

# Fah Jarupon Sathirapongsasuti

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## Education

### Harvard University, MA

Ph.D.

starting Fall, 2009

Biostatistics

### Stanford University, CA

Master of Science

June 2009

Computer Science with Area of Concentration in Biocomputation

Bachelor of Science with Honors

June 2009

Mathematical and Computation Science (Biology Track)

## Work Experience

IncentAlign Inc. ([www.incentalign.com](http://www.incentalign.com))

Director of Research and Development

Summer, 2009

## Honors and Awards

2001-2003 Finalist, Thailand International Mathematical Olympiad Training Camp

2001-2003 Thailand Representative, Asia-Pacific Mathematical Olympiad (APMO)

2002-2003 National Outstanding Youth Award in Morality, Thailand

2003-2004 National Outstanding Youth Award in Science and Technology, Thailand

2002-Present Gifted Scholarship, Junior Science Talented Project, National Science and Technology Development Agency, Thailand

*Top ten students are selected as Gifted Scholars to participate in long-term scientific training program*

2004-Present First Ranked Recipient of King's Scholarship, Thailand

*The King's Scholarship is awarded to top five students in Thailand based on an annual examination and interview.*

2004 Best Interdisciplinary Project Prize from Sigma Xi, the Scientific Society, the Intel International Science and Engineering Fair (Intel ISEF 2004)

2005 Top 75 in the 2005 USA Mathematical Olympiad (USAMO)

- 2005 Certificate of Admission, Harvard College, MA
- 2005 Certificate of Admission (with Early Notification), Dartmouth College, NH
- 2005 William Carleton Scholar, Carleton College, MN
- 2005 Pauline and Irving Tanner Dean's Scholar, Cornell University, NY
- 2005 Benjamin Franklin Scholar, University of Pennsylvania, PA
- 2005 Echo Scholar, University of Virginia, VA
- 2005 College Science Scholar, University of Virginia, VA
- 2006 The President's Award for Academic Excellence, Stanford University, CA
- 2006-2009 Top 500 and 200 in William Lowell Putnam Mathematical Competition
- 2006-2009 The Highbridge Book Award in Mathematical Problem-Solving, Stanford University, CA
- 2008-2009 Rathbun Fellowship for Religious Encounter, the Office of Religious Life, Stanford University, CA
- 2009 Meritorious Winner for placing 12<sup>th</sup> in Mathematical Contest in Modeling (MCM), the Consortium for Mathematics and Its Applications (COMAP). The first group to represent Stanford in COMAP MCM.
- 2009 Phi Kappa Psi California Beta Chapter Scholarship, Phi Kappa Psi Fraternity, Stanford University, CA

## Experience

### Research Experience

- 2000-2002 Gifted Scholar long-term training program, Junior Science Talent Project, National Science and Technology Development Agency, Thailand  
Topic: *Area: A Mathematical Exploration*  
Professor Pichakorn Plangprasopchok, Department of Mathematics, Srinakharinwirot University, Thailand
- 2002-2003 Gifted Scholar long-term training program, Junior Science Talent Project, National Science and Technology Development Agency, Thailand  
Topic: *Binary Representation of the Square Root of 2*  
Professor Paisan Nakmahachalasint, Department of Mathematics, Chulalongkorn University, Thailand
- 2002-2004 Gifted Scholar long-term training program, Junior Science Talent Project, National Science and Technology Development Agency, Thailand  
Topic: *Walking with A Millipede: A Mathematical Model of Millipede Gait and Locomotion*  
Professor Paisan Nakmahachalasint and Professor Chidchanok Lursinsap, Department of Mathematics, Chulalongkorn University, Thailand
- Summer 2005 Research Training  
Topic: *Delay Differential Equation Model for Insulin Kinetics*  
Professor Yongwimon Lenbury, Department of Mathematics, Mahidol University, Bangkok, Thailand

- Winter 2006 Undergraduate Research Assistant  
 Topic: *Conceptualizing Compassion: a Buddhist Perspective*  
 Professor Jeanne L. Tsai, Department of Psychology, Stanford University, CA
- Summer 2006 Research Experience for Undergraduates, Department of Electrical Engineering (EE-REU)  
 Topic: *Waterfall-Generated Ground Vibrations—A Second Look*  
 Professor Antony Fraser-Smith, Department of Electrical Engineering, and Professor Simon Klemperer, Department of Geophysics, Stanford University, CA
- Winter 2007 Research Student  
 Topic: *Biomechanical Analysis of the Golf Swing*  
 Professor Amy Ladd, Department of Orthopedic Surgery, and Professor Christopher Chafe, the Center for Computer Research in Music and Acoustics (CCRMA), Stanford University, CA
- 2007-2008 Computer Science Undergraduate Research Internship (CURIS)  
 Topic: *Guilt by Association Annotation of cis-Regulatory Elements*  
 Professor Gill Bejerano, Departments of Developmental Biology and Computer Science, Stanford University, CA
- Summer 2008 Research Intern  
 Topics: *Tissue-specificity Expressed and Highly Conserved Segments in Human mRNA-like Noncoding RNA and Ultraconserved cDNA Segments in the Human Genome Exhibit Resistance to Folding and Implicate Function in Translation and Possibly ATG Selection*  
 Professor Sumio Sugano and Professor Yutaka Suzuki, Department of Medical Genome Sciences, Graduate School of Frontier Sciences, The University of Tokyo, Kashiwa, Japan
- 2008-2009 Research Student  
 Topic: *Inferring Pathways from Protein-Protein Interaction Networks and Gene Expression Data*  
 Dr. Silpa Suthram, postdoctoral researcher at Atul Butte laboratory, Department of Biomedical Informatics, Stanford University, CA

## Teaching Experience

- Winter 2006 Problem Selection Committee – Stanford Mathematics Tournament
- 2006-2008 Mathematics Tutor – Stanford University Mathematical Organization
- Fall 2006 Grader – MATH 19 Calculus
- Winter 2007 Section Leader – CS 106A Programming Methodology (Eric Roberts)  
 Head Grader – MATH 52 Integral Calculus of Several Variables
- Spring 2007 Section Leader – CS 107 Programming Paradigms (Jerry Cain)  
 Course Facilitator – INTNLREL 53SI Introduction to Thai Culture and History (Mark Mancall)
- Summer 2007 Section Leader – CS 106B Programming Abstractions (Jerry Cain)
- Fall 2007 Course Helper – CS 198 Teaching Computer Science
- Winter 2008 Section Leader – CS 106B Programming Abstractions (Julie Zelenski)
- Spring 2008 Teaching Assistance – OSPKYOTO 42 Scenes In and Around Kyoto (Karen Wigen)
- Fall 2008 Section Leader – CS 106X Programming Abstractions (Accelerated) (Tom Hurlbutt)

- Winter 2009 Section Leader – CSI06B Programming Abstractions (Jerry Cain)
- Spring 2009 Section Leader – CS 106X Programming Abstractions (Accelerated) (Jerry Cain)  
Instructor – INTNLREL 54SI Introduction to Thai Culture and History (faculty sponsor Don Emmerson)  
Instructor – RELIGST 17SI Meditation Across Traditions (faculty sponsor Carl Bielefeldt)

## Related Experience

### Publication Experience

- 2005-2006 Production Team  
Stanford Scientific Magazine, Stanford University, CA  
*Designed and implemented layout using a desktop publishing system such as Photoshop, InDesign, and Pagemaker. Collaborated with production team and authors on the layout and graphic design of particular articles and of the journal as a whole.*
- 2007-2008 Production Editor and Web Administrator  
Encounter: Stanford Interfaith Journal for Spiritual Expression, Stanford University, CA  
*Co-founded the journal. Perfected the design and style of the Journal and background using a desktop publishing system such as Photoshop, InDesign, and Pagemaker. Worked with team on the layout and graphic design of the journal. Designed, developed, and maintained the group's website.*
- 2007-2008 Section Editor, National Section  
Stanford Undergraduate Research Journal, Stanford University, CA  
*Established contact with academic departments of universities across the country, published Call for Papers and organized submissions, initiated automated contact system, organized and participated in a review committee, and worked with authors to perfect the publication.*

### Educational Activities

- 2005-2006 Head of Admissions  
Stanford-Thai Exchange Program, Stanford University, CA  
*Developed application process for the program, defined admission criteria, improved and implemented application review process, and conducted interviews with candidates.*
- 2005-2006 Academic Coordinator  
Stanford-Thai Exchange Program, Stanford University, CA  
*Pioneered the position. Assisted participants' research progresses by facilitating usage of academic resources. Collaborated with Stanford faculty, research laboratories, and libraries in organizing workshops and seminars.*
- 2005-2006 Student Assistant  
Mathematics and Computer Science Library, Stanford University, CA  
*Managed mass book rearrangement, categorized books by subject categories, and performed other library assistantship.*
- 2006-2007 Peer Mentor  
Undergraduate Advising Program, Stanford University, CA  
*Served as an academic role model for new freshmen, acted as liaison with Academic Advisor and with Head Peer Academic Coordinator, initiated and organized academic and advising programming in residences.*
- 2007-2008 Scholarship Chair  
Phi Kappa Psi Fraternity, Stanford University, CA  
*Served as an academic role model for the Fraternity, worked with Faculty Advisor and the Dean of South Row Residences on academic advising for the Fraternity, encouraged and facilitated learning environment within the*

*Fraternity, organized educational events such as Faculty Dinner. During my term, the Fraternity won Academic Excellence Award from the National Fraternity.*

### **Organizational and Leadership Skills**

- 2006-2007      Director  
Stanford-Thai Exchange Program, Stanford University, CA  
*Established collaboration with American University Alumni Association of Thailand, Stanford Alumni Club of Thailand, and the Nation, Thailand's leading English newspaper. Raised fund and support for the program. Formalized recognition from Stanford University and increased sponsorship from the University. Launched a new publicity program including a redesign of program's website and logo. Pioneered a Student Initiated Course on Thailand to complement the program.*
- 2006-2009      Officer  
Buddhist Community at Stanford, Stanford University, CA  
*Organized, initiated, and participated in speaker events and weekly meditation sessions.*
- 2007-2008      Historian  
Phi Kappa Psi Fraternity, Stanford University, CA  
*Responsible for keeping institutional memory both in documents and in images. Acted as photographer for events. In charge of making yearly publications such as Alumni Newsletter and Yearbook. Also served as chair of the archive committee.*
- 2008-2009      Chaplain  
Phi Kappa Psi Fraternity, Stanford University, CA  
*Served as the spiritual leader for the Fraternity. Gave "word for the good" speech at weekly Chapter Meetings, facilitated discussion on meaning of life and fraternity life, motivated members to participate in self-improvement activities and community service activities, assessed and promoted wellbeing of members and the Fraternity. Planned and organized quarterly retreats. Organized regular meditation sessions and spiritual activities.*

### **Selected Invited Lectures and Presentations**

"Teaching and Research in Mathematics and Applied Mathematics." National Mathematics Teacher Seminar, Department of Mathematics, Srinakarinwiroj University, Bangkok, Thailand, June 10, 2001.

"Developing Students by Mathematical Project." National Mathematics Teacher Seminar, Department of Mathematics, Rajabhat Institute of Bangkok, Bangkok, Thailand, July 20, 2002; March 24, 2002 and March 26, 2004.

"Meditation as A Way to Witness Separation of Self and Non-Self." Eastern Philosophy Class, Deerfield Academy, MA, March 28, 2006.

"Ultraconserved cDNA Segments." Laboratory of Functional Analysis *in silico*, Human Genome Center, the Institute of Medical Science, the University of Tokyo, August 27, 2008

### **Publications**

#### **Refereed Journal Papers**

**Sathirapongsasuti, J.** "Experiencing the Truth: Meditation as the Way to Witness the Separation of the Self and the Non-Self". *Spice Rack: Journal of Philosophy and Religion of Deerfield Academy*, Deerfield Academy Press: Deerfield, MA, 2006.

**Sathira, J.**, Haugen, A., Fraser-Smith, A. “Waterfall Generated Ground Vibration: A Second Look”. *Stanford Electrical Engineering and Computer Science Research Journal*. Spring 2007:45-48.

**Sathira, F.**, Sathira, N., Suzuki, Y., Sugano, S. “Ultraconserved cDNA Segments in the Human Genome Exhibit Resistance to Folding and Implicate Function in Translation and Possibly ATG Selection”, *Nucleic Acids Res.* (In review)

## Conference Presentation

**Sathirapongsasuti, J.**, et al. “Area Approximation by Regression Analysis”. *Thailand Science and Technology Fair*, Bangkok, Thailand, 2002.

*The first award from Mathematics Association of Thailand.*

**Sathirapongsasuti, J.** “Binary Representation of the Square Root of 2”. *Annual Meeting of National Science and Technology Development Agency*, Bangkok, Thailand, 2003.

**Sathirapongsasuti, J.**, Punnaniti, N., Wimolkittiwat, P. “Walking with a Millipede: A Mathematical Model of Millipede Gait and Locomotion”. *Intel ISEF 2004: Intel International Science and Engineering Fair*. Portland, Oregon, 2004.

*The first award from the Sigma Xi, the scientific research society, for the best interdisciplinary project.*

*The first award from the Science Society of Thailand*

*Also presented at the Thailand Science and Technology Conference, Nakhorn Panom, Thailand, 2004.*

## Refereed Conference Abstract

Sathira, N., **Sathira, F.**, Wakaguri, H., Suzuki, Y., Sugano, S. Tissue-specificity Expressed and Highly Conserved Segments in Human mRNA-like Noncoding RNA. In *Biochemistry and Molecular Biology (BMB2008)*, Kobe, Japan, 2008.

## Books

**Sathirapongsasuti, J.** Area. Rajabhat Institute of Bangkok: Bangkok, Thailand, 2002.

**Sathirapongsasuti, J.**, et al. *Math—A Handbook for High School Mathematics*. Triamudom Suksa School: Bangkok, Thailand, 2003.

**Sathirapongsasuti, J.**, et al. *เรียนต่อมหา'ลัยชั้นนำใน America ไม่ยากอย่างที่คิด (Getting into Top American Colleges, Easier Than You Think!)*. Rakluk Book: Bangkok, Thailand, 2006. *Best Seller, Thailand Educational Book Fair 2006.*

## Languages

Thai – native speaker

English – native fluency

Japanese – intermediate conversational

## Membership

2009-	American Kyudo Renmei
2009	North California Kyudo Federation
2008-	International Society for Computational Biology
2007-	The Order of Omega, the Greek Honor Society
2006-	Phi Kappa Psi Fraternity
2005-	The Cum Laude Society
2004-	Science Society of Thailand
2002-	Mathematical Association of Thailand
2000-	Buddhist Society of Thailand