

Lam Raga Anggara Markely

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Education

2008-present **Harvard – MIT Health Sciences and Technology**
Graduate Education in Medical Sciences Program

2006-present **Massachusetts Institute of Technology**
Ph.D. Candidate (Chemical Engineering; GPA = 4.9/5.0)
Advisor: Prof. Daniel I. C. Wang

2002-2006 **University of Wisconsin-Madison**
B.S. (Chemical Engineering with Highest Distinction; GPA = 3.96/4.00)

Academic Awards and Honors

2006 Edward Clark Walsh Presidential Graduate Fellowship (MIT)
2006 Irma L. Newman Scholarship (UW-Madison, Mathematics)
2005 Merck Undergraduate Research Scholar Award (UW-Madison, Chemical and Biological Engineering)
2005 Meyer Scholarship (UW-Madison, Chemical and Biological Engineering)
2005 Member of Mathematical Association of America (UW-Madison, Mathematics)
2004 Meyer Scholarship (UW-Madison, Chemical and Biological Engineering)
2002-2006 Dean's Honor List (UW-Madison, Chemical and Biological Engineering)

Research Experience

2007-present **MIT, Chemical Engineering**

Advisor: Prof. Daniel I. C. Wang
High-throughput quantification of glycoprotein sialylation

2005 **UW Madison, Collaborative Undergraduate Research Labs - Mathematics**

Advisor: Prof. Alexander Kiselev
Determine analytically a rigorous lower bound of the speed of front propagation of the Fisher and Kolmogorov-Petrovski-Piskunov (KPP) reaction-diffusion model for a fluid flow.

Advisor: Prof. Paul A. Milewski
Develop a predator-prey model between cicadas and their predators to mimic the synchronization of cicada populations and investigate the dominance of cicadas with 13 and 17 year life cycles over cicadas with non-prime life cycles.

2004-2005 **UW Madison, Chemical and Biological Engineering**

Advisor: Prof. John Yin
Develop and analyze a mathematical model for the intracellular dynamics of the gene expression of bacteriophage ϕ X174.

Publications

Markely, L.R.A. and Yin, J. (2007). Intracellular Dynamics of Bacteriophage ϕ X174 Gene Expression. *Journal of Young Investigators*, 16 - <http://www.jyi.org/research/re.php?id=1068>.

Markely, L.R.A., Andrzejewski, D., Butzlaff, E., and Kiselev, A. (2006). Enhancement of Combustion by Drift in a Coupled Reaction-Diffusion Model. *Communications in Mathematical Sciences*, 4(1): 213-225.

Patent

Wang, D.I.C. and **Markely, L.R.A.** High-throughput method for quantifying sialylation of glycosylated molecules. United States patent Application number 12/581,854 filed at October 19th, 2009.