Candidate
Executive Council of the International Society for the Advancement of Emergy Research

Term Length: 4 years

Name: Hongfang Lu
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Education and Expertise

- Sep. 2001- Nov. 2003, Ph.D. candidate at South China Institute of Botany, Chinese Academy of Sciences. Dissertation title: **Emergy evaluation** of the industrial system in Shunde City.
- Sep.1998-July 2001, Master candidate at South China Agricultural University. Dissertation title: **Emergy analysis** of three classical dike-pond agricultural systems in Sanshui City.

Recent Research and Teaching

- Sept. 2009- Present. Professor. Vegetation and Landscape Ecology Group, South China Botanical Garden, CAS.
- Aug.2014-Present. Visiting scientist at the USEPA, ORD, NHEERL, Atlantic Ecology Division studying scale emergy evaluation.
- Sept. 2012-Mar. 2013 Invited Researcher for interactions among energy consumption, economic development and GHG emissions in Japan after WWII. National Institute for Advanced Industrial Science and Technology, AIST, Japan.
- **Ph.D. students**: Linjun Li, Fang Cheng.
- **Master students**: Yu Bai, Zhuohan Wang, Hao Li, Zheng Li, Shuhua Liu, Xianshou Zeng, Fangyan Fu, Lang Zhou.

Recent Emergy Research Projects:

- Principal Investigator: the NSF of China "Structure, Function and Efficiency Self-Organization Dynamic of Subtropical Forests" (No. 31170428, 2012-2015)
- Principal Investigator: the NSF of China "Emergy Synthesis and Simulation of Subtropical Forest Restoration Ecological Engineering modes' (No. 31070483，2011-2013)
- Principal Investigator: the NSF of China "Emergy evaluation of the land use on coastal wetland in Pearl River Delta" (No. 30600072, 2007-2009)

Some Recent Emergy Publications:

- **Lu, H.F.**, Yuan, Y.G., Campbell, D.E., Qin, P., Cui, L.J. 2014 Integrated water quality, **emergy** and economic evaluation of three bioremediation treatment systems for eutrophic water. Ecological Engineering 69, 244-254.
- **Lu, H.F.**, Lin B.L., Campbell, D.E., Sagisaka, M., Ren, H. 2012. Biofuel vs. biodiversity? Integrated emergy and economic cost-benefit evaluation of rice-ethanol production in Japan. ENERGY. 2012. 46, 442-450.
- **Lu, H.**F., Wang, Z.H., Ren, H., Campbell, D.E., Wang, J. 2010. Emergy and Eco-exergy evaluation of four forest restoration modes in southeast China. Ecological Engineering. 2011.37, 277-285.
- **Lu, H.F.**, Bai, Y., Campbell, D.E., Ren H*. Integrated emergy, energy and economic evaluation of rice and vegetable production systems in alluvial paddy fields: Implications for agricultural policy in China. Journal of Environmental Management. 2010. 91,2727-2735.
- **Lu HF**, Campbell DE, Chen J, Qin P, Ren H. 2007. Conservation and economic viability of nature reserves: an emergy evaluation of the Yancheng Biosphere Reserve. Biological Conservation. 139:415-438.

Your Personal Vision Statement for the Emergy Society (ISAER)

-Overall

Since the idea of setting up a society was brought up by Dr. Campbell in January 2004, ISAER has developed quickly over the past 10 years, and played a role as a more and more powerful engine for speeding up the development of emergy study in both methodological and applied aspects, through a suite of activities. For example, we have encouraged many students and young scientists to continue their emergy studies, by supporting them to attending the biennial Emergy Synthesis conferences in Florida; we pushed forward fundamental emergy studies, by supporting the calculation of emergy to money ratio of different countries (NEAD), and by setting-up of the Emergy Society UEV database etc. Above all, we provided an international communication forum for our emergy colleagues, and consequently improved international co-operation. At the beginning of this year, we set up our first chapter in China, and supported the publication of a journal, i.e. Journal of Environmental Accounting and Management. Thanks to all our members, especially our committee members, I think we have successfully emerged to the highway for the further development of emergy study, and are heading to a brilliant future.

-Short term. I think there are 3 priorities for the advancing ISAER's mission over the next 2 or 4-year period:

Firstly, solidify emergy theory and methods by promoting research. For example, continue developing and improving the UEV database and advancing other fundamental emergy studies, like the planetary emergy baseline, emergy indices, emergy evaluation of pollutants/wastes and the recycle of them etc.

Secondly, encourage or organize international co-operation for high global impact emergy studies, which are needed to bring emergy theory to a wide audience, not just in emergy study field, but to others, like economists, governors, and common people.

Thirdly but not less important, make internal emergy workshops a routine activity, which is a very efficient way to bring more and more young scientists into our study field, and they, are our future.