### International Federation for Systems Research

# IFSR Newsletter vol. 15, no. 1



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www-home page: http://www.ifsr.org/recognitions\_anniversaries/index.html

### **Dear WWW Readers!**

You will have noticed two changes in the header of our Newsletter:

- 1. We have made the addition of our WWW-address. In our home page you will find some more information concerning the IFSR and also the latest Newsletters.
- 2. We have decided to display show the long history of our Newsletter by changing the numbering scheme to a volume/issue base. We are proud to show that you have already volume 15 in your hands.. For 1996 we will continue both with both numbering schemes and from then on we will only use volume/issue. The first issue came out in 1981. For very precise mathematicians we must, however, confess, that no Newsletter was published in 1992. You will have also noticed that we have now reduced the Newsletter to four issues a year, five issues being a little too ambitious. Hoping that you find the Newsletter of interest and that we are always in need of interesting contributions I remain yours sincerely Gerhard Chroust

Systemtechnik und Automation Johannes Kepler University Linz, 4040 Linz, Austria

### **Changes of E-mail addresses:**

Prof. B. Banathy has a new e-mail address: BHBANATHY@AOL.COM

Prof. Michael Jackson can now also be reached by e-mail: DGIBBS@HUMBER.AC.UK

IMPRESSUM: Mediuminhaber, Herausgeber, Satz und Layout: Int. Federation for Systems Research Für den Inhalt verantwortlich: Prof. G. Chroust, Kepler Universität Linz. 4040 Linz, Druck: Druckerei Bad Leonfelden Ges.mb.H. & Co. KG, Bad Leonfelden.

#### WELCOME TO THE EMCSR-CONFERENCE 1996

Vienna, April 9-12

IFSR would like to express its welcome to this Conference in Vienna. IFSR is proud that this is the 13th conference in a series and we are glad to say that IFSR has also contributed to it: IFSR contributes to the congress by subsidizing participants who cannot afford to come to the congress by use of their own financial means only. At this year's congress IFSR will also present itself and its aims and achievements in plenary session on Friday, April 12, morning. We invite the participants to talk to the IFSR-officers to investigate, whether a cooperation with IFSR might be fruitful. see: http://www.ai.univie.ac.at/emcsr/emcsr.html

#### **IFSR** wants Your contribution!

We would like to extend the Newsletter's function as a forum for the interchange of information.. Therefore we would ask you to send us short reports on relevant conferences, meetings, and announcements of conferences, as well as reviews of interesting books. You can contact us by mail, fax or e-mail. E-mail submissions are preferred! We promise a fairly short turn-around time!.



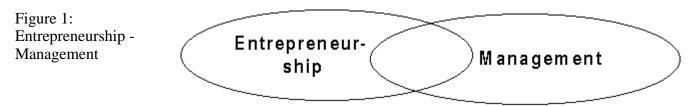
### HONORARIUM FOR AUTHORS

We pay a modest honorarium (about US-\$ 40) for lengthier original contributions (not announcements or advertising). Authors are therefore reminded to supply their bank connection along with their manuscripts.

## **NEW TRENDS**

SYSTEMS THINKING, ENTREPRENEURSHIP AND MANAGEMENT Matjaz MULEJ, Miroslav REBERNIK, Stefan KAJZER University of Maribor, EPF SI-62000 MARIBOR, SLOVENIA, P.O.B. 180, fax +386-62-26681

Contemporary notions of systems thinking, entrepreneurship, and management surfaced in the same period of the modern social and economic development. Life's complexity could no longer be avoided, but had rather to be faced, so did and do turbulence, speed of change, globalisation of economy and life, communication, knowledge, interdependence, competition etc. They have much in common, as well as some differences. Systems thinking aiming at holism and depth by interdisciplinary creative cooperation is not needed by entrepreneurship and management only. These two roles for running an organization differ in defining their dialectical systems, i.e. systems consisting only of a complete set of essential viewpoints (Fig. 1).



Business or any other organizational process can be viewed as consisting of two main subprocesses:

• Schumpeterian creative destruction of the old, obsolete cultures, products and technologies, and

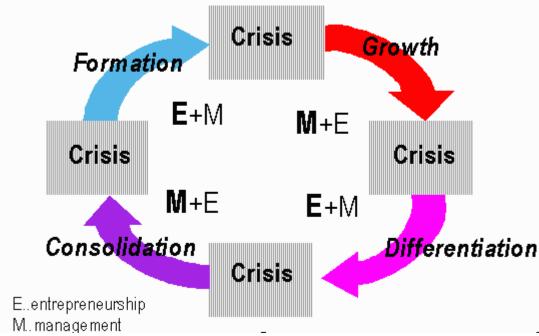
- their replacement by more innovative ones; here entrepreneurship is favored;
- utilization of the existing capacities (human, capital, information) to their full extent and stakeholders' benefit before they get obsolete; here management is favored.

Fig. 2 shows a process of this kind in more detail. It shows phases of prevalence of the more entrepreneurial and the more managerial behavior. These phases replace one another all the time in an organizational process:

- making an organization requires more of entrepreneurship,
- growth of the organization requires more of management,
- differentiation of the organization, again, stresses entrepreneurship more,
- consolidation of the organization, again, stresses management more.

At the end of each phase, a crisis surfaces, and demands the next phase's style of running the organization. The behavior is repeated in a cycle.

Figure 2: Organization Life Cycle



Both figures also convey that organizational vitality and viability are best provided by entrepreneurial management and managerial entrepreneurship. Both are actually two functions of the same job - satisfying all the stakeholders to the highest possible degree by using as much of systems thinking as possible and needed. Hence, instead of talking about entrepreneurship and management as distinct concepts, it may be wiser to talk about the managerial and entrepreneurial roles that have to be performed simultaneously as phases in modern organizations, business etc. There are also distinctions, of course, e.g. institutional ones: a manager is a paid function, an entrepreneur may be an owner and/or a function, etc. Linking rather than dividing the two notions as well as other concepts is very much needed nowadays. This is what both STIQE-Conferences (Dec. 1992, and Dec. 1994 in Maribor) have been about, and also STIQE '96. Due to too much specialization and focusing, linking and interplay are left out of consideration too frequently. We are trying to help making up for this mistake.

# **IDEAS**

### "Aura" and the "Wasa" story

Charles Francois Libertad 742, 1640 Martinez Republica Argentina

In 1625, Gustavus II Adolfus, King of Sweden, ordered the building of a flagship for his fleet. The ship, named "Wasa" in honor of the royal patronym, was very large for those times: her overall length was some 200 feet and she displaced about 1300 tons. The ship was launched in 1628 and, on August 10th of that year, fully equipped, she solemnly sailed for her maiden trip from Stockholm harbor. Unfortunately, there was some error in her construction and due to a powerful squall of wind, she capsized and sunk under the horrified gaze of the king himself and a multitude of people. After some few years, the event became slowly forgotten and so was also the exact place where the wreck lay at rest.

It was however located again by a diver in 1956 and the Swedish navy rescued it between 1959 and 1961. She was towed back into a Stockholm dock, mounted on a specially built concrete pontoon and carefully cleaned and restored. Since 1962, she can be visited as part of the Swedish National Marine Museum, thus beginning a new and unexpected "life" after 334 years of oblivion.

This is a perfect illustration of the concept of "aura", i.e. "the set of the traces and/or constraints left over by a system after the end of its functional existence". Given favorable conditions and/or circumstances, such a system may maintain or even recuperate itself as a functional entity, eventually of a quite different kind.

The aura concept corresponds to a kind of fossil field, i.e. to a certain degree of survival of some material or abstract structure. The concept applies to a fossil, as well as to a sunken ship, a destroyed empire, or the teachings of a great disappeared mystic or philosopher.

# **CONFERENCE REPORTS**

### **ECBS'96**

### **Engineering of Computer-Based Systems**

Conference and Workshop March 11-15, 1996, Friedrichshafen, Germany

To the background of the lovely Bodensee (Lake Konstanz) some 90 scientists discussed issues related to the emerging discipline of ECBS, i.e. design, development and use of complex, heterogeneous systems in which computers play a crucial role. 65 papers were presented at the conference on topics such as process models, data bases, standards, architecture, real-time systems, codesign, tools and education in ECBS.

Most contributions clearly recognized the fact that a holistic, systemic approach is needed in systems engineering in order to integrate the different technologies and the different disciplines contributing to a complex socio-technical system. Modeling is a key to achieving acceptable results.

In an accompanying exhibit 8 exhibitors showed products related to systems engineering.

The second half of the week was devoted to a workshop. 44 participants participated and discussed main issues of ECBS and how to further this area. Main topics were development processes, standards, education and training, representation of systems, etc.

Proc. IEEE Symposium and Workshop on Engineering of Computer-Based Systems.- IEEE Computer Society Press, Los Alamitos, Calif.,1996, ISBN 0-8186-7355-9

### 2nd Workshop Int'l Inst. for General Systems Studies

January 9 - 11, 1997 Southwest Texas State University San Marcos, Texas, USA

Objectives: promote the study of mathematical foundation of general systems theory; promote the development of methodologies of systems research; promote interdisciplinary exchange and collaboration for the progress of mathematical theory of general systems; and explore applications of general systems theory in various scientific areas.

- Mathematical Systems Theory and Applications
- Algebraic Methods in Systems Analysis
- General Systems Theory, History, and Methodologies
- Systems with Uncertainty
- Systems Analysis in Artificial Intelligence
- System Modeling and Simulation -
- Systems Theoretical Foundations for Advanced Modeling and Simulation Environment
- System Engineering and Design
- Realization and Validation of System Models
- Systems Analysis in Social Science
- Control: Theory and Applications
- Philosophical Issues
- Systems Analysis in Biological Science. Call for session organizers. Proposals for sessions focusing on new or emerging topics (6 presentations of 20 minutes each).

Topic forums. These forums on selected topics aim to provide opportunities to exchange research ideas in a semi-free discussion style.

Presentation by Title. Contribution without personal appearance may be submitted.

Minicourse (half day): 'Overview of Systems Science: A Guided Tour' by Professor George J. Klir. The first part of the minicourse will discuss the meaning of systems science. It will be argued that systems science is a new dimension of science, complementary to classical science. In the second part of the minicourse, a summary of conceptual frameworks for characterizing the domain of systems science will be introduced, distinguishing deductive and inductive approaches. The focus of the third part of the minicourse will be on a critical examination of the current status of systems science and its future prospects. An overview of research areas that are active in systems science will be presented.

- Abstract submission: June 10, 1996
- Final paper due: October 15, 1996
- Fees: \$225.00, \$140.00 (student), Minicourse fee: \$65.00.

### IDIMT-96 4th Interdisciplinary

Information Management Talks Oct. 16-18, 1996 Zadov, Czech Republic

The aim of this series of annually organized talks is to provide an informal interdisciplinary forum for an interchange of ideas and concepts on Information Management, Information Engineering, Systems Analysis and related topics. The cooperation of technical and economic institutes and at the same time of researchers with different economic and historical backgrounds will provide a challenging basis for interdisciplinarity.

The increasing interest in information as a vital resource makes it necessary to consider technology transfer and opportunities for establishing technical and commercial cooperation across borders. Key topics are:

- Economic and Sociological Implications of Information Management
- Challenges for Small and Medium Enterprises : A European Perspective
- Hopes, Realities and Perspectives of Business Reengineering
- Competitive Advantage by International Cooperation
- Technology Transfer Challenges and Problems

Extended Abstract due: May 2, 1996 Camera ready copies due: July 15, 1996

#### **HUMAN SCIENCE RESEARCH**

July 21-26, 1996 Castel Ivano, Strigno, Italy

The annual seminar involves research studies and applications of systemic concepts and principles to foundation areas of knowledge and skill improvement relevant to the conduct of scientific inquiry, with special emphasis given to the role and importance of human beings in the discovery, production, and creation processes of science. Theme of the 1996 seminar is methods, praxis and systemics in Human Inquiry.

#### **ISAT'96**

# 18th Internat. Scientific School on Systems Inquiry, Information Systems and Technology

September 24th - 29th 1996, WROCLAW, POLAND

The increase of innovativeness of information and communication technologies results in qualitative changes of information culture of the society, as well as of human interaction. These phenomena force challenges for more creative design and decision processes in the development and management of systems. The achievement of such purposes depends upon new methodological foundations for multi-disciplinary human activities, which often will have to destroy the present boundaries of disciplines formed by the fragmentary vision of our world. This situation justifies and motivates the organization of

scientific meetings in order to discuss a new interdisciplinary vision of modern system oriented knowledge and education. The general purpose of the ISAT '96 is to hold a common debate on methods and means of implementing the necessary societal transformations, as well as to discuss the impact of modern informatics, systems inquiry methods and new information and communication technologies on human thinking and decision making processes. The following general topics will be discussed:

- methodological foundations of human activity systems inquiry and informatics,
- systems engineering of inquiry and distributed artificial intelligence methods: interdisciplinary, knowledge representation and transfer, distributed knowledge based information systems, etc.,
- systems integration of networking and connectionism oriented approaches in information and decision making processes and systems evolution,
- multimedial communication supporting human-computer co-operation and integration of imagination: CSCW, Groupware, EDI transactional tools, etc.,
- information systems evolution in education, management and design education
- model of the 21st century information society.

### STIQE'96

# 3rd Int'l Conference on Linking Systems Thinking, Innovation, Quality, Environment and Entrepreneurship

December 8 - 11, 1996 Maribor, Slovenia.

The conference continues the discussion launched at SYSTEMS and QUALITY '92 and STIQE '94 conferences in Maribor, Slovenia. It encouraged an interdisciplinary discussion about mutual links of theory and practice of Systems Thinking, Total Quality Management, Innovating, Environment and Entrepreneurship and Environment.

- August 1, 96: Abstracts (1 page) and 1/3 page of the author's C.V.
- Sept. 1, 1996: Acceptance/rejection
- Oct.1, 1996: Final papers (8 12 pages).

Conference fee: 250 \$, authors: 150\$

# NEWS FROM THE BOOK MARKET

#### **EUROCAST'95**

**Computer Aided Systems Theory** 

Proc. Fifth International Workshop on Computer Aided Systems Theory Innsbruck, Austria, May 1995
F. Pichler, R. Moreno Díaz, R. Albrecht (Eds.)

CAST research has become rather stable in the sense that the common paradigms to be followed are today generally accepted by the interested groups.

Section 1 (Systems Theory) presents new approaches for the development of systems theory, as required to provide the theoretical frameworks for complex modeling tasks, are presented. Section 2 (Design Environments) gives insight into different developments of method base systems and their architectures, which are crucial for the success of CAST in practical applications. Section 3 (Complex System Design)

deals with methodological means to control complexity in engineering design tasks. Section 4 (Specific Applications) presents concrete examples of applied research, which can be embedded into the topics of CAST research.

Springer Lecture Notes in Computer Science No. 1030, 1996

# News from the IFSR



### **INVITATION and AGENDA**

(for representatives of ISFR member societies)

### **BOARD MEETING of the IFSR**

Thursday, April 11, 1996, 17.00 - 19.30 in MELKER Stiftskeller Vienna 10, Schottengasse 3 **Agenda** 

- 1. Opening
- 2. Minutes of the Board Meeting April 7, 1994
- 3.
- 4. Report of the President
- 5. Report of the Secretary/Treasurer a. Membership Status
  - b. Financial Status and Outlook
- 6. IFSR-Publications a. Status of 'IFSR-Newsletter' b. Status of 'System
  - c. IFSR brochure
  - d. IFSR Book Series
- 7. IFSR supported events a. Ashby-lecture b. Fuschl 94, Fuschl 96
  - c. EMCSR'96 (Robert Trappl)
  - d. CAST94, CAST95, CAST97
  - e. other events
- 8. Membership-related decisions
  - a) New Members
  - b) inactive members
- 9. Election of Officers
- 10. IFSR Committees
- 11. IFSR Projects
- 12. Invitation and Agenda for Strategy Meeting
- 13. Other Business
- 14. Closing

### Dear Members!

The next ECMSR-Conference will take place in April 1996 in Vienna. As is the custom, we will have the IFSR-Board Meeting during the conferences. Attendance to the Board Meeting is only open to member

societies of the IFSR. We are, however, willing to invite by special arrangement, representatives of tentative members of the ISFR to join us at the meeting Please contact one of IFSR's officers. Past experience has shown that there is never enough time at the Board Meeting to discuss really strategic issues. The EC has therefore called for a special strategy meeting on Saturday, April 13, 1996.

Yours sincerely, Gerhard Chroust

### **INVITATION and AGENDA**

(for representatives of IFSR member societies only)

#### STRATEGIC MEETING of the IFSR

Saturday, April 13, 1996, 9.00- 12.30 in SCHOTTENKELLER Freyung 6, 1010 Wien

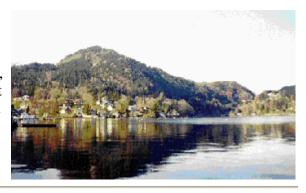
### Agenda

- 1. Opening
- 2. Committees of the IFSR
- 3. Future Activities and Projects of the IFSR (Brainstorming and Discussion)
- 4. Closing

### **FUSCHL TALKS-1996**

April 14-19, 1996, Fuschl, Austria

We also have the pleasure to announce that this year's Fuschl-Talks have over 30 participants. In these interdisciplinary talks, moderated by Bela H. Banathy, the following topics will be discussed: Social Systems Design, Designing Systems for Learning and Human Development for the 21st century, Systems Learning, Societal Evolution and Conscious Evolution, Designing Information Systems for Decision Support.



# WHAT'S NEW IN "SYSTEMS RESEARCH"?

The quarterly Systems Research, the official journal of the IFSR, is published by John Wiley and Sons.

Papers for publication and subscription requests should be sent to:

Professor M.C. Jackson University of Humberside Cottingham Road Hull. HU6 7RT, United Kingdom tel: +44 1482 440550 Ext. 3720 fax: +44 1482 445715

### **Contents of vol. 12, no. 4 (1995)**

### Special Issue in Kenneth Boulding Guest Editor: Bela H. Banathy

- Editorial: An Appreciation of Kenneth Boulding Mike C. Jackson
- Guest Editorial: Kenneth E. Boulding: 1910 1993 Bela H. Banathy
- Introduction of Special Issue: Kenneth Boulding Elise Boulding
- Education in the World System Kenneth E. Boulding
- Ethics and Science West Churchman
- An Appreciation of Kenneth Boulding Hazel Henderson
- Perspectives from the Boulding Files Debora Hammond
- Curriculum Vitae: Achievements Bela H. Banathy

#### **Other Material**

- An Example of the Operation of the MPSB Filter Joseph Kim-keung Ho
- Organizational Excellencies: A Redefined Ethical Perspective Ramakrishnan
- The Development of Critical Systems Thinking in Tanzania C. Milanzi
- The 21st-Century Janus: The Three Faces of Information Bela A. Banathy

#### Contents of vol. 13, no. 1 (1996)

- Norman Uphoff: Understanding the World as a Heterogeneous Whole
- Russ Ackoff and J. Gharajedaghi: Reflections on Systems and their Models
- Roberta Snow and Evan Leach: Institutionalizing the Aesthetic
- Costa Tsouvalis and Peter Checkland: Reflection on Soft Systems Methodology
- John Warfield and Scott Staley: Structural Thinking

### Do we need Computer Aided Systems Theory? - A Discussion

In an e-mail to the participants of EUROCAST-95 (Innsbruck) Jimmy (Werner) Schimanovich stated a provocative thesis.

The old system theory is no longer a scientific subject of its own!

You can reach Jimmy at byi@smc.univie.ac.at. Please let the discussion go on!

# **Calendar of Events**

Title	Date and Place	Further Information	
Abbreviations: CfP, CfA: Call f.Papers/Abstract, FP: Final Paper due, : more details in issue.nn			
13th European Meeting on Cybernetics and Systems Research, Vienna	Apr. 9-12, 1996, Vienna, AustriaCfP: Oct. 12, 1995,	R. Trappl, Dept. of Med. Cybernetics & AI, Univ. of Vienna, Freyung 6/2, A-1010 Vienna, Austria, tel: +43-1-53532810, fax: +43-1-5320652, Email: sec@ai.univie.ac.at, www:http://www.ai.univie.ac.at/emcsr/emcsr.html	
IFSR Strategic Meeting	April 13, 1996, morning, Vienna	open only to IFSR member societies!details to be announced	
Fuschl-Talks 1996	Apr. 14-19, 1996, Fuschl, Austria CfA: May 15, 1995	B. Banathy, 25781 Morse Dr., CARMEL, CA 93923, USA, email: belasr@aol.com	
Int'l Cnf. on Modeling, Simulation and Optimization	May 6-9, 1996Gold Coast, Australia CfA: Jan 1, 1996FP: expired	IASTED secretary MSO 96, 4500 16th ave NW, unit 80, Calgary, Alberta, Canada T3B0M6, tel: (403) 288-1195, fax (403) 247-6851, e-mail: iastad@istd.cuug.ab.ca	
Colloque 'Systemes bio-inspires'	July 1-2, 1996, Lausanne	Groupe d'interet poul lab bio-informatique (GIBI), Ecole polytechnique federale de Lausanne (EPFL), IN-Ecublens, CH-1015 Lausanne, tel +41 21 6932640, email: mange@di.epfl.ch, URL:http://lslwww.epfl.ch	
ICCHP 1996: International Conference on Computers for Handicapped Persons	July 16-19, 1996, Linz, Austria	Austrian Computer Society, Wollzeile 1-3, A-1010 Wien, tel: +43 1 512 02 35, e-mail: ocg@vm.univie.ac.at	
1996 Summer Computer Simulation Conference	July 21-25, Portland, Oregon, USACfA: expired	SCS-96, 4838 Ronson Court, Suite L, San Diego, CA 92111-1810	
8th Annual Int. Seminar on Human Science Research	July 21-26, 1996,Catel Ivano, Strigno, Italy	Arne Collen P. O. Box 4550, Walnut Creek, CA 94596 USA, tel and fax. 001-510-930-9779 acollen@igc.apc.org	
5th Bi-Annual Conference of the International Society for the Empirical Study of Literature	August 21 - 26, 1996, Banff, Alberta, Canada.	Steven Tötösy de Zepetnel, Res. Inst. for Comparative Literature, Univ. of Alberta, Edmonton, Alberta Canada T6G 2E6, tel: 403-492-4776: fax: 403-492-5662; e-mail: stotosyagpu@srv.Ualberta.ca.	
World Congres of Systems and Cybernetics	Aug. 26-31, 1996,Bucharest, Romania	Ecological University in Bucharest, 4-6 Dem I Dobrescu Street, 70119 Bucharest 1, Romania, tel: 40-1-6137468, fax: 40-1-6150326	
	Chiquita Snippe-Marlisa, P.O. Box 2346, 7301 EA Apeldoorn, NL, fax: +31- 55 55 73 93, e-mail:		

	chiquita@info.vub.ac.be	
4th Interdisciplinary Information Management Talks (IDIMT-96)	Sept. 16-18, 1996, ZadovCfP:May 2, 1996FP: July 15, 1996	Gerhard CHROUST, Systems Engineering and Automation, Kepler University Linz, A-4040 Linz, Phone: +43-732-2468-865, fax: -878, email: CHROUST@SEA.UNI-LINZ.AC.AT
ISSS-Conference 1996	17-20 Sept 1996Budpest, Hungary	Harold Linstone,c/o Int. Society for the Systems Sciences (ISSS), PO Box 6808, LOUISVILLE, Kentucky 40206-0808, USA, tel (=fax) (502) 899-3332email: hwhl@odin.cc.pdx.edu
ISAT'96 18th Internat. Scientific School on Systems Inquiry, Information Systems And Technology	Sept 24-29, 1996Wroclaw, PolandCfA: May 15, 1996	Mieczyslaw BazewiczTechnical University of Wrocław 50-370 WROCLAW, POLAND, tel: (48- 71) 20-35-89, fax: (48-71) 22-36-64, e-mail: bazew @ pwr.wroc.pl
3rd Systems Science European Congress	1-4 Oct. 1996RomeCfP: expired	C.E.S 3, -afcetm 156 Bd. Pereire, F-75017 Paris, tel: +33 (1) 47 66 29 19, fax:: +33 (1) 42 67 93 12
1996 IEEE Int. Conference on Systems, Man and Cybernetics: 'Information, Intelligence and Systems	Oct. 14-17, 1996 Beijing (China)CfA: Jan 15, 1996FP: June 1, 1996	Prof. Jian Chen, School of Economics and Management, Tsinghua Univ., Beijing 100084, China, tel. (8610) 2595876, fax: (8610) 2561532
STIQE '96: 3rd International Conference on Linking Systems Thinking, Innovation, Quality, Environment and Entrepreneurship	December 8 - 11, 1996 Maribor, Slovenia CfA: Aug 1, 1996FP: Oct 1, 1996	Matjaz Mulej, University of Maribor, School of Business and Economics, P.O.Box 180 (EPF), SI - 62000 Maribor, Slovenia, Tel.: + 386 62 22 46 11, Fax: + 386 62 22 70 56, E-mail: MULEJ@UNI- MB.SI
2nd Workshop of the IIGSS	Jan 9-11, 1997 San Marcos, TexasCfA: June 10, 1969FP: Oct. 15, 1996	Dr. Yonghao Ma, Department of Mathematics, Southwest Texas State University, San Marcos, Texas 78666, USA, ma@iigss.math.swt.edu
EUROCAST '97: 6th Intern. Workshop on Computer Aided Systems Technology	Feb. 1997,Las Palmas de Gran Canaria	Roberto Morena-Diaz, CIICC, Universidad de Las Palmas d.GC, Spain, tel: +34-2845-87-50, fax -85, e-mail: rmoreno@ciicc.ulpgc.es

webmaster@ifsr.org last changes: 12-11-2007

