

Dai Chao

Status at NTU: Research Fellow (completed)
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Technological University, Singapore;

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Education:

Ph.D., Environmental Science, Peking University, China, June 2016

M.S., Environmental Science, North China Electric Power University, China, June 2012

B.Eng., Environmental engineering, Huazhong Agricultural University, China, June 2009

Working & Research Experiences

(1) From Sep. 2016 to Nov. 2016, Research Fellow, School of Civil & Environmental Engineering, Nanyang Technological University, Singapore

- ❖ Participating in the project of “Microbiological, Chemical and Physical Interactions in Rock Cavern Water Storage”.

(2) From Sep. 2012 to Jun. 2016, Project major member, Environmental Science, Peking University, China

- ❖ Participated in the project of “Spatio-Temporal Optimization and Regulation of the Water Quantity and Water Quality for the Water Resources System of the Lake Dianchi Watershed”.

Research Interests

- Lake Watershed Water Quality Management
- Water Resources Scheduling Modeling for Lake Watershed
- Best Management Practices
- Simulation-Optimization Modeling
- Inexact Optimization Modeling

Honors & Awards

- 2016, National Scholarship
 - 2016, Excellent doctorate theses in the Peking University
 - 2016, Xiaoyan Tang environmental science innovation scholarship
 - 2016, Academic elite rewards in the Peking University
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Publications

- **Dai, C.**, Q.,T, W.T., Lu, Guo, H.C., 2016. Inter-basin water transfer planning and management for Lake Eutrophication restoration: A coupled simulation-optimization method. *Ecological Engineering* 95: 409-421
- **Dai, C.**, Cai, Y.P., Lu, W.T., Liu, H., Guo, H.C., 2016. Conjunctive water use optimization for watershed-lake water distribution system under uncertainty: a case study *Water Resource Management* 30: 4429-4449
- **Dai, C.**, Li, Y.P., Cai, Y.P., Hu**Dai, C.**, Cai, X.H., Cai, Y.P., Guo, H.C., 2014. A simulation-based fuzzy possibilistic programming model for coal blending management with consideration of human health risk under uncertainty. *Applied Energy* 133: 1-13.
- **Dai, C.**, Cai, Y.P., Li, Y.P., Sun, W., Wang, X.W., Guo, H.C., 2014. Optimal strategies for carbon capture, storage and utilization based on an inexact m_λ -measure fuzzy chance-constrained programming. *Energy* 78:465-478
- **Dai, C.**, Cai, Y.P., Liu, Y., Wang, W.J., Guo, H.C., 2015. A generalized interval fuzzy chance-constrained programming method for domestic wastewater management under uncertainty – a case study of Kunming, China. *Water Resource Management* 29:3015-3036
- **Dai, C.**, Cai, Y.P., Ren, W., Xie, Y.F., Guo, H.C., 2015. Identification of optimal placements of best management practices through an interval-fuzzy possibilistic programming model. *Agricultural Water Management* (165) 108–121
- **Dai, C.**, Cai, X.H., Cai, Y.P., Huo,Q., Lv,Y., Huang, G.H., 2014. An interval-parameter mean-CVaR two-stage stochastic programming approach for waste management under uncertainty. *Stochastic Environmental Research and Risk Assessment* 28, 167-187.
- **Dai, C.**, Li, Y.P., Huang, G.H., 2011. A two-stage support-vector-regression optimization model for municipal solid waste management-a case study of Beijing, China. *Journal of Environmental Management* 92(12):3023-37.
- **Dai, C.**, Guo, H.C., Tan, Q., Ren W., 2015. Development of constructed wetland network for mitigating nonpoint source pollution through a GIS-based inexact optimization approach. *Ecological Engineering* 96: 9-108
- **Dai, C.**, Li, Y.P., Huang, G.H., 2012. An interval-parameter chance-constrained dynamic programming approach for capacity planning under uncertainty. *Resources Conservation and Recycling* 62(2):37–50.
- **Dai, C.**, Cai, X.H., Cai, Y.P., Guo, H.C., Sun, W., Tan, Q., 2014. An integrated simulation and optimization approach for managing human health risks of atmospheric pollutants by coal-fired power plants. *Journal of the Air & Waste Management Association* 64: 704-720.
- **Dai, C.**, Sun, W., Tan, Q., Yi, X., Guo, H.C., 2016. Risk management for sulfur dioxide abatement under multiple uncertainties. *Frontiers of Earth Science* 1:87-107
- **Dai, C.**, Li, Y.P., Cai, Y.P., Huang, G.H., Sun, W., 2014. An SVR-MC-Based Interval Two-Stage Programming for Environmental Systems Planning in Beijing. *Environmental Engineering and Management Journal* (Online)