

# Jun S. Song, Ph.D., M.A.St.

## CURRICULUM VITAE

**Position:** Founder Professor in Bioengineering and in Physics  
University of Illinois, Urbana-Champaign  
Department of Bioengineering (50%)  
Department of Physics (50%)  
Faculty, Institute for Genomic Biology

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### EDUCATION

1992 - 1996	Harvard University	A.B.	Physics, Summa Cum Laude
1996 - 1997	University of Cambridge, UK.	Master of Advanced Study	Mathematics, Distinction
1997 - 2001	Massachusetts Institute of Technology	Ph.D.	Physics (Thesis Advisor: Gang Tian, Dept. of Mathematics)

### PRINCIPAL POSITIONS HELD

2001 - 2003	University of California, Berkeley	Charles B. Morrey, Jr. Assistant Professor	Mathematics
2003 - 2005	Harvard University	Instructor and Research Fellow	Medical Physics
2005 - 2007	Harvard University	Research Fellow	Biostatistics and Computational Biology
2007 - 2008	Institute for Advanced Study	Member	Simons Center for Systems Biology
2008 - 2009	Institute for Advanced Study	Martin A. and Helen Chooljian Member	Simons Center for Systems Biology
2009 - 2012	University of California, San Francisco	Assistant Professor	Institute for Human Genetics
2012 - 2013	University of California, San Francisco	Tenured Associate Professor	Institute for Human Genetics
2014-2016	University of California, San Francisco	Adjunct Professor	Department of Epidemiology and Biostatistics
2014-present	University of Illinois, Urbana-Champaign	Founder Professor	Departments of Bioengineering and Physics

## HONORS AND AWARDS

1992-6 John Harvard Scholarship, Harvard University  
 1993 Detur Prize, Harvard University  
 1995 Thomas Temple Hoopes Prize, Harvard University  
 1995 Phi Beta Kappa National Honor Society  
 1996 Bowdoin Prize in Natural Science Writing, Harvard University.  
 1996 Herchel Smith Scholarship, Certificate of Advanced Study in Mathematics, University of Cambridge  
 1996 Philip Hofer Prize for Book-Collecting, Harvard University  
 1997 Emmanuel College Prize for distinction in the Mathematical Tripos, University of Cambridge  
 1997 NSF Graduate Fellowship  
 2008 Martin A. and Helen Chooljian Membership in Biology, Institute for Advanced Study  
 2011 Distinguished Scientist Award, Sontag Foundation  
 2011 NSF CAREER Award  
 2015 Engineering Council Outstanding Advisor

## PROFESSIONAL ORGANIZATIONS

### Memberships

2003-2005 American Association of Medical Physicists  
 2015- American Association for the Advancement of Science  
 2015- American Physical Society

### Service to Professional Organizations

1999-2001 American Mathematical Society, Reviewer for Mathematical Reviews

## SERVICE TO PROFESSIONAL PUBLICATIONS

1999 - 2001 Ad hoc referee for Mathematical Reviews, American Mathematical Society  
 2005 - 2007 Ad hoc referee for International Conference on Intelligent Systems for Molecular Biology (ISMB)  
 2005 - present Ad hoc referee for Bioinformatics, BMC Genomics, Statistical Applications in Genetics and Molecular Biology, BMC System Biology, Journal of Molecular Cell Biology, Cell, Genomics, Nature Protocols, Current Cancer Drug Targets, Cancer Research, Cancer Letters, PLoS Comp Bio  
 2010 - present Review Editor, Frontiers in Epigenomics

## GOVERNMENT AND OTHER PROFESSIONAL SERVICE

2010 – 2012, 2014	US-Israel Binational Science Foundation	Expert Reviewer
March 2012	NIH	Computational Analysis of ENCODE Data (U01) Special Emphasis Panel Member
Oct 2012,	NIH	BDMA Study Section Ad Hoc Member
Feb 2013,	NIH	BDMA Study Section Ad Hoc Member
Oct 2014	NIH	BDMA Study Section Ad Hoc Member
March 2013	NIH	Extracellular RNA Biogenesis, Biodistribution, Uptake, and Effector Function (U19) Special Emphasis Panel Member
Oct 2013	NIH	GCAT Study Section Ad Hoc member
April 2014	NIH	NHGRI Genomics of Gene Regulation U01 Special Emphasis Study Section
April 2014	NIH	LINCS U54 Special Emphasis Study Section
July 2014	Cancer Research UK	Expert Reviewer
Feb 2015	NSF	Advanced Cyberinfrastructure
April 2015	NIH	U01 4D Nucleome Network Organizational Hub Special Emphasis Panel
April 2015	NIH	U01 4D Nucleome Data Coordination and Integration Center Special Emphasis Panel
June 2015	NIH	U54 4D Nuclear Organization and Function Interdisciplinary Consortium Special Emphasis Panel
2015-2021	NIH	BDMA Study Section Standing Member
2016	German Israeli Cooperation in Cancer Research,	Expert Reviewer

**RESEARCH AWARDS****Ongoing Research Support**

Distinguished Scientist Award 8/15/2017 Sontag Foundation Computational Methods for Studying the Evolution of Brain Cancer Epigenomes This project aims to develop longitudinal statistical methods for modeling time-course epigenetic changes in pediatric brain cancer. There is no overlap with this proposal.	Song (PI)	10/01/2011-
NSF CAREER Award 9/31/2016 CAREER: Computational Analyses of the Interactions between DNA and Chromatin Structure This project aims to develop and apply novel statistical methods for analyzing the sequence spectrum of nucleosomal DNA.	Song (PI)	10/15/2011-
NCI, NIH 12/15/2016 1R01CA163336-01 Predicting Transcriptional and Epigenetic Networks in Cancer from Sequencing Data.	Song (PI)	12/16/2011-
National Brain Tumor Society 03/15/2019 Functional Characterization of Germline Risk Variants in Oligodendroglioma This application proposes to integrate genomic and epigenomic data with GWAS SNP information to discover how genetic variation contributes to low grade glioma.	Song (PI)	03/16/2016-
Dabbiere Family Private Donation Life History of LGG from the First Cells This project will investigate the evolutionary trajectory of brain cancer cells by tracing the time-course molecular profiles of subclones. Role: Co-investigator	Costello (PI)	2016-2019
NIH, U54GM114838 KnowEng, a Scalable Knowledge Engine for Large-Scale Genomic Data. This project will establish a Center of Excellence in Big Data Computing for developing scalable algorithms suitable for analyzing and visualizing biomedical Big Data. Role: Co-PI	Han, Sinha, Song, Weinshilboum (PIs)	09/29/2014-04/30/2018
Center for the Physics of Living Cells NSF Physics Frontier Center This center grant supports research at the interface of single-molecule biophysics, population dynamics, computational biophysics, and computational biology. Role: Co-investigator	Schulten, Chemla (PIs)	08/1/2014-07/31/2019
<b><u>Completed Research Support</u></b> PhRMA Foundation, Research Starter Grant Discovering Regulatory Elements Governing the Transcription and Biogenesis of microRNAs The project aims to identify microRNAs that are directly transcribed by the onco-protein MITF in melanoma and to study the evolution of intronic microRNAs. There is no overlap with this proposal.	Song (PI)	01/01/2010 – 03/31/2011
Academic Senate Committee on Research Start-up Individual Investigator Grant Integrative Genomics of Melanoma This project studies copy number alterations driven by the lineage-specific factor MITF in melanoma.	Song (PI)	06/01/2010-07/31/2011
UCSF Resource Allocation Program Pilot Research Award Integrative Genomics of Melanoma	Song (PI)	07/01/2010-06/30/2011

This project studies copy number alterations driven by the lineage-specific factor MITF in melanoma.

UCSF Neurosurgery Internal Grant

Costello (PI)

11/1/2010-10/31/2012

TLG3: The Low-Grade Glioma Genome Project

This project aims to discover novel mutations and aberrant DNA methylation via next generation sequencing in low-grade glioma.

Role: Co-Investigator

U54HD055764, NIH

Giudice (PI)

04/1/2012-12/31/2013

Origins and Biological Consequences of Human Infertility.

This project will investigate the genetics, epigenetics and molecular mechanisms of human infertility.

Role: Director of Computational Biology Research Core.