Newsletter

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International Federation for Systems Research
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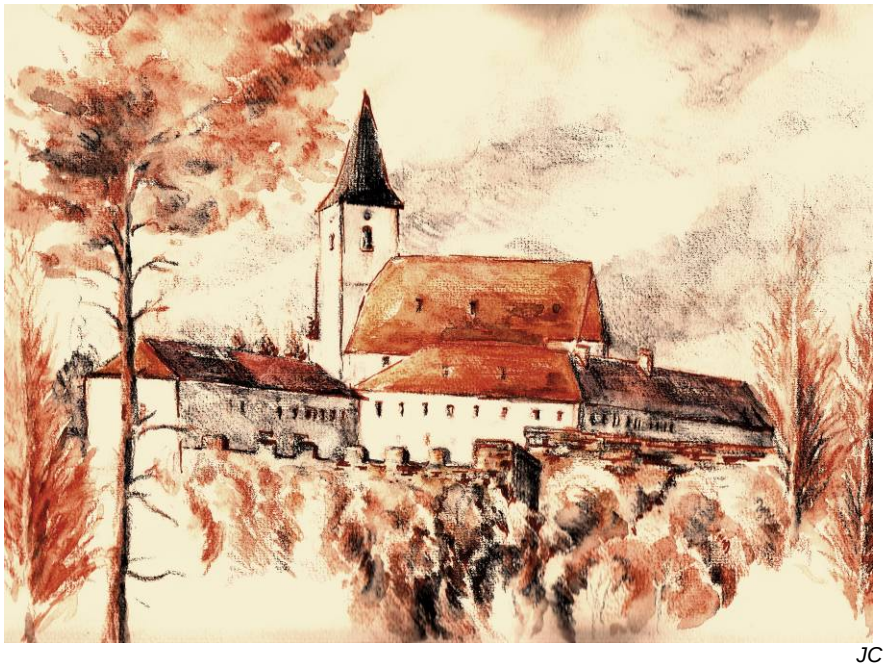


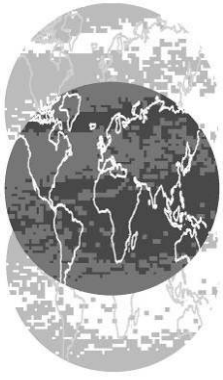
Kloster Pernegg

Location of the 2010 Fuschl/Pernegg Conversation

JC 2010

Dear Members!
Based on the recommendations and considerations of the Fuschl conversation of 2006 we have tried to envigorate the IFSR by providing an active web site. We had our bi-annual board Meeting in Vienna on April 7th, 2010 during which a new Executive Committee was elected, with Gary Metcalf as our new president. To our regret Matjaz Mulej and Yoshiteru Nakamori have retired from their offices. This time we elected three vice presidents: Kyoichi Jim Kijima, Amanda Gregory and Leonie Solomons.
You will find a report on the IFSR activities which took place in and around Vienna in parallel to the Board Meetings.
And I should mention another change. Instead of issuing one thick newsletter we will try to publish several smaller ones containing more up–to–date information.
I have to apologize to have overlooked to publish a December issue of the Newsletter. But the most up-to-date news are on the internet, anyway. This is now our primary medium of information exchange and communication – please use and support it by supplying information and comments.

Sincerely
Gerhard Chroust



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The new address of the IFSR:

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The New Executive Committee of the IFSR

The IFSR Board Meeting elected the following Executive Committee on Wednesday, April 7, 2010:

President: Dr. Gary Metcalf, USA (Int. Society for the Systems Sciences)

Vice-President: Prof. Dr. Kyoichi Jim Kijima, Japan (International Society for Knowledge and Systems Sciences)
Vice-President: Dr. Amanda J. Gregory, United Kingdom (Journal of Systems Research and Behavioral Science)
Vice-President: Dr. Leonie Solomons, Australia
Secretary-Treasurer (=Secretary General): Prof. Dr. Gerhard Chroust, Austria (Austrian Society for Cybernetic Studies)

President

Gary Metcalf, USA

Secretary General

Gerhard Chroust, Austria

Vice Presidents

Kyoichi Jim Kijima, Japan

Amanda Gregory, UK

Leonie Solomons, Australia

Summary of the IFSR Board Meeting 2010
(April 7, 2010, Vienna)

Every two years the representatives of the members of the IFSR meet at a Board Meeting. In 2010 this took place on April 7, 2010, 18:00 – 20:30 in the Melker Stiftskeller, 1010 Vienna. Key topics were:

Membership status:
Currently the IFSR has 36 member societies. It does not have individual members.
No new members joined in 2008/2009.

Election of the new Executive Committee (EC): (see above)

Financial Status and Outlook
The IFSR has two major sources of income: membership fees and the royalties from the Journal of Systems Research and Behavioral Science" (published by Wiley Interscience).
The current financial situation is healthy thanks to the great success of the Journal.
The Board thanked Prof. M. C. Jackson and Amanda Gregory for their efforts in editing and publishing the journal.

Honoring past EC-Members:
Prof. Jifa Gu, Prof. Matjaz Mulej, and Prof. Yoshiteru Nakamori received a commemorative plaque spelling out their achievements for the IFSR.

Activities of the IFSR in Vienna
April 6 – 9, 2010

During the week of the EMCSR-conference in Vienna (the bi-annual European Meeting on Cybernetics and Systems Research on April 6 - 9, 2010), see http://www.osgk.ac.at/emcsr/, IFSR organized several additional activities.

Tuesday, March 25, IFSR Get-together (18:00 with open end). Members of the IFSR membership met informally with the officers of the IFSR.

Support for 9 young scientists by paying their conference fee for the EMCSR.

Wednesday, April 7:
The IFSR provided a full day of activities at the EMCSR-Conference

Presentation: What is the IFSR?
The aims, activities and organization of the IFSR were presented to the EMCSR audience.

Ross Ashby Memorial Lecture

Traditionally the IFSR sponsors a key note lecture at the EMCSR in honor of W. Ross Ashby. It was given by Prof. J. Eder, Alpen-Adria University Klagenfurt, Austria with the provocative title "Grand Challenges of Computer Science Research" which was also related to the fundamental work of Ross Ashby (see below).

Two Public Discussions:

What is Systemic Thinking all about? (chair M. Mulej)

Grand Challenges for Systems Sciences (chair G. Chroust with Prof. J. Eder)

Board Meeting (evening) The official meeting of the membership of the IFSR (see above)

Strategy Meeting, Thursday, April 8,

The aim of the meeting was to sketch ways into the future in order to promote systems thinking. The meeting was moderated by Allenna Leonard and Markus Schwaninger using the Syntegration Method (invented by Stafford Beer) on the general topic of how Systems Thinking and Systems Sciences could be better integrated into normal business, academia and society.

Friday April 9, morning: EC-Meeting

The newly elected EC met for a first short discussion.

Pernegg Conversation 2010 (April 10-15)

(see below)

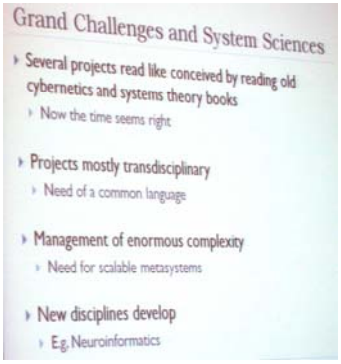
Ross Ashby Memorial Lecture:

"Grand Challenges for Computer Science Research"

Johannes Eder
Alpen-Adria University Klagenfurt, Austria:

W. Ross Ashby (b. 1903, London, d. 1972) was a psychiatrist and one of the founding fathers of cybernetics. He developed the homeostat, the law of requisite variety, the principle of self-organization, and the law of regulating models. He wrote Design for a Brain (1952) and an Introduction to Cybernetics (1956).
The commemorative lecture, sponsored by the International Federation for Systems Research (IFSR), is held every second year on the occasion of the EMCSR-Conference in Vienna.

Grand Challenges are formulated to focus research endeavors, to motivate both researchers and funding organizations and to communicate research goals broadly and boldly. Several Organizations (e.g. UKCR Committee, ISTAG Group of the European Union, the German VDE, and the Gartner Group) have formulated a set of "Grand Challenges for Computer Science" to structure research and funding schemes in the coming years. The Grand Challenges of the ISTAG Group, for example, was instrumental in shaping the 7th framework program of the European Union.
J. Eder presented the concept of Grand Challenges as research programs and their characteristics, comparing the different currently published sets of Grand Challenges for Computer Science Research. He brought forward and discussed several of these Grand Challenges in some detail with a particular focus on the organization of Grand Challenge as research drivers.
He showed that the fundamental work of Ross Ashby can be related to several of these challenges.



15th Pernegg Conversation 2010

(Saturday April 10 - Thursday April 15, 2010)

As the previous, historic location of the Conversations (Fuschl near Salzburg) was difficult to reach, also because the meeting rooms were inadequate, a change to a location nearer to Vienna was anticipated. After a long search Gerhard Chroust found a new location:
Kloster Pernegg (www.klosterpernegg.at). Pernegg is located approx. 100 km northwest of Vienna. It can be reached easily by car in 90 minutes and by train in 2,5 hours from Vienna.

We chose this location because we rightly believed that it was better suited to the purpose of a conversation. The seminar hotel is in the buildings of a former renaissance monastery, but completely modernized and refurbished in the 1990s. It is embedded in a tranquil, almost untouched landscape and looks back at a history of more than 850 years. It provides a focused and inspiring working atmosphere. The results of the conversation will be published on the Website as proceedings.

Why Conversation and what form do they take?

The Fuschl Conversations were established by the IFSR in 1980, primarily under the guidance of Bela H. Banathy, as an alternative to traditional conferences. A number of systems professionals found that they were disillusioned with a format in which the majority of the time was spent on papers being read or presented to passive listeners, with minimal time for discussion and interaction about the ideas. The Fuschl Conversations took on quite a different nature. As described by Bela, they were to be:

- a collectively guided disciplined inquiry,
- an exploration of issues of social/societal significance,
- engaged by scholarly practitioners in self-organized teams,
- on a theme for their conversation selected by participants,
- initiated in the course of a preparation phase that leads to an intensive learning phase.

Fuschl am See has been the setting for the Conversations from its beginning until 2008. Under Bela's guidance, the individual teams pursued their own areas of inquiry, but within a general framework that allowed for learning across the teams. Over time, this cross-interaction became more difficult as teams diversified in their topics and approaches.

In 2006, the Fuschl Conversation was devoted to bringing representatives of members of the IFSR together, in order to consider the role of the Federation in relation to its member organizations. In 2008 the Conversation returned to a more traditional format with an overall theme of Systems Research and Education.

A full set of photos from Pernegg 2010 can be found under 'Photo Gallery' on IFSR's homepage.

Team 1: Creating Systems Education Curricula

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The goals of the group were to create generic curricula for education and learning about systems for the generalist and specialist tracks, and to explore an active network of systems educators and stakeholders who can benefit from enhanced systems education in having to deal with complex issues.

We discussed the fragmented nature of systems education with multiple traditions expressed in very different ways at different institutions, and developed guidelines for designing two systems courses. The first, ST101 *Introduction to Systemic Thinking and Practice*, is intended as an introductory course for students from all disciplines. The second, ST301, *Advanced Systemic Thinking and Practice*, is intended as a more advanced course for students who are faced with complex issues that require a transdisciplinary approach. Each course design is intended as an aid to educators, and we expect that educators from different disciplines and systems traditions would adapt it to meet the need of different students. The designs contain a set of key systems concepts and frameworks relevant to the appropriate level, along with tools and methods which enable students to explore each concept. The list of tools is partial and indicative, and we fully expect educators to expand the list.

We also worked to develop the requirements and benefits of a global network for systems education and systems educators. Such a network will help to fulfill the needs of managers, policy makers and society in general. It could lead to the ability of more people to practice systems thinking, which will also have a ripple effect on others in society – all of these contributing to systems thinking becoming a more mainstream part of a sustainable society.

We will publish the results of our work in the Pernegg 2010 proceedings and we hope also in a journal article, and feed our ideas into a workshop at the ISSS 2010 conference in Waterloo.

Team 2: The Science of Service Systems

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The work of Team 2 focused on the emerging science of service systems, and how concepts and theories from systems science might aid in its development. The conversation dealt with service systems from the levels of philosophy to applications, including education, modelling and operations. Questions were raised about the distinctions between service systems and other types of systems with respect to characteristics such as relationship, participation, and the new types of complexities they create, as well as how those might affect the co-creation of value (as proposed in the service science literature). Numerous systems models were explored and examined for their relevance to service systems. While a great deal of work is already being done on the development and application of service science, it may be at the level of philosophy, as it relates to decisions at the other levels, where the most work remains.

Team 3: Learning Systems for Sustainability

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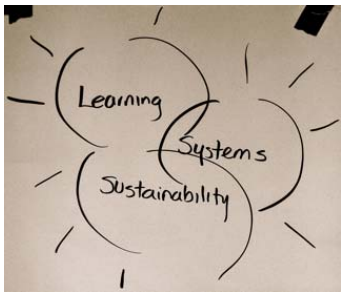
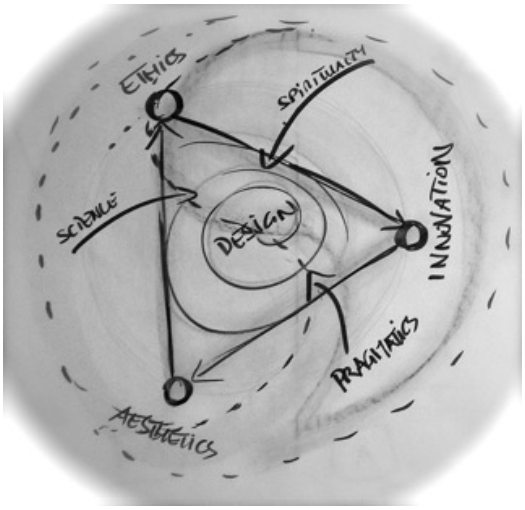
The specific conversation topic for Team 3 within this year's theme of *Learning Systems* was: 'Designing a meta-system as a vehicle for enabling dialogue and collaboration among diverse and geographically dispersed individuals and institutions with a shared identity around innovating learning systems for sustainability.'

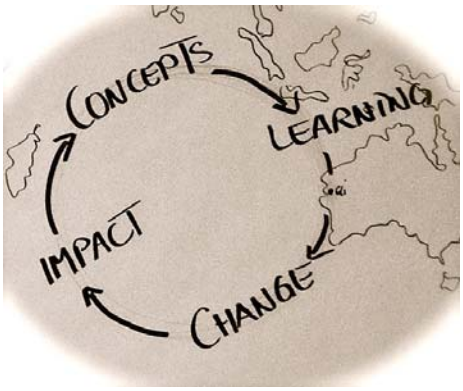


Our team worked on design issues at the intersection of learning, systems, and sustainability. We explored the urgent implications of sustainability as a framework for addressing the complexity and interconnectedness of global and regional challenges such a climate change, water shortage, energy supply, resources availability,



and so on. At the core of such sustainability challenges are questions related to the way human and human activity systems live, learn and interact with their environment.

The scaffolding we created for a meta-system of *pro-active co-adaptation* (i.e., sustainability) of people with planet considered the dynamic interplay of ethics, aesthetics, and innovation in a learning and design context informed by science, spirituality, and pragmatics. Design was understood to be a product of *self-organizing action inquiry* (i.e., learning), and as such, is entirely emergent and ever evolving. By basing our design approach on systemic action inquiry we underscored the fact it is not possible – or desirable – to know what the result of the design will be at the beginning of the process. Freedom of the definition of outcome is essential.



This insight made clear that whatever we were to name our meta-system model, it would have to be about process, pattern and relationship rather than about product, outcome or object. We spent much time considering appropriate metaphors, but in the end chose to hold the naming playfully, to focus on the content of the model, and to let the name for it emerge.

The three main components of our meta-system for pro-active co-adaptation through self-organizing action inquiry are:

1. A "think tank" function that integrates two horizontal learning cycles; one based on self-organizing systemic action inquiry, and the other on the ontology of dynamic sustainability.
2. A "link tank" function that operationalizes the model through the design of a socio-technical system capable of capturing the emerging pattern language of successful pro-active co-adaptation for global systemic sustainability, and of structuring the emerging design insights into usable

outcomes, such as a field guide on how socio-ecological challenges are resolved.
3. A “do tank” function that coordinates the action research initiatives of the various geographically dispersed participants, each engaging in their own systemic learning projects on issues of sustainability.

The operational cohesion of the link-tank serves to integrate the approaches developed in the individual projects of the do-tank in an emerging pattern language of sustainability captured in the think-tank. This pattern language is then fed back to the do-tank to inform and align them with each other as well as with the ever changing needs of global sustainability.

Team 4: Systems Science and Systems Engineering

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The team explored a hypothetical urban transportation problem as a basis for developing a more “systems rich” form of systems engineering approach. We believe that our consideration of urban transportation represents a more systemic approach to a complex case study. Rather than considering the problem of transporting people and goods, we consider the movement of people, goods and information as one system. Traditionally, we use information as means to improve the transport of people and goods, thus limiting the scope of the system boundary. ICT is also recognized as a lever of change and as a typical source of counterintuitive effects. When used effectively it has the potential to reduce traffic loads and or journey times, a feature we would hope to exploit; but it also has the potential to increase traffic flows for leisure purposes. People learn of more opportunities for leisure e.g. an art exhibition, through faster and more pervasive ICT and this stimulates their response to travel to it.

Most emphasis is given to a design methodology which brings “requisite variety” through user-designers being involved in all aspects of the design of an improved urban transport system. The wider boundary considerations provide the potential to reduce undesirable repercussions caused by introducing change. The paper identifies the additional considerations that would be reflected in the main phases of a typical systems engineering design process. We call this enhanced process “Integrative Systems Engineering”.

The International Academy of Systems and Cybernetic Sciences (IASCYS)

The International Academy of Systems and Cybernetic Sciences (FIASCOS) is a body of activity of the International Federation for Systems Research (IFSR) that fill the gap resulting from the failure of national and international academies of sciences and arts or learned societies (in British naming of the kind of organizations) to include systems and cybernetic sciences in their list of sciences and arts in order to have their outstanding members honored and activated as members of academies of sciences and arts. While the traditional disciplines of science focus on their selected parts of the given reality of life and consider them from their more or less narrowly selected viewpoints, the systems and cybernetics theories and practices deal with a worldview of holism and therefore tend to help humans cover the left-aside empty spaces between the spaces covered by individual traditional sciences, mostly by enabling their interdisciplinary creative cooperation leading to insight into synergies and mastering of such processes. In this way, systems and cybernetics tend to cover attributes of the given reality of life that the traditional sciences fail to cover. Thus, the otherwise resulting oversights tend to be replaced by new insights. This effort and its success tend to help humans as

individuals, their organizations of any kind, and the entire humankind to attain more or even requisite holism of monitoring, perception, thinking, emotional and spiritual life, decision making, and action, and therefore to attain more success and well being.

On April 7, 2010 the General Assembly of the IFSR approved the Constitution of the IASCYS (subject to some editorial amendments), the criteria for membership and the first Executive Committee of the IASCYS.

The officers of the IASCYS are:

- Matjaz MULEJ- IASCYS President
- Jifa GU - IASCYS Vice-president
- Ranulph GLANVILLE - IASCYS Vice-president
- Jennifer WILBY - IASCYS Secretary General

The first members of the IASCYS are:

• Matjaz MULEJ- IASCYS EC President
• Jifa GU - IASCYS EC Vice-president
• Ranulph GLANVILLE - IASCYS EC Vice-president
• Pierre BRICAGE
• Guangya CHEN
• Charles FRANCOIS
• Enrique HERRSCHER
• Kyoichi J. KIJIMA
• Yoshiteru NAKAMORI
• Robert VALLEE
• Shouyang WANG
• Andrzej WIERZBICKI
• Jiuping XU
• Jennifer WILBY - IASCYS Secretary General

More details can be found on the homepage of the IFSR.

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