

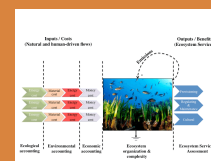
# ISAER Newsletter

For the members of the International Society for the Advancement of Emergy Research



## GIREPAM

“Integrated Management of Ecological Networks through Parks and Marine Areas” is an Interreg Italy-France Maritime Program (2014-2020). The researchers of University of Genoa apply emergy for the assessment of ecosystem services in three Italian marine parks.



## EAMPA

“Environmental Accounting of Marine Protected Areas” is a project funded by the Italian Ministry of Environment. The main goal is the calculation of the emergy and economic value of natural capital and ecosystem services in 29 Italian Marine Protected Areas.

## Highlights from the Past

### 3<sup>rd</sup> International School on Emergy Accounting

From 21<sup>th</sup> to 25<sup>th</sup> May, the 3<sup>rd</sup> International School on Emergy Accounting took place at the San Giobbe headquarter of the University Ca’ Foscari, in Venice, Italy.

The participants were 15 young researchers and PhD students from Brazil, Denmark, Germany, Italy, Slovenia and UK.

The lectures were held by Mark Brown, Sergio Ulgiati and Francesco Gonella; besides, Amalia Zucaro participated as Instructor Assistants.



### HIGHLIGHTS FROM THE PAST

- 3<sup>rd</sup> International School on Emergy Accounting pp. 1-2
- ACPN Medal Awards 2018 p.3

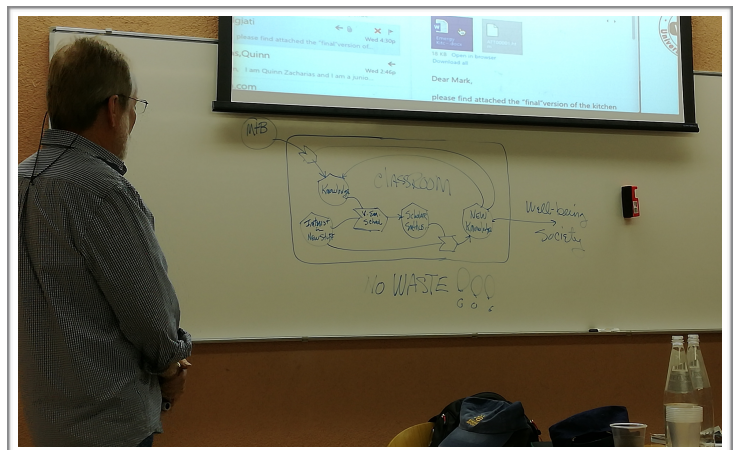


### ABOUT SOCIETY

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In this edition of the emergy course we had a somewhat mixed group of students with different expertise in the emergy method: some of them had just basic knowledge of emergy concepts and accounting procedures, some others were more advanced in their understanding. Prof. Mark Brown said “While this is not unusual for these types of short courses, we decided to vary the course organization to not only stress the fundamentals, but to also include time for students to work in groups on several case studies (an agriculture system, an urban system, and an industrial system).” Case study teams were composed of at least one advanced student and “beginners” to ensure that groups had similar make up.

Days were organized to include lectures in the morning (about 4 hours) and then working groups in the afternoon. The first day was spent discussing “the systems approach” and “systems thinking”, followed by an afternoon and evening of drawing diagrams of the three case study. The following day we presented the diagrams and held lengthy discussions regarding syntax, presentation, structure, etc. Topics covered in lectures the following 4 days included:

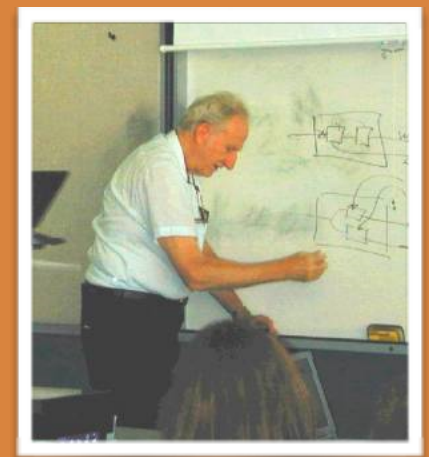


Energy, Exergy and Emergy;  
 Computing Available Energy of Energy,  
 Materials and Products; Emergy and Labor;  
 Emergy and Money; The Value of Nature, the  
 Nature of Value; Simulation Modeling.

### OUR FAVORITE QUOTE

“Trade and projects that unbalance local economies...and increase emergy inequality between countries, do not maximize the world economy, because they leave major sectors of the world's population in poverty, essentially outside the world economy. This pattern wastes resources into luxury and excess of the developed countries, diverting resources that used to go directly to population support (without payments). This pattern is not sustainable, does not maximize world wealth and emergy, does not reinforce world production, and will not last. These patterns will become discredited as world opinion changes, as revolutions occur, and worldwide resource depletion soon cuts off the largesse of the overdeveloped countries.”

From: Odum H.T., 1994. Emergy and Policy. Vol.1, pp. 25-29. Environmental Engineering Sciences, University of Florida, Gainesville.



## ACPN Medal Award 2018



Prof. Gengyuan Liu from Beijing Normal University received the ACPN Medal Award, in June, during the International Workshop on Advances in Cleaner Production (IWACP) in Barranquilla, Colombia. Professor Gengyuan Liu and Emeritus Professor Carlo Vandecasteele were awarded after a quality selection of the works submitted and presented at ACPN events. An award committee evaluated the scientific production of more than 900 works presented by the ACPN members. After a rigorous evaluation of the award committee, formed by ten members of the ACPN, the contributions of Prof. Liu and Prof. Vandecasteele have been identified among the best presented in the last 10 years of the event. They represented the new and the senior generations of Advances in Cleaner Production Network (ACPN). The ACPN Medal is to recognize the contribution of young and experienced researchers to the advancement of cleaner production and to the preservation of the environment. The medal is inspired in Odum's Theory: "...where elements of the biosphere - nature and society - are represented in trees and buildings. The main driving force of the natural services used by society, renewable solar energy, transforms and circulates within the ecosystem. The arrow represents the ideal flow of resources in the biosphere as the basis of the planet's sustainability."

For more information: [Click here](#)

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## Teaching energy around the world

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**Austin Humphries - Assistant Professor at University of Rhode Island.**

"I teach a course entitled, "Ecosystem Science & Sustainability" where we use HT Odum's principles of Systems Ecology. We begin the semester by reading some current literature on sustainability in the context of planetary boundaries, consumption and the Anthropocene. We then learn about the basics of ecology and general systems theory, and in particular the energetic basis for valuing nature and ecosystem services. Using the emergy language, our first modeling exercise is based on Dr. Seuss's "The Lorax". Students can take some time to adopt the emergy language, but most find it useful. When asked about the applicability of emergy to their other courses or thesis/dissertation, I find that there are always a few students who apply it. Often the most useful part of the class is getting the students thinking in units of energy. I have taught the course twice and plan to continue to teach it as part of the graduate curriculum where most courses are much narrower in scope and focus on mechanisms and not interrelationships and feedbacks."

For more info about Prof. Humphries activity: [Click here](#)

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## Breaking News

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Since the beginning of the year 93 papers have been published (source: SCOPUS, searching for "emergy" in title, abstract or keywords).

*The ISAER newsletters are also published on the [ISAER website](#)*