors”, H.-B. Schüttler and C.-H. Pao, *Phys. Rev. Lett* **75**, 4504-4507 (1995).

## **SYNERGISTIC ACTIVITIES:**

- Mentor with REU in Fungal Genomics and Computational Biology for underrepresented Students at UGA. 2003-present.
- Mentor with Physics and Astronomy REU: Physics at the Boundary at UGA. 2001-2004.

## **COLLABORATORS:**

J. Corcoran, U. Schneider, J. Arnold, R.W. Robinson, A. Voigt, B. Aleman-Meza, D.K. Asch, D. Battogtokh, C. Gröber, H. G. Evertz, G. Esirgen, D. Logan, W. Dong, W. Zhou, W.-D. Zhou.

## **ADVISEES:**

**Main Advisor, Current Graduate Students:** Z.-Q. Hao, Y.-P. Huang, X.-J. Tang, M.-C. Zhang (Computer Science, jointly supervised).

**Main Advisor, Graduate Students Past 5 Years:** W.-D. Zhou (Ph.D., Research Assoc., Michigan State U.), S.-X. Qu, (Ph.D., Professor, Xi’an, China), Y. Yu (Ph.D., Stock Analyst, Credit Suisse Bank), C.-J. Liu (Ph.D., Research Staff, USDOT), Q. Wang (M.S. Computer Science, jointly supervised).

**Graduate Student Committee Member Past 5 Years:** Qin Zhang (Ph.D), R. Chastain (Ph.D., Clarke Central High School Teacher, Athens, GA), X.-P. Tao (Ph.D., Research Assoc., ORNL), W. Kwak (Ph.D.), F.-G. Wang (Ph.D.), F. Tavazza (Ph.D., Research Assoc., NIST).

**Undergraduate Research Mentor Past 5 Years:** D. Choi (REU), A. Missel (REU), L. Dudek (REU), D. Brown (REU), C. Altimus (jointly supervised).

## **PROFESSIONAL ACTIVITIES:**

American Physical Society

## **SERVICE:**

- Head, Department of Physics and Astronomy, The University of Georgia, 2000-2006.
- UGA Representative to GRA Nanotechnology Initiative, 2002.