



**Che-Chi Shu** (許哲奇)  
Assistant Professor  
Dept. of Chemical Engineering  
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### Education

Doctor of Philosophy School of Chemical Engineering Purdue University, West Lafayette, IN Doctoral Dissertation: Modeling Signal Transduction Process in Cell Population Application to Transfer of Drug Resistance (with concentration on Computational Life Science) GPA:3.45	<i>Aug. 2007-Aug. 2012</i>
Bachelor in Engineering Department of Chemical Engineering, National Taiwan University Avg:87.44, Rank: 4 out of 108	<i>Sep. 1998 - June 2002</i>

### Teaching Experience

Assistant professor, Dept. of Chemical Engineering and Biotechnology, National Taipei University of Technology	<i>Aug. 2014 - Now</i>
Teaching Assistance, Process design computer lab course Purdue University	<i>Jan. 2010-May2010</i>
Teaching Assistance, Separation process course Purdue University	<i>Aug. 2008-Dec 2008</i>
Full time Teaching Assistance, Unit operation lab course National Taiwan University	<i>Aug. 2006-July 2007</i>

### Working Experience

Scientist R&D Department, MFC sealing technology co., LTD, Taiwan • Developed the standard operating procedure (SOP) for ISO 17025 certification	<i>Feb. 2003 - Jul. 2003</i>
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### Publications

**CC Shu**, Vu Tran, J. Binagia, D Ramkrishna (2015) On speeding up stochastic simulations by parallelization of random number generation, *Chem. Eng. Sci.*, 137:828-836

D Ramkrishna, **CC Shu**, and Vu Tran (2014) New “ Tau-Leap” Strategy for Accelerated Stochastic Simulation, *I&EC*, 53:18975-18981

**CC Shu**, A Chatterjee, GM Dunny, WS Hu, D Ramkrishna (2013) Role of Intracellular Stochasticity in Biofilm Growth. Insights from Population Balance Modeling, *PLoS One* 8(11): e79196

A Chatterjee, CC Laura, **CC Shu**, Y Chen, DA Manias, D Ramkrishna, GM Dunny, WS Hu (2013) Antagonistic self-sensing and mate-sensing signaling controls antibiotic-resistance transfer, *PNAS* 108: 9721-9726

**CC Shu**, A Chatterjee, WS Hu, D Ramkrishna (2012) Modeling of Gene Regulatory Processes by Population Mediated Signaling. New Applications of Population Balances, *Chemical Engineering Science* 70:188-199

**CC Shu**, A Chatterjee, GM Dunny, WS Hu, D Ramkrishna (2011) Bistability versus Bimodal Distributions in Gene Regulatory Processes from Population Balance, *PLoS Computational Biology* 7(8):e1002140

A Chatterjee, CM Johnson, **CC Shu**, YN Kaznessis, D Ramkrishna, GM Dunny, WS Hu (2011) Convergent transcription Confers a Bistable Switch in *Enterococcus faecalis* Conjugation, *PNAS* 108: 9721-9726