

Samuel Cho

Associate Professor of Physics and Computer Science at Wake Forest University

Winston-Salem, NC, US

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Biography

With expertise in both biophysics and computer science, Samuel Cho has a unique perspective on biomolecular research of cellular processes: he understands how human cells work at the molecular level, and he can manipulate cutting-edge technology to create simulations that deepen that understanding for scientists everywhere.

In his recent research into enzymes that aid tumor growth, Cho and his colleagues used computer simulations to understand how RNA functions. What he found – new, in-depth views of how that RNA helps tumor cells grow – has opened a path for developing treatments that target cancerous tumors. Now, he's working with students to use the graphic processing units in video gaming technology to make this work even quicker.

Areas of Expertise

Computational Biophysics, Molecular Dynamics Simulations, GPU-Based Programming, Protein and RNA Folding, Biomolecular Assembly, Molecular Machines, Protein Folding Kinetics, RNA Folding Mechanisms, Protein-RNA Machines: Ribosome Assembly, Protein-Nanoparticle Interactions, GPU-Based MD Simulations

Education

University of California, San Diego

Ph.D. Physical Chemistry

University of Maryland Baltimore County

B.S. Biochemistry & Computer Science

Accomplishments

NIH Post-Doctoral Research Fellowship (UMd)

2007 - 2010

Molecular Biophysics Training Program (UCSD)

2003 - 2005

Teaching Assistant Excellence Award (UCSD)

2003

President's Scholar Award (UMBC)

1996 - 2000

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