

**Curriculum Vitae of Sameer Jadhav, Ph.D.**

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**Current position:**

2005-present: Assistant Professor, Department of Chemical Engineering, Indian Institute of Technology Bombay.

**Academic background:**

2004-2005: Post Doctoral Fellow, Chemical & Biomolecular Engineering, The Johns Hopkins University and, Mechanical Engineering, University of Maryland at Baltimore County.

2004 : PhD, Chemical & Biomolecular Engineering, The Johns Hopkins University.

1998 : M. Tech., Chemical Engineering, Indian Institute of Technology, Kanpur, India.

1995 : B. Tech., Chemical Engineering, Laxminarayan Institute of Technology, Nagpur, India.

**Honors and awards:**

· October 2002, BMES Travel Award, Second Joint EMBS / BMES Conference, Houston, TX.

· 1998-1999, Abel Wolman Fellowship, Whiting School of Engineering, The Johns Hopkins University.

**Doctoral thesis**

"Receptor-mediated interactions of polymorphonuclear leukocytes with colon carcinoma cells and selectin substrates under shear." *Advisor: Dr. Konstantinos Konstantopoulos*

**Publications**

1. S Jadhav, K Konstantopoulos, CD Eggleton, "Simulation of collisions between elastic capsules in shear flow" *J Biomech. 2007 (Article in Press)*.

2. S Jadhav, CD Eggleton, K Konstantopoulos, "Mathematical modeling of cell adhesion in shear flow pertinent to inflammation and cancer metastasis", Invited Review in *Curr Pharm Des. 2007, 13(15):1511-26*.

3. S Jadhav, CD Eggleton, K Konstantopoulos, "A 3-D computational model predicts that cell deformation affects selectin-mediated leukocyte rolling" *Biophys J. 2005 88(1):96-104*.

4. KC Ahn, AJ Jun, P Pawar, S Jadhav, OJT McCarty, K Konstantopoulos, "Preferential binding of platelets to monocytes over neutrophils under flow", *Biochem Biophys Res Commun. 2005, 329(1):345-55*.

5. W Hanley, OJT McCarty, S Jadhav, Y Tseng, D Wirtz, K Konstantopoulos, "Single molecule characterization of P-selectin/ligand binding", *J Biol Chem. 2003*,

278(12):10556-61

6. S Jadhav and K Konstantopoulos, "Fluid shear- and time-dependent modulation of molecular interactions between PMNs and colon carcinomas", *Am J Physiol Cell Physiol.* 2002, 283(4):C1133-43.
7. OJT McCarty, S Jadhav, MM Burdick, WR Bell, K Konstantopoulos, "Fluid shear regulates the kinetics and molecular mechanisms of activation-dependent platelet binding to colon carcinoma cells", *Biophys J.* 2002, 83(2):836-48.
8. S Jadhav, BS Bochner, K Konstantopoulos, "Hydrodynamic shear regulates the kinetics and receptor specificity of polymorphonuclear leukocyte-colon carcinoma cell adhesive interactions", *J Immunol.* 2001, 167(10):5986-93.
9. MM Burdick, OJT McCarty, S Jadhav, Konstantopoulos K, "Cell-cell interactions in inflammation and cancer metastasis", *IEEE Eng Med Biol Mag.* 2001, 20(3):86-91.
10. S Jadhav, N Verma, A Sharma, PK Bhattacharya, "Flux and retention analysis during micellar enhanced ultrafiltration for the removal of phenol and aniline", *Separ Purif Technol.* 2001, 24:541-557.

#### Conference presentations:

1. P. Pawar, S Jadhav, CD Eggleton and K. Konstantopoulos, "Multiscale Modeling of Neutrophil Rolling over a Selectin-Coated Surface", To be presented at the *Annual Meeting of American Institute of Chemical Engineers*, Cincinnati, OH (November, 2005).
2. CD Eggleton, S Jadhav and K Konstantopoulos, "A Computational Model of Deformable Cell Rolling in Shear Flow", *Annual Meeting of the American Physical Society*, Los Angeles, CA (March 2005).
3. S Jadhav, CD Eggleton, and K Konstantopoulos, "A three-dimensional computational model of leukocyte rolling on a selectin surface under shear flow", *Annual Meeting of the Division of Fluid Dynamics, American Physical Society*, Seattle, WA (November 2004).
4. CD Eggleton, S Jadhav, and K Konstantopoulos, "Simulation of cell-cell interactions in shear flow", *Annual Meeting of the Division of Fluid Dynamics, American Physical Society*, Seattle, WA (November 2004).
5. S Jadhav, CD Eggleton, and K Konstantopoulos, "A three-dimensional computational model of leukocyte rolling on a selectin surface under shear flow", *Annual Meeting of the Biomedical Engineering Society*, Philadelphia, PA (October 2004).
6. S Jadhav, CD Eggleton, and K Konstantopoulos, "Simulation of cell-cell interactions in shear flow", *Annual Meeting of the Biomedical Engineering Society*, Philadelphia, PA (October 2004).
7. S Jadhav, CD Eggleton, and K Konstantopoulos, "Leukocyte rolling on selectin-coated surfaces: A computational model", *Annual Meeting of the Biophysical Society*, Baltimore, MD (February 2004).
8. S Jadhav, CD Eggleton, and K Konstantopoulos, "Simulating cell-substrate interactions in shear flow: Application to selectin-mediated leukocyte rolling", *Annual Meeting of American Institute of Chemical Engineers*, San Francisco, CA (November 2003).

9. S Jadhav and K Konstantopoulos, "Fluid shear modulates the molecular interactions between polymorphonuclear leukocytes and colon carcinomas", *Proceedings of the Second Joint EMBS / BMES Conference*, Houston, TX (October 2002).
10. OJT McCarty, S Jadhav, M Burdick, and K Konstantopoulos, "Fluid shear regulates the kinetics and molecular mechanisms of activation-dependent platelet binding to colon carcinoma cells", *Annual Meeting of Federation of American Societies for Experimental Biology*, New Orleans, LA (April 2002).
11. S Jadhav, BS Bochner and K Konstantopoulos, "Hydrodynamic shear regulates the kinetics and receptor specificity of polymorphonuclear leukocyte - colon carcinoma adhesive interactions", *Annual Meeting of American Institute of Chemical Engineers*, Reno, NV (November 2001).
12. OJT McCarty, S Jadhav, M Burdick, and K Konstantopoulos, "Hydrodynamic shear and platelet activation regulate the kinetics and receptor specificity of platelet-tumor cell adhesion", *Annual Meeting of American Institute of Chemical Engineers*, Reno, NV (November 2001).
13. OJT McCarty, S Jadhav, M. Burdick, WR Bell, K Konstantopoulos, "Hydrodynamic shear and platelet activation regulate the kinetics of platelet-tumor cell adhesion", *Annual Meeting of the Biomedical Engineering Society*, Durham, NC (October 2001).