

Candidate

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

Term Length (2 years)

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Education and Expertise

My graduate education has come exclusively from the Odum tree of systems ecology. I studied under Mark Brown when earning a Master's degree at the University of Florida and David Tilley while at the University of Maryland for a PhD. My graduate work involved quantification and valuation of ecosystem services using environmental accounting. In my PhD work I developed a novel way to calculate the monetary value of ecological work. I am also very interested in using emergy accounting to evaluate emergy resources to help inform decision making for the future.

Research and Teaching

I have been using environmental accounting in my research all throughout my educational and professional career. I have attended every emergy conference from 2006 to the last conference in 2014 and presented either a poster or oration (or both) in each biannual conference. While the emergy and associated monetary value of ecosystem services has been my research focus, I have a great interest in evaluating traditional and alternative methods of emergy production using emergy accounting. I was the primary instructor for an upper level underclassman class at the University of Maryland where teaching emergy evaluation was a focus. I have given many guest lectures and presentations on emergy as well.

Relevant Publications

Elliott Campbell. Emergy Analysis of Emerging Methods of Fossil Fuel Production. 2014. Ecological Modelling. In Press.

Elliott Campbell and David Tilley. 2014. The Eco-Price: How Environmental Emergy Equates to Currency. Ecosystem Services Vol. 7, 128–140

Elliott Campbell and David Tilley. 2014. Valuing Ecosystem Services from Maryland Forests Using Environmental Accounting. Ecosystem Services Vol. 7 141–151 [http](http://)

Elliott Campbell. 2013. Response to embodied emergy and emergy analyses of a concentrating solar power (CSP) system (2012). Energy Policy Vol. 60, 424–

Elliott Campbell and Mark Brown. 2012. Environmental Accounting of Natural Capital and Ecosystem Services of the US National Forest System. Environment, Development and Sustainability, Volume 14, Issue 5, pp 691-724

Your Personal Vision Statement for the Emergy Society (ISAER)

I see the overall mission for ISAER being to serve as the primary vehicle for promotion of energy research, provide a venue for collaboration and discussion between researchers and raising funds to further worthy research goals and for energy researchers in need of aid to attend conferences. An observation that I have made over the past few years is that there are a large number of relatively poor quality journal articles being submitted that use energy. I think a key problem is that unless someone has studied under a select few scientists in the world it is not likely that they possess the knowledge base to do energy research without making errors. I think the council should provide energy analysis guidelines on the site and provide an opportunity for researchers to get feedback on their work prior to submitting to a refereed journal. A list of appropriate energy experts should be provided on the site so they can be requested to review energy research.

In the two year period in which I would potentially serve on the executive council I would like to see the transformity database website updated and improved, the ISAER website optimized to serve as a home for energy practitioners to collaborate, and the many worthwhile activities of ISAER, like providing travel funds for those in need, continued. Measures of success of the council would be increased attendance of the Energy Conference and more high quality journal articles being published.