

# The International Academy for Systems and Cybernetics Sciences, IASCYS, What For?, How?

Pierre Bricage<sup>1, 2, \*</sup>

<sup>1</sup> Vice-President of the French Society for Systems and Cybernetic Sciences, AFSCET, Paris, France

<sup>2</sup> past Secretary General of the International Academy for Systems and Cybernetic Sciences, Pau, France

\* Correspondence: [pierre.bricage@univ-pau.fr](mailto:pierre.bricage@univ-pau.fr)

**Abstract:** In 2010, in Vienna, Austria, European Union, the International Academy for Systems and Cybernetic Sciences (IASCYS) was founded as a body of the International Federation for Systems Research (IFSR). The essential aim was not only to honour outstanding scientists in the fields of systems science and cybernetics and to facilitate high-level interaction between them, but also to develop the holistic and interdisciplinary viewpoint so as to span, both in education and research activities, the gaps between traditional sciences. In 2016, it was registered in Pau, France and became an independent organisation having its own statutes, rules of procedure and membership criteria. During 10 years, without any money, through co-organisation of multilingual workshops and conferences in systems science and cybernetics, in theory and application, IASCYS facilitated transdisciplinary cooperation between worldwide Societies and expert and young researchers, thus leading to insights into synergies and the creation of new paradigms and methods for coping with situations that the traditional sciences fail to cover. On 2020, 75 IASCYS Academicians were appointed, coming from 30 Countries. In 10 years IASCYS as sponsored 40 meetings, co-organised 10 conferences and 20 workshops and managed many educative sessions in systems thinking.

**Keywords:** Academy; cybernetics; holism; multilingualism; research; systems science; teaching; transdisciplinary.

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## 1. Introduction

The first general assembly of IASCYS as a new IFSR body, along with a first workshop conference, organised by the IASCYS Chinese Academicians, about “**Teaching Systems and Cybernetic Sciences in Higher Education**”, was held during October 25-27 2010, at the University of Sichuan in Chengdu, P.R. China. The assembly confirmed the first 13 founding fathers of the Academy (Pierre Bricage, Guangya Chen, Charles François, Ranulph Glanville, Jifa Gu, Enrique G. Herrscher, Kyoichi Jim Kijima, Matjaz Mulej, Yoshiteru Nakamori, Robert Vallée, Shouyang Wang, Andrej Wierzbicki, Jiuping Xu, 7 April 2010). The first Executive Committee (EC) of IASCYS consisted of Professor Matjaz Mulej, from Slovenia (President), Professor Jifa Gu from China (Vice-President), Professor Ranulph Glanville, from Great Britain (Vice-President), and Professor Pierre Bricage from France (Secretary General). The emergence of the International Academy for Systems and Cybernetic Sciences (IASCYS) was the result of an effort begun in 2003 by Matjaz Mulej, working with Jifa Gu who was IFSR President at that time. Two IFSR Board Meetings, particularly the IFSR Board Meeting on 26 March 2008 in Vienna (Austria), several sessions of the provisory IASCYS Executive Committee (mostly by e-mail), and intensive discussions with many members of IFSR member associations around the world, and finally the deliberations of the first General Assembly at Chengdu, China, in October 2010 helped to formulate the statutes of the Academy, the acceptance criteria for Academicians, and the ethical point of views of the Academicians. According to the approved statutes, the 2010 Chengdu discussion ratified the nominations and appointments of 11 new Academicians, the Academy representing then 14 Countries (Argentina, Australia, Austria, Belgium, Canada, Chile, China, France, Ireland, Japan, Poland, Slovenia, UK, USA) [1].

## 2. The history of a new idea.

National and international Academies of sciences and arts previously did not include any systemic and cybernetic domains in their list of sciences and arts. This situation overlooks the contributions which these domains have made to many traditional fields (e.g. [2]). **Ludwig von Bertalanffy** had already claimed that over-specialisation was the source of problems in modern civilisation. He advocated **General Systems Theory** as a way of building bridges among specialists, without requiring them to abandon their specialties.

The emergence was most probably in 2006, when Matjaz Mulej became President of **IFSR** after Jifa Gu. They both were unhappy with the situation! IFSR [3] was created many years ago *to interlink the systems science associations*. Currently, IFSR (Vienna, Austria, European Union) is an umbrella Society of national and international Societies in the field of systems and cybernetics. From 3 Societies the number kept growing (more than 50 today) but much more than the strength of them and ISFR. IFSR publishes the journal *Systems Research* and arranges few closed conferences.

Jifa Gu was, and is still working, in the Chinese Academy of Sciences and Arts. Matjaz Mulej was a member of three international Academies, but he had a quite bad experience with one of the three. This Academy had no real serious criteria and took membership fees. He left it. Taking into account their personal experiences with Academies, Matjaz Mulej and Jifa Gu had the idea of on IFSR improvement including the establishment of an International Academy of Systems and Cybernetic Sciences. The fundamental point was multiple: *-the new academy must have serious criteria of inclusion into membership, -the new academy must serve associations by involving them into the academy and involving the academy members into activities of the associations, -the new academy should serve beyond a honour Society in promotion of cybernetic and systemic behaviour, -the Academicians must have a double scientific and teaching expertise at least at the European level and be appointed after a competitive examination, -with no membership fees.*

It took Jifa Gu and Matjaz Mulej several years to prepare draft criteria. They agreed after a while, and a lot of discussion with IFSR representative personalities, on a list of achievements to be included into criteria. After several improvements, they are now listed formally on the website of the Academy [4]. After five years and many rounds of discussions with a lot of colleagues (either by blog or during conferences), a draft was presented to the IFSR assembly, completed up and passed.

Usually people who are active in the fields of systems and cybernetics, rather than in traditional academic fields, are often not honoured by traditional national Academies of Sciences, so IFSR decided to create its own Academy to recognise outstanding contributions. We had a wonderful chance to have our first membership meeting in Chengdu (P.R. of China). The General Assembly was arranged by Jifa Gu and his Chinese IASCYS members colleagues (Prof Dr Guangya Chen, Prof Dr Shouyang Wang and Prof Dr Jiuping Xu). As a nonprofit organisation, and without any membership fees, the Academy organised its activities without receiving any financial support.

## 3. Innovative IASCYS functioning and roles

So, IASCYS was created to build bridges among the IFSR member associations, to identify the most qualified scientists and practitioners in the field in order to invite them as keynote speakers to conferences, to recognise systems science and cybernetics as sciences equal to other sciences and to create links among the leading members of the systems and cybernetics community with the intent to aid and promote the development of the field. But the **International Academy for Systems and Cybernetic Sciences** (IASCYS) is not just an honour Society.

### 3.1 Academicians nomination and appointment.

For selecting and adding new Academicians, national Societies (e.g. AFSCET, ALAS, ASC, OSFK, SESC, SESGE ...), international Societies (e.g. ICSE, IIIS, ISKSS, ISSS) or Federations (e.g. IFSR, UES-EUS, WCSA, WOSC) were asked to identify outstanding scientists in systems and cybernetic sciences and to nominate them as applicants to be appointed as Academicians. Criteria for acceptance as an Academician are: -authorship of a renowned theory, -articles and books publications, -citations of writings, -organisation of national and international conferences, -national and international journals editorships, -teaching abroad or consulting activities, -practical applications and patents [4].

Biographies of all IASCYS Academicians are published on the [IASCYS web-site](#) [4].

### 3.2 *Academicians roles and free Creative Commons activities*

The Academicians, recruited on competitive examination, are benevolently working, when *respecting the ethics of social responsibility* (in alphabetic order): accountability, conscious reflection, fair governance, fair operating practices, interdependence and holism, compliance with the rules, transparency (ISO 26000 norm). Academicians are not required to assume any specific obligations in their research or education.

Even without any money, the members of the Academy conduct workshops, where IASCYS Academicians and other renowned researchers, engineers or educators are invited to speak at conferences about advances in the field (**Table 1**). Participants are always invited freely by the meeting organisational committees, without having to pay fees, with no accommodation expenses and often with their travel expenses partly or totally reimbursed. Soon after its creation, in 2011, in Brussels (Belgium), the IASCYS EC met the boards of two other international organisations in the area of systemics and cybernetics: **UES-EUS** [5] and **WOSC** [6] -WOSC whose Honorary President was Robert Vallée (from France)-. The 2012 mid-term Assembly decided to cooperate by opening IASCYS to all 3 federations (IFSR, UES-EUS and WOSC) but it will take 6 years and 2 General Assemblies to change our internal rules and by-law before the registration in France!

### 3.3 *Academicians activities and IASCYS projects*

The two main first missions of IASCYS were, through coordination of the actions of the Academicians associations, to create an internationally accepted curriculum in systems science and cybernetics and to create an auditing process aimed at validation and promotion of education in systemics and cybernetics [7]. But, very soon, IASCYS would like to do more than simply honour outstanding contributors. The IASCYS Executive Committee (EC) wanted: 1- to engage IASCYS in projects and activities that will help to build the field, i.e. to expand the number of International Associations to work with [Table 1, **Figure 1**]; 2- to improve coordination among the Academicians by providing profile of their works, publicising conferences and publishing papers and books (but in that way IASCYS became a competitor of IFSR!); 3- to offer courses and degree programs at Academicians home Universities and short courses in systems and cybernetics in various Countries (but in that way retired IASCYS Academicians became competitors of current active ones); 4- to create online issues, lists and links describing the contributions of systems science and cybernetics to other academic fields [**Figure 2**].

The first EC was elected in 2010. Matjaz Mulej asked to no longer have the duty to be at the head of the EC for private reasons in 2012, after our first mid-term report in Vienna. Robert Trapp (from Austria) accepted the duty, while Matjaz Mulej took the role of leading the project on linking the newly internationally launched concept of (Corporate) Social Responsibility (ISO, 2010) and the systems/cybernetic behaviour with IRDO-IASCYS workshops [Table 1]. The project produced a four volumes book published by Bentham Scientific '*Social Responsibility beyond Neoliberalism and Charity*' [8] and three special Journal volumes, *Systems Research and Behavioural Science*, *Systems Practice and Action Research*, and *Kybernetes*, respectively. The publications involved 70 authors from 30 Countries in the 2013-2015 period. We had a workshop of the Academy about Social an Environmental Responsibility in 2014 to present the series during the **EMCSR** in Vienna. Unfortunately in meantime we lost Ranulph Glanville and Stuart Umpleby (from USA) was invited to help us as vice-President. After Robert Trapp's decision in 2015 that he has not enough time to be active as President, Stuart Umpleby accepted the duty and was elected as President in 2016.

To further develop "its inventiveness, its creativity", and to make it in practice, "its ability to innovate", IASCYS was registered as an independent Non Governmental Organisation (NGO) in France (1901 law) on 14 July 2016 (uia.org J5273 -Yearbook of International Organisations-).

**Table 1. IASCYS Education and Research Meetings, Workshops and Prizes**

<b>Meetings: why, when?</b>	<b>IASCYS Workshops: what for?</b>	<b>Where?</b>
1 <sup>st</sup> General Assembly IASCYS-IFSR October 2010	Systems and Cybernetic Sciences <b>Teaching in Higher Education</b>	Chengdu, China
IRDO Institute for the Development of Social Responsibility March 2011	<b>Social Responsibility Current Challenges: Health and Societal Sciences Engineering</b>	Maribor, Slovenia
Meeting of the European Union for Systemics EUS-UES October 2011	Towards a Formal Way for Systemic Behaviour: <b>Social Responsibility / Societal and Environmental Responsibility</b>	Brussels, Belgium
IASCYS - IRDO March 2012	<b>Social Responsibility: The Way Out of a Socio-Cultural Crisis</b>	Maribor, Slovenia
EMCSR European Meeting on Cybernetics and Systems Research April 2012	<b>Conception of Complexity and Thinking in Complexity</b>	Vienna, Austria
EMCSR and BCSSS Bertalanffy Centre for the Study of Systems Science April 2012	Ph. D. Colloquium <b>Complexity as a process: Exploring the Trans-disciplinary.</b> 1 <sup>st</sup> Bertalanffy Award for Young Students	Vienna, Austria
IEEE Institute of Electrical and Electronics Engineering November 2012	General System <b>Theory and Methodology</b> -World Conference on <b>Complex Systems-</b>	Agadir, Morocco
IRDO April 2013	<b>Innovation of Culture: Towards More Social responsibility</b>	Maribor, Slovenia
IRDO March 2014	<b>Health-Personal and/or Social-Societal Responsibility</b>	Maribor, Slovenia
EMCSR – BCSSS April 2014	Ph. D. Colloquium <b>Modelling of Complex Social Situations</b> Bertalanffy Award for Young Students	Vienna, Austria
EMCSR - OFAI April 2014	Balancing Individual and Collective Actions <b>Humanity and Systems Interactions</b>	Vienna, Austria
EUS-UES, SESGE October 2014	<b>Artificial Intelligence, Machine Learning and Information Systems</b>	Valencia, Spain
IEEE - MSCS Moroccan Society of Complex Systems November 2014	<b>Innovation for Preservation and Curation. Crises: What innovation for what prevention and curation?</b>	Agadir, Morocco
IASCYS – IFSR October 2015	<b>Systemic Solutions for Systemic Problems</b>	Chengdu, China
HerrenHausen Conference VW Stiftung July 2015	<b>Cyber-systemics, Systemic Enquiry, Challenge and Capacity, discussion panels</b>	Hanover, Germany
IASCYS – EMCSR - BCSSS avant-garde April 2016	Cybernetics and Systems Research <b>Ludwig von Bertalanffy young Scientists Award</b> 1 <sup>st</sup> pop-up conference in Systems Science	Vienna, Austria
IASCYS - Vignan's University July 2016	<b>Systems Thinking for Everyone</b> Short Course	Andhra Pradesh, India
IASCYS – ISKSC - SESC October 2017	Systems Science and Cybernetics <b>Research Development and Education</b>	Chengdu, China

IASCYS – EUS-EUS October 2018	Systemic Means Holistic, <b>Beyond The Local and Short Term Criteria of Benefit</b>	Brussels, Belgium
IASCYS - EUS-UES October 2018	1 <sup>st</sup> <b>International Prize Charles François</b>	Brussels, Belgium
IASCYS - IEEE - MSCS April 2019	<b>Systems Thinking in Practice</b>	Ouarzazate, Morocco
IASCYS - IRDO – WOSC World Organisation of Systemics and Cybernetics June 2019	<b>Corporate Social Responsibility: Development, applications and Impact measurement</b>	Maribor, Slovenia
AMSS - IASCYS – SESC BCSSS - IFSR - WOSC May 2019	Research, Development and Education in Systems Science and Cybernetics: <b>paradigms, models and applications.</b>	Beijing, China
IASCYS - IRDO online performance June 2020	Organisational Responsibility and Systemic Behaviour <b>For A Sustainable Future</b>	Maribor, Slovenia

#### 4. IASCYS competitive examinations: prizes, certifications and awards.

The IASCYS intellectual endeavour is also to help young people as individuals, their organisations, and humankind to attain a more complete appreciation, through perception, thinking, emotional and spiritual life, decision making, communication, and action, and therefore to attain more social success and well being.

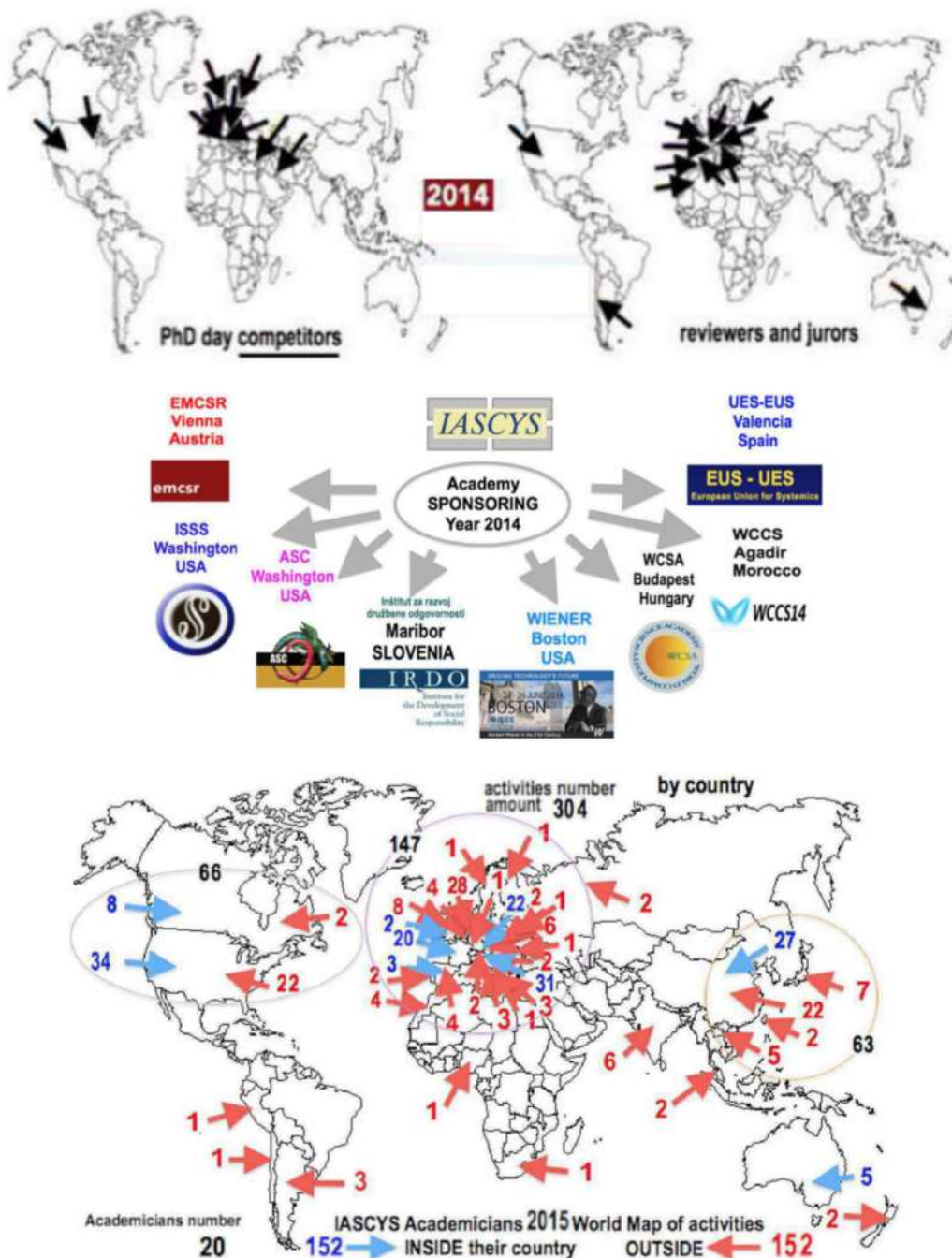
##### 4.1. The Ph. D. day competition for young researchers

The Academy has two major missions: - *academic research* of course, but also - *promotion of education in systems science and cybernetics*, not only in higher education but at all education levels, and to create an auditing process through coordination of the actions of IFSR member associations for a worldwide accepted framework curriculum. To achieve parts of these goals, the Academy organised for 4 years, and each 2 years, conjointly with the Bertalanffy Center for the Study of Systems Science (BCSSS [9]), which is a member Society of the IFSR, during the European Meeting on Cybernetics and Systems Research (EMCSR) [10] in Vienna (Austria), the Ph.D. day competition [11].

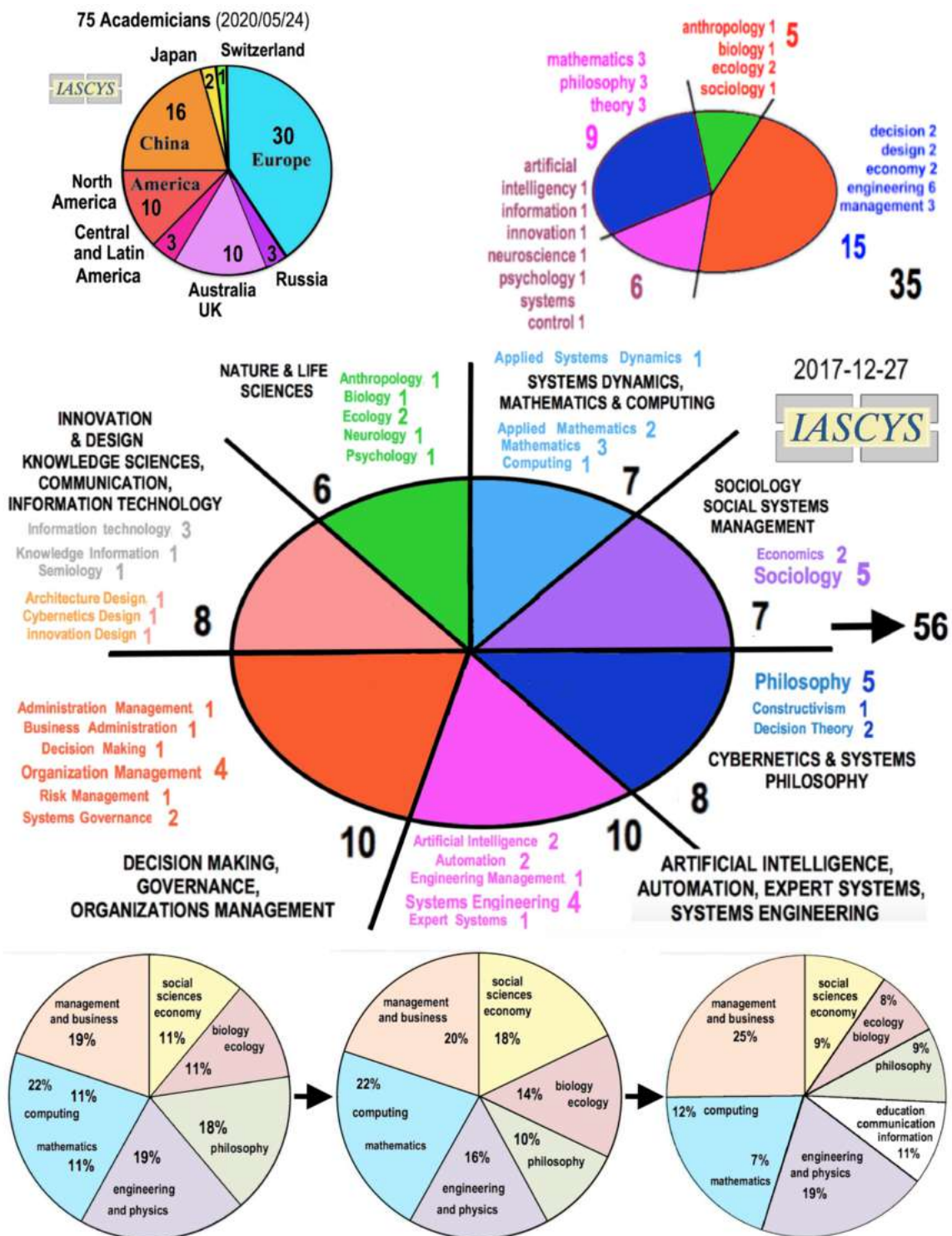
The first Ludwig von Bertalanffy young scientist Award (from BCSSS) was given in 2012, to Jessica Foley (from Trinity College, Dublin, Ireland) for her research project “*The Important Case of Poetry, Telecommunications Engineering and von Bertalanffy’s General System Theory*”. Katri-Liisa Pulkkinen (from School of Engineering, Aalto University, Finland) won the second one in 2014 for her research project “*A bottom-up way of building a system and changing perceptions -urban pioneers as a model for transformation for sustainability.*” Each year, coming from all around the world, a different team of at least 16 benevolent experts in various fields of systems science and cybernetics (from the Academy, from academic or engineering fields, from public and private structures) was evaluating the works of only 6 selected competitors from a larger group of applicants (Figure 1a). Unfortunately with changing BCSSS management the cooperation for Ph. D. day ceased in 2016.

##### 4.2. The Charles François International Prize

The Academy mission consists mainly in strengthening trans-disciplinary interactions between Organisations and Societies working in systemics and cybernetics fields (Table 1). This is the purpose of the international multilingual prize Charles François as well. The Academy has also as its goal to promote and to encourage educational activities [12], either at the level of its individual member or by organising workshops during national or international congresses. Charles François spread his knowledge throughout Argentina, various Latin America Countries, and beyond in Europe and the USA.



**Figure 1.** IASCYS activities. (1a)-top-. e.g. The second PhD day competition during the EMCSR in Vienna (Austria). Competitors (paper and talk), reviewers (papers selection) and jurors (talks session) were mainly from Europe and were not native English speakers. (1b)-middle-. e.g. International Conferences sponsored in 2014. Sponsoring does not mean giving money but reviewing and supporting and chairing sessions and workshops. (1c)-down-. IASCYS Academics activities in 2015: only 20 Academics of 35 were reported activities either inside their Country (blue arrow) or outside it (red arrow). -Adapted from IASCYS Secretary General bi-annual reports [4]-.



**Figure 2.** IASCYS areas of expertise. (2a)-top left-. The current 75 IASCYS Academicians team, by Countries. *The Academicians have a multiple scientific and teaching expertise:* (2b)-top right). e.g. detailed areas of expertise in 2014 (first term report), 35 appointed Academicians. (2c)-middle-. e.g. details areas of expertise in 2017 (56 Academicians). (2d)-down-. Evolution of IASCYS global competences during the first 10 years of activities (until October 2020, 75 Academicians) -Adapted from IASCYS Secretary General bi-annual reports [4]-.

Charles François toured many Countries, giving tutorials and many lectures, participating in forums and seminars and integrating multiple institutions. He is the author of several books, numerous contributions and articles in several languages (French, English, Spanish), and the editor of reference works as a Dictionary in Spanish and *the International Encyclopedia* [13], in English, both *about Systemics and Cybernetics*.

The first Charles François International Prize of the Academy (gold medal) was awarded to a young research engineer, Julio Laborde, who was working about social modelling for the Insight-Signal Company. Julio Laborde grew in Santiago de Chile, Latin America, where he got a degree on Mathematics at the Universidad Católica. In 2012 he moved to France, where he got a masters degree on Complex Systems, about natural cognition and artificial intelligence, at the prestigious École Pratique des Hautes Études (EPHE), in Paris, France, where he decided to pass a PhD on Complex Systems. His research was mostly focused on graph theory and pre-topology as tools for the study of Complex Systems. His talk was about "*Extraction of Information from Agent Base Models. A new pre-topological metric for controlling the propagation of crises.*" It took place during the '*Methods and tools for risk management of complex socio-technical systems*' session. His work was the most promising work of the 2018 congress of the European Union for Systemics.

During the World International Conference on Complex Systems, in Ouarzazate, Morocco, the 2019 Charles François International Prize of the International Academy for Systems and Cybernetic Sciences was awarded to Francisco Gomez for his talk about "*The Role of Communities in the Fear of Crime.*" Francisco Gomez, PhD in Computer Sciences, is working in computational modelling of biological systems, and specifically, brain imaging and computational ecology. He is Assistant Professor in the Departamento de Matemáticas, at Universidad Nacional de Colombia, Facultad de Ciencias, Bogotá, Colombia, Latin America. He was involved in different projects: e-learning systems, computer games, optimisation tools for intelligent transportation systems and computer vision tools for people monitoring, optical character recognition and fingerprint recognition. He worked as postdoctoral researcher in the Cyclotron Research centre of Liege, Belgium, European Union. His current research interests include: Brain resting activity, Computational Ecology, Predictive Policing.

The Prize was opened to strengthen multi-disciplinary research and the multi-language communication (Figure 2d) of recent results, towards a worldwide education in Cybernetics and Systems Thinking [7], which are aims of the Academy [12]. The final delivery of the Prize and certificates giving evidence of the excellence of the works is distributed only after publication of the papers in the journal of the choice of the organisers [14]. But, with according to the professional specificity of Charles François's international way of life, considering the linguistic diversity of the Academicians, the written final text must be at least a bilingual one, a trilingual is better. For example the complete text can be in English with a very extended summary in French, or the opposite. The text, either in French or in English, can be accompanied by an extended summary either in English or in French, another one in Spanish, or in another language (German, Arabic, Chinese, Portuguese, Russian). "*Want to influence the world? Map reveals the best languages to speak.*" [15]. On the IASCYS website [4] you will find the detailed rules of the Prize, in Arabic, Chinese, English, Spanish, French and Russian.

#### 4.3. About *requisite variety*: always multilingual workshops.

Language is a part of our personal and collective identity. A literary, scientific or /and technical culture is not separable of the language in which it is expressed. *The intellectual health of the planet depends on the multilingualism*. English as sole language has for logical and unavoidable consequence the disappearance of all the cultures of the people who do not think in English. That can have as a **result only a cultural impoverishment**. The learning of our mother language does not prevent us to learn foreign languages which can be a cultural and intellectual enrichment [16]. Because of the demographic, geopolitical and economic changes, Spanish and Chinese became important enough to influence the national priorities of big Countries. Brazil (where people speak Portuguese) adopted in 2005 a law indicating that every establishment of secondary education has to teach their pupils Spanish. In 2011, Sweden (where people speak English and Swedish) decided that in all the primary and secondary establishments, pupils have to learn Chinese language. English is not any more enough, it will never become the worldwide language with the exception of all the others [15].



That's the reason why the United Nations Organisation (UNO) wrote "*the linguistic diversity is a fundamental human heritage.*" "*English as universal language is a sentence of the last century. The future it is the multilingualism, in Europe and in the world.*" (Donald Lillistone). Like English, French and Spanish [7, 12, 14] are spoken on 5 continents. The 75 states which compose the French-speaking world represent more than a third of the states of the United Nations Organisation.

"*The sum of the human wisdom is not contained into a single language (culture), and there is not only a single language which is allowing the expression of all the forms and all the degrees of the human understanding.*" (Ezra Pound). The UNESCO's Agreement (2003) *for the saving of the immaterial cultural heritage* has proposed the protection by private and public actions which have "*for foundation the interests of the cultural diversity and the cultural identities of communities*" (Li Wang) [15]. So all the talks and discussion parts of the workshops (Table 1) that were organised by IASCYS during the meetings of either UES-EUS (Brussels, Belgium; Valencia, Spain) or EMCSR (Vienna, Austria) or WCCS (Agadir or Ouarzazate, Morocco) were all always managed using both English, Spanish and French as languages and sometimes Arabic or Portuguese or Russian, even Slovenian (IRDO, Maribor, Slovenia) or Chinese (Chengdu, China) [4, 17].

That is the reason why the talks presented during *the Charles François International Prize* competitive examination are always associated with a presentation in at least 2 languages, English and another one. And the papers of the awarded talks are always published with an extended abstracts in another language than the main text, depending on the Journal issue they are published [14].

#### 4.4. About *requisite variety*: IASCYS certificated talents

That is also a main reason to award, as Certificated Talents, young researchers who could not gain enough point scoring to be appointed as Academicians, but who were working in Countries with different languages and cultures (e.g. Germany & PR China, or Vietnam & Australia) and publishing there works in different languages. Honouring people late in their careers as Academician is one of the aims of the Academy. However, honours could also be most helpful to people who are early in their careers. So this new category of '*IASCYS Certificated Talents*' is for nominees who won't yet be appointed as Academicians but who are scientifically promising candidates. The value of these persons is recognised by the Academy with a certificate, and their names is listed on the IASCYS website. They are members of the IASCYS non-profit organisation but they aren't Academicians. We hope that this honour will help their careers. According to the manner their energy and activities will contribute to the work of IASCYS as a whole, sooner or later they could be appointed as Academicians. Their career progress is checked for progress at five-year intervals. If a Certificated Talent does not make satisfactory progress towards becoming a full Academician within five years, the title can either fall away, or certification can be prolonged again for another 5 years, depending on "progress toward meeting IASCYS Academician criteria".

#### 4.5. About *requisite variety*: IASCYS award in Education & Research in Systems Thinking & Cybernetics

Honouring people late in their careers as Academician helps to define and strengthen our field. However, honours could also be most helpful to people who who won't be appointed as Academicians but who are nationally or internationally recognised for their expertise in education or research, and particularly if they are working in different Countries with different languages. So IASCYS will contribute to confirm the importance of their work by a special award. The first recipient, awarded in 2019, was Nagib Callaos from Venezuela [4].

Currently after Charles Francois and Enrique Herrscher deaths there are no more Latin American IASCYS Academicians but Latin American researchers were honoured in Argentina, Chile, Colombia and Venezuela.

## 5. Discussion-Conclusions

Even if Academicians were retired they could have a lot of activities, either to promote young researchers (Figure 1a), or to support research meetings worldwide (Figure 1b) both inside and outside their Country (Figure 1c). Unfortunately IASCYS growing was not associated with a proportional significant activities increasing because active Academicians were always the same. And their percentage decreased along time (Figure 2d). Academicians appointments allowed both to increase the number of Countries were IASCYS could have an activity and the diversity of IASCYS areas of expertise (Figure 2). At the IFSR origin of IASCYS most Academicians were either practising as engineers (operation research) and managers or elaborating theories and their applications (Figure 2b). The maximum of variety was attained at the end of 2017 (Figure 2c) with the best balance between areas. Even if this has no sense in term of holism and trans-disciplinary innovation, but to have a comparison, we could look at the evolution of the percentages of the “traditional field” origin or the main field of application of Academicians expertise (Figure 2d).

The “management and business” field was always increasing but it was also the less active field of IASCYS. The “engineering and physics” fields remained stable and was always very active, particularly in China. The “computing and applied mathematics” fields remained stable too and was very active too, particularly in the European Union Countries. For 10 years, nearly 2/3 of Academicians were coming from these 3 groups of traditional research fields. The “natural and human sciences” fields (i.e. biology, ecology, physiology, sociology), which were the most active [18] but are widely worldwide sparse, were decreasing in percentages. With new skills, an emerging field “education, communication, information” (which were aims of IASCYS [7, 12, 17]) recently developed as a whole. According to the claim of Ludwig von Bertalanffy that *over-specialisation is the source of problems in modern civilisation*, IASCYS has proved **Systems Thinking as a way of building bridges** among specialists, and did it without requiring them to abandon their multiple specialties (Figure 2).

The successive Executive Committees of the Academy were always elected unanimously with more than 2/3 of effective voting, even if, unfortunately, IASCYS growing was associated with a proportional significant voting amount decrease. Nevertheless, during 10 years, regarding the EC composition a balance was maintained according to the ratio of Academicians Countries (Figure 2a) with 2 European members, 1 Chinese member, 1 American and 1 “other Countries” members.

Currently, *with no membership fees, IASCYS Academicians, with a multiple scientific and teaching expertise, were appointed after a competitive examination*, and IASCYS, *without any money, organised international multilingualism events in research and teaching*, but with the emergence of COVID19 [19], would IASCYS have to find new way of working? A first step is the registration of IASCYS as NGO in Austria, where, in Vienna, we would find a lot of high standing cybersystemics organisations, with which Academicians are working since the beginning (Table 1) or from which Academicians are members, (by alphabetic order): BCSSS, IIASA (the International Institute for Applied Systems Analysis [20]), IFSR, OFAI, or with which IASCYS could cooperate e.g. CEU (the Central European University).

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## References

1. Chroust, G. IASCYS and IASCYS Academicians. In *Official Newsletter of the International Federation for Systems Research*, Vienna, Austria, December 2010; Volume 27, no. 2, pp. 4-5, ISSN 1818-0809 (print), ISSN 1818-0817 (online).
2. Whitcomb, C.; Davidz, H.; Groesser, S. Editors, *Systems Thinking*. MDPI , Basel, Beijing, Barcelona, Belgrade, Cluj, Manchester, Tianjin, Tokyo, Wuhan, 2020, 224 p., ISBN 978-3-03936-796-2 (Hbk) ISBN 978-3-03936-797-9 (PDF).
3. IFSR <http://ifsr.org>
4. IASCYS <http://iascys.org>
5. UES-EUS <http://www.ues-eus.eu>
6. WOSC <http://wosc.co>

7. Bricage, P. Teaching & Learning Systems Thinking: What, Why, When, Where, Who, What For, How? *Revista Internacional de Sistemas* **2017**, 21(1), 9-16.  
<https://ojs.uv.es/index.php/ris/article/view/11598/10943>
8. Dyck, R. G.; Mulej, M. Editors, *Social Responsibility Beyond Neoliberalism and Charity*. Vol. 1: Social Responsibility -A Non-technological Innovation Process., Vol. 2: Social Responsibility -Sustainability, Education and Management. Vol. 3: Social Responsibility -Methods, Dilemmas and Hopes. Bentham Science, New York, USA, **2014**, online eBooks.
9. BCSSS <http://www.bcsss.org>
10. EMCSR <http://emcsr.net>
11. <http://emcsr.net/calls-2014/calls-for-papers-2014/phd-colloquium-award>
12. Bricage, P. The International Academy for Systems and Cybernetic Sciences IASCYS. *Revista Internacional de Sistemas* **2014**, 19, 1-4. <https://www.uv.es/sesgejd/RIS/19/1.Bricage.IASCYS.pdf>
13. François, Ch. Editor, *The International Encyclopedia of Systems and Cybernetics*. Creative Common Internat. Team (ALAS, IASCYS, IFSR), K.G. Saur, München, Germany, 2nd edition, 2 vol., 741 p., **2004**.
14. Knyazeva, H.; Parra-Luna, F.; Bricage, P. First Award of The Charles François International Prize established by IASCYS. *Revista Internacional de Sistemas* **2019**, 23, 1-5.
15. Ronen, S.; et al. "Links that speak: The global language network and its association with global fame". *PNAS* **2014**, 111(52): E5616-E5622. <http://www.pnas.org/content/111/52/E5616>
16. Cassin, B. Discours de réception à l'Académie Française (extrait). *Défense de la Langue Française* **2020**, 277, 2-4.
17. Gu, J.; Xu, J. Editors, *Systems and Cybernetic Sciences Teaching in Higher Education*, IFSR-IASCYS Proceedings, Chengdu, P.R. China, October **2010**.
18. Bricage, P. Living networks of networks: the societal and environmental responsibility of humanity in the fight between humans and the wild. *In Social Responsibility Beyond Neoliberalism and Charity.*, Dyck, R. G.; Mulej, M. Editors, Bentham Science, New York, USA, **2014**, 3: 257-277.
19. Bricage, P. SARS-CoV-2 and COVID-19: Questions about a world ethical governance for a societal and environmental responsibility in health science research. IRDO world Congress, Maribor, 4 June **2020**, IRDO Conference Proceeding, 15: 7p., <http://www.irdo.si/irdo2020/referati/b-1-bricage.pdf>
20. IIASA [https://en.wikipedia.org/wiki/International\\_Institute\\_for\\_Applied\\_Systems\\_Analysis](https://en.wikipedia.org/wiki/International_Institute_for_Applied_Systems_Analysis)

