

College of Engineering
Faculty and Staff Activities and Achievements
March 2012

Articles

Nicholas Flann (CS)Mahoney, A.W.; Podgorski, G.J.; Flann, N.S., (2012). Multiobjective Optimization Based-Approach for Discovering Novel Cancer Therapies, in IEEE/ACM Transactions on Computational Biology and Bioinformatics, Volume 9, Issue 1, pp. 169--184.

Kai Zeng, Wenjing Lou and Ming Li, "Multihop Wireless Networks: Opportunistic Routing," Wiley, ISBN: 978-0-470-66617-3, 2011

Ming Li, Shucheng Yu, Joshua. D. Guttman, Wenjing Lou and Kui Ren, "Secure Ad-Hoc Trust Initialization and Key Management in Wireless Body Area Networks," *ACM Transactions on Sensor Networks (TOSN)*, accepted.

Qiben Yan, Ming Li, Zhenyu Yang, Wenjing Lou and Hongqiang Zhai, "Throughput Analysis of Cooperative Mobile Content Distribution in Vehicular Ad Hoc Networks using Symbol Level Network Coding", *IEEE Journal on Selected Areas in Communications (JSAC)*, to appear.

Qiben Yan, Ming Li, Tingting Jiang, Wenjing Lou and Y. Thomas. Hou, "Vulnerability and Protection for Distributed Consensus-based Spectrum Sensing in Cognitive Radio Networks," *IEEE INFOCOM 2012*, Orlando, FL, Mar. 2012, accepted. (Acceptance ratio: 18%)

Zi, J., Valiente, J., Zeng, J., Zhan, J.* (2011): Metabolism of quercetin by *Cunninghamella elegans* ATCC 9245. *Journal of Bioscience and Bioengineering* 112(4), 360–362.

Napan, K. L., Zeng, J., Takemoto, J. Y., Zhan, J.* (2012): A key cytochrome P450 hydroxylase in pradimicin biosynthesis. *Bioorganic & Medicinal Chemistry Letters* 22, 606–609.

Zeng, J., Decker, R., Zhan, J.* (2012): Biochemical characterization of a type III polyketide biosynthetic gene cluster from *Streptomyces toxytricini*. *Applied Biochemistry and Biotechnology* (in press).

Dimkpa, C., Zeng, J., McLean, J., Britt, D., Zhan, J., Anderson, A. (2012): Production of indole-3-acetic acid via the indole-3-acetamide pathway in the plant-beneficial bacterium,

Pseudomonas chlororaphis O6 is inhibited by ZnO nanoparticles but enhanced by CuO nanoparticles. *Applied and Environmental Microbiology* (in press).

Yu, D., Xu, F., Zeng, J., Zhan, J.* (2012): Type III polyketide synthases in natural product biosynthesis. *IUBMB Life* (in press).

Shao, L., Zi, J., Zeng, J., Zhan, J.* (2012): Identification of the herboxidiene biosynthetic gene cluster in *Streptomyces chromofuscus* ATCC 49982. *Applied and Environmental Microbiology* (in press).

B. M. Wilson, B. L. Smith, and R. E. Spall, "Examples of unsteady CFD validation quantities in a cylinder array," Accepted Nuclear Engineering and Design, October, 2011.

Reuben, T.N., B.K. Worwood., L.D. Carrigan and , D.L. Sorensen. 2011. Pineview Reservoir nutrient loading, unloading, and the role of groundwater in the estimates. *Transactions of the American Society of Agricultural and Biological Engineers* 55(6):2219-2225.

Bandaragoda, C. and B.T. Neilson. 2011. "Increasing Parameter Certainty and Data Utility Through Multi-Objective Calibration of a Spatially Distributed Temperature and Solute Model" *Hydrology and Earth System Sciences*. 15, 1547-1561, doi:10.5194/hess-15-1547-2011.

Merck*, M. F., B.T. Neilson, R. Cory, G.W. Kling. 2011. "Variability of Instream and Riparian Storage in a Beaded Arctic Stream." *Hydrological Processes*. DOI:10.1002/hyp.8323.

Awards/Grants

Nicholas Flann (CS) "Multiscale Spatial and Temporal Dynamics of Yeast Colony Development. Institute for Systems Biology, Seattle, WA. January 2012 through June 2012. \$77,135 (PI)

Ming Li (CS) USU Seed Grant (GEM): *Patient-Centric Security and Privacy Framework for Cloud-based Personal Health Record Systems*, 1/1/2012-12/31/2012. \$5,000 (PI)

David Rosenberg (CEE) NSF "CAREER: Near Optimal Water Management to Improve Environmental and Ecological Decision Making". January 2012 - December 2016. \$409,985 (PI)

Jixun Zhan (BE) NIH Rocky Mountain Regional Center of Excellence for Biodefense and Emerging Infectious Diseases (RMRCE) Developmental Project, 09/01/2011 - 08/31/2012, Title: Mixing tetracycline and angucycline biosynthetic machineries for novel antibiotics. \$172,150 (PI)