

The logo for GSIS, featuring the letters 'G', 'S', and 'S' in a bold, white, sans-serif font. The letter 'I' is replaced by a vertical orange bar with a small orange dot at the bottom.

The Institute for a Global
Sustainable Information Society

Verein zur Integration und Implementation von System-, Informations- und
Gesellschaftswissenschaften

Report 2022 and Outlook

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Authored by W. Hofkirchner
Vienna, February 2023

A Research

Research activities focus on exploring the techno-eco-social transformation of societies into a Global Sustainable Information Society. This focus is justified by the escalation of the worldwide poly-crisis (in the sense of Edgar Morin) caused by the global challenges. A scientific clarification of the ways and goals to ensure the survival of humanity and a good life for all is needed. Our projects, presentations, events, networking, teaching, and our publications are increasingly zeroing in on the request for futurability.

In particular, we studied the commons, convivialist imperatives, habits and rituals, critical communication, the relationship of ownership, media and the public sphere, climate justice and media, degrowth, Surveillance Capitalism, impact and design of digitalisation, of AI and of drones, disasters on the human-machine interface, and value-based design and utilisation of techno-social systems to foster techno-eco-social transformation. A constant companion has been transdisciplinarity in research in the face of existential threats.

Because the pandemic was not over, we faced cancellations and postponing of face-to-face events. Nevertheless, we entertained 8 events in presence mode, hybrid or online, and members and researchers made, at least, 30 appearances. We produced more than 16 monographs, edited volumes, annals or journal special issues, not counting journal articles. We deepened ties with national and international befriended organisations or networks or single researchers.

1 Projects

Preparation and execution of, or autonomous collaboration in, research projects by the institute with or without funding.

Projects ongoing (for details see Current Projects at our website <https://gsis.at/research/projects-1/>):

- **SISI (Single Integrated Science of Information)**
This project was continued with further publications in the 4th year. However, it will be discontinued – our friend and extreme scientist Mark Burgin passed away in February 2023. Publications in progress started by Burgin need to be resumed and finalised. So far only publications of Wolfgang Hofkirchner can be counted for 2022: the monograph *The Logic of the Third* (see below), the special issue of *New Explorations* co-edited with Hans-Jörg Kreowski on *Digital Humanism and the Future of Humanity*, the paper *The Future of Anthroposociogenesis: Panhumanism, Anthroporelational Humanism and Digital Humanism in proceedings*, and the paper *Artificial Intelligence: “Machines of loving grace” or “Tools for conviviality”* in *Signifikant Jahrbuch*.
- **glossaLAB**
This project was continued in 2022. It ended in Ecuador. For detailed updates to come see at the project list (<https://gsis.at/research/projects-1/#glossaLAB>).
- **Evolution of Information Processing Systems**
Annette Grathoff published two contributions in the proceedings of the IS4SI: First, a short summary of the special session of the IS4SI Summit 2021 (held online) from 12th–19th of September 2021, *Information in Natural Sciences*, and the extended abstract of her presentation at the summit, *Nonlinearities and Interference—Their Importance for the Study of Information*. The literature research for the presentation and the subsequently published extended abstract showed that a lot of practical knowledge about nonlinear frequency mixing and the generation of "emergent" new frequencies from communication technology is not well considered in basic research on communication in Biology and the humanities. The generation of novelties from a nonlinear combination - a combination with a coupling - of previously independent units is a very central topic for Biology and evolutionary development studies. As a consequence, Grathoff focused her research for the years 2021-22 and the year to come on references from nonlinear optics, nonlinear audio processing and music.
- **Systems Thinking Origins**
Besides the new book of Hofkirchner that can be mentioned here (see below), sociologist Franz Ofner's article *On the sociogenesis of norms following George Herbert Mead and Jürgen Habermas* published in August 2022 deals with anthroposociogenesis. It describes the joint formation of norms, speech oriented to reaching understanding, and self-conscious individuals in the context of the

development of cooperative activities. Ofner is a retired professor at the University of Klagenfurt and years-long affiliate of the forerunner of our Institute.

Projects terminating in 2022 (for details see Past Projects at our website <https://gsis.at/research/projects-2/>):

- **Information Ethics, Responsibility and Sustainability**

2022 was the third and last year of that project according to the contract between GSIS and the *Faculty of Informatics and Statistics, Prague University of Economics and Business*, 0013/VŠ/2020.

- Tomáš Sigmund and Hofkirchner contributed to the publication of presentations at the *Digital Humanism: how to shape digitalisation in the age of global challenges* workshop in 2021 in *proceedings*, including the paper of Sigmund, and to the production of a special issue of the Canadian journal *New Explorations* resuming the field of the workshop under the title *Digital Humanism and the Future of Humanity*, including a new paper of Sigmund.
- Both Sigmund and Hofkirchner joined two conferences, one in Wittenberg organised by the Institut für Design Science München on the *Sense of Life in the Universe* and another one in Leipzig with the topic *Naturallianz/Allianztechnik* after Ernst Bloch. Sigmund gave a lecture on the *Critique of the Fight against Disinformation* and a lecture on *Erkenntnis als Abbild der Welt oder Kontakt mit ihr?* Hofkirchner talked about *Imperatives of Conviviality for the “Anthropocene”* and prepared slides on the *Concept of techno-social systems* that allows for value-based design. Hofkirchner’s contributions were extrapolations of his new book that revolves around ethics for our time (see below).
- Another topic was ethical problems regarding *Artificial Intelligence*. Hofkirchner co-authored a presentation with Hans-Jörg Kreowski at the *Bits & Bäume* conference in Berlin. Liang Wang, Associate Professor at the Xi’an Jiaotong University in China, added papers on that topic.

- **Emergent Transformation**

The manuscript of the book project of Hofkirchner was submitted to the publisher in February 2022. The monograph resumes his book *Emergent Information* and rounds up the *Paradigm Shift to a Shared Future for Humanity* with providing a transdisciplinary theories framework for a transformation science – the so-called *Logic of the Third*. In addition to the tenets of a Praxio-Onto-Epistemology (POE), an Evolutionary Systems Theory (EST) and a Unified Theory of Information (UTI) of the first book, the application of these foundations to the social, social information and social information technology yields the tenets of a Critical Social Systems Theory (CSST), a Critical Information Society Theory (CIST) and a Critical Techno-social systems Design Theory (CTDT). The second book was made available in November 2022 (imprint 2023).

- **Climate-friendly Living**

In support of the compilation of the Austrian Panel on Climate Change (APCC) Special Report 22 with the title *Structures for a climate-friendly living* GSIS-affiliates Livia

Regen and Hendrik Theine coordinated a chapter on *Mediendiskurse und -strukturen*, while Wolfgang Hofkirchner worked as review editor. In November 2022, the report was presented at a press conference in the presence of ministers Gewessler and Kocher. The printed version of the report will be available in 2023.

- **Lernen lernen**

Sophie Huber-Lachner's documentary *Lernen lernen* could, eventually, be finalised in February 2022. The title has been changed to *Das Lernen (wieder) lernen*. Its premiere was in Kino Ebensee and Markhof in Wien in March 2022. You can stream it on Flimmit.at: <https://flimmit.at/das-lernen-wieder-lernen/assets/7258>.

Projects pending:

- **Historical materialism, critical media and communication theory**

This book project of Sebastian Seignani and Sevda Arslan is still postponed.

- **Edgar Morin: Das Leben des Lebens**

The translation of Morin's second volume of "Method" is still work in progress.

2 Presentations (selection)

Lectures or other appearances by researchers or members of the Institute at scientific events (for details see Past lectures at our website <https://gsis.at/lectures/>):

- **Renate C.-Z.-Quehenberger**, *COP27*, Sharm El-Sheikh International Convention Center, 17 November 2022
- **Renate C.-Z.-Quehenberger**, *Advanced Imaging International Festival: AI – Variation of an Art*, Seoul, 3-6 November 2022
- **Vincent M. Brannigan, Kirsten Bock, Klaus Fuchs-Kittowski**, *Podiumsgespräch: Der wissenschaftliche Paradigmenwechsel zur Bewältigung der globalen Herausforderungen*, Wiener-Schmidt Preisverleihung, Berlin-Friedrichshagen, 13 October 2022
- **Rainer E. Zimmermann, Tomáš Sigmund, Wolfgang Hofkirchner, Christian Stary**, *Naturallianz/Allianztechnik: Bloch in Leipzig*, öffentliche Konferenz der Ernst-Bloch-Assoziation, Leipzig, 30 September to 2 October 2022
- **Hans-Jörg Kreowski, Wolfgang Hofkirchner**, *Bits & Bäume – The Conference for Digitization and Sustainability*, Berlin, 30 September to 2 October 2022
- **Renate C.-Z.-Quehenberger**, *Annual Meeting of German Mathematicians*, Berlin, 12-16 September
- **Rainer E. Zimmermann, Wolfgang Hofkirchner, Tomáš Sigmund**, Herbsttagung, *Institut für Design Science München*, Wittenberg, 9-11 September 2022
- **Gerhard Chroust**, *IDIMT 2022*, 7-10 September 2022
- **Jaime F. Cárdenas-García**, *European Sociological Association – Research Network 18: Sociology of Communications and Media Research*, Turin, 1-3 September 2022
- **Irena Mostowicz, Renate C-Z.-Quehenberger, Raffaella Giovagnoli**, *Habitual Behavior 2022*, online, 26 August 2022
- **Tomáš Sigmund, Modestos Stavrakis, Teresa Guarda, José María Díaz**, *glossaLAB* workshop, León and Madrid, 23-31 May 2022
- **Hans-Jörg Kreowski, Christian Heck**, *Kongress Ohne NATO leben – Ideen zum Frieden*, Berlin, 21 May 2022
- **Hendrik Theine, Thomas Allmer, Sebastian Sevigani, Christian Fuchs**, *Eigentum, Medien, Öffentlichkeit*, Wien, 12-14 May 2022

- **Yagmur Denizhan**, *Collège International de Philosophie: The Mental State of Noise & the New Frontiers of Cognition*, online, 10 February 2022 (organised by, and in discussion with, **Cécile Malaspina**)

3 Events

Scientific meetings organised by the institute or in co-operation with researchers or members thereof (for details see Past meetings at our website <https://gsis.at/meetings/>):

- **Wiener–Schmidt Preisverleihung**, *Emergent Systems, Information and Society Research Group* in cooperation with *German Association for Cybernetics, Information and System Theory*, Berlin-Friedrichshagen, 13 October 2022 (laureates Klaus Fuchs-Kittowski and Horst Völz)
- **ARTIIS 2022**, *Advanced Research in Technologies, Information, Innovation and Sustainability*, second international conference, Santiago de Compostela, 12-15 September 2022
- **Strukturwandel und Diskurs**, *Institut für Design Science München*, Wittenberg, 9-11 September 2022
- **IDIMT 2022**, *Interdisciplinary Information Management Talks*, Prague, 7-10 September 2022 (co-organised by Gerhard Chroust, Petr Doucek)
- **Habitual Behavior 2022: Habits, Routines and Rituals**, online, 26 August 2022
- **Communication, Capitalism and Critique: Critical Media Sociology in the 21st Century**, ESA RN18 Mid-Term Conference, Turin, 1-3 September 2022 (organised by Thomas Allmer)
- **Bringing about Transdisciplinarity**, international *glossaLAB* workshop, León and Madrid, 23-31 May 2022
- **Eigentum, Medien, Öffentlichkeit**, *Kritische Kommunikationswissenschaft*, Wien, 12-14 May 2022

4 Networking

Establishing new relations of the institute with other organisations, including sharing positions (for details see Friends at our website <https://gsis.at/friends/>).

So far, we have been enjoying three contracts on scientific collaboration that, due to Corona crisis, could not be executed in the full spectrum of agreed activities:

- with the **School of Humanities & Social Sciences, Xi'an Jiaotong University**, Xi'an, China;
- with the **Faculty of Informatics and Statistics, University of Economics and Business Prague**, Czech Republic;
- with the **Universidad a Distancia de Madrid**, Spain.

Renate C.-Z.-Quehenberger worked as expert at the **European Commission**, assisting in the evaluation process of New European Bauhaus Prize 2022.

Wolfgang Hofkirchner was invited to join as member the **Herbert C. Kelman Institute for interactive conflict transformation**, Vienna, Austria.

Hans-Jörg Kreowski and Wolfgang Hofkirchner joined the Editorial Board Members of **New Explorations – Studies in Culture & Communication** at the Library of the University of Toronto, Canada.

The **Foundations of Information Science (FIS)** network to which some of us have been connected since the nineties of the last century was included as befriended.

5 Teaching

Courses or guest lectures for students at institutes of higher education and schools researchers or members of the institute are not affiliated with as well as tutoring external PhD students (for details see Past teaching at our website <https://gsis.at/teaching/>):

- **Renate C.-Z.-Quehenberger** held as OEAD Young Science Ambassador geometry workshops in schools (“The Riddle of Plato’s 5th Element”)

Due to the Corona pandemic the planned course at *Xi’an Jiaotong University*, China, still had to be postponed. The same holds for the exchange of postgraduate and PhD students according to the agreement between the School of Humanities & Social Sciences at the *Xi’an Jiaotong University* and GSIS.

6 Publications (selection)

Scientific papers, edited volumes, special journal issues, and monographs documenting research findings that serve the purpose of the institute, (co-)authored or (co-)edited by researchers and members thereof (for details see Publications 2020- at our website <https://gsis.at/publications/publications-copy-2/> or <https://gsis.at/category/publication/>):

- **Armutskonferenz, Attac, Beigewum** (eds.): *Klimasoziale Politik. Eine gerechte und emissionsfreie Gesellschaft gestalten*. 2. Auflage. bahoe books, Wien 2022
- **Balsa, Carlos, Guarda, Teresa, Guivarch, Ronan et al.** (eds.): Special Issue Applications of Computational Mathematics to Simulation and Data Analysis. *Computation*, 2022
- **Barlow, Nathan, Cadiou, Noémie, Regen, Livia** (eds.): *Degrowth & Strategy. How to bring about social-ecological transformation*. MayFlyBooks/Ephemera, Exeter 2022
- **C.-Z.-Quehenberger, Renate**: Quantum Computing and Cinema. In: Miranda Eduardo (ed.), *Quantum Computing in the Arts and Humanities, An Introduction to Core Concepts, Theory and Applications*, Springer, New York 2022, 227-275
- **C.-Z.-Quehenberger, Renate**: Painting as a Drug for expanding Consciousness, A Trip from Transcendence to Immanence. In: Kunitsyna, Alina (ed.), *Helium Ecstasy*, Kunitsyna, Wien, Damschach 2022, 119-128
- **Fuchs, Christian**: *Digital Capitalism*. Media, Communication and Society, Volume Three. Routledge, New York 2022
- **Fuchs, Christian**: *Digital Fascism*. Media, Communication and Society, Volume Four. Routledge, New York 2022
- **Fuchs, Christian**: *Digital Humanism. A Philosophy for 21st Century Digital Society*. Emerald, Bingley 2022
- **Fuchs, Christian**: *Foundations of Critical Theory*. Media, Communication and Society, Volume Two. Routledge, New York 2022
- **Fuchs, Christian**: *Marxist Humanism and Communication Theory*. Media, Communication and Society, Volume One. Routledge, New York 2022
- **Grathoff, Annette**: Information in Natural Sciences. *proceedings*, 2022, 81, 35

- **Grathoff, Annette:** Nonlinearities and Interference—Their Importance for the Study of Information. *proceedings*, 2022, 81, 61
- **Guarda, Teresa, Anwar, Sajid, Leon, Marcelo, Mota Pinto, Felipe Jorge** (eds.): *Information and Knowledge in Internet of Things*. Springer, Cham 2022
- **Guarda, Teresa, Portela, Filipe, Augusto, Maria Fernanda** (eds.): *Advanced Research in Technologies, Information, Innovation and Sustainability*. Part 2. Springer, Cham 2022
- **Guarda, Teresa, Portela, Filipe, Augusto, Maria Fernanda** (eds.): *Advanced Research in Technologies, Information, Innovation and Sustainability*. Part 1. Springer, Cham 2022
- **Hofkirchner, Wolfgang:** Die Verantwortung, die gesamte Menschheit vor der Vernichtung zu schützen. *Volksstimme* 7-8/2022, 10-12
- **Hofkirchner, Wolfgang, Kreowski, Hans-Jörg** (guest eds.): Digital Humanism and the Future of Humanity. *New Explorations*, Special Issue, Vol. 2, No. 3, 2022
- **Kreowski, Hans-Jörg:** Eine lebenswerte Welt – Kann Künstliche Intelligenz helfen, das Ziel zu erreichen? *FifF-Kommunikation* 2/2022, 53-56
- **Papadimitropoulos, Vangelis:** *Blockchain and the Commons*. Routledge, London 2022
- **Schroeder, Marcin J., Burgin, Mark** (eds.): The 2021 Summit of the International Society for the Study of Information. *proceedings*, 2022
- **Tchernykh, Andrei, Ramírez, Reyes; Guarda, Teresa. et al.:** Guest Editorial Special Issue on Recent Trends in Advanced Computing, Engineering and Technology: Transformation and Innovation. *Program Comput Soft* 48/2022, 485-488
- **Zimmermann, Rainer E., Järvenpää, Silke, Dobler, Ralph-Miklas** (eds.): *Signifikant. Jahrbuch für Strukturwandel und Diskurs* 4/5 2021/22. Wissenschaftlicher Verlag Berlin, Berlin 2022

B Development of organisation

The **General Meeting** was held electronically on 27 September 2022. After 3 years of monitoring our financial management and our compliance with the articles – which were already tailored to our status as a non-profit organisation – the General Meeting still had to approve minor adjustments to the articles such that our research institution was finally recognised by the Austrian tax authority as **receiver of tax-deductible donations**. This was done with an official decision on 13 October 2022 (for details see Donations at our website <https://gsis.at/donations/>).

The **directorate** made up of Hofkirchner, Sevignani and Allmer was confirmed for the next period.

The membership increased by 1 to a total of **37 Ordinary Members**. Also, the number of volunteers who contribute to our research success without being Ordinary Members increased by 1 to a total of **6 GSIS Researchers** out of 21.

Our **Honorary Member**, Klaus Fuchs-Kittowski, received the Wiener-Schmidt-Prize of the *German Association for Cybernetics, Information and System Theory*. He celebrated his 88th birthday on 31 December 2022.

Um unsere finanzielle Situation zu verbessern, sind wir außerdem der Initiative Vergissmeinnicht beigetreten, die auf Testamentsspenden spezialisiert ist (für Details siehe Donations auf unserer Webseite <https://gsis.at/donations/>).

In 2022, we received € 7,037.45 in donations, half of which are already tax-deductible. (2022 konnten wir einen Eingang von Spenden in der Höhe von € 7.037,45 verbuchen. Rund die Hälfte der Spenden können steuerlich geltend gemacht werden – die andere Hälfte war vor der Zuerkennung des neuen Status des Instituts empfangen worden und stammte nicht von Privatpersonen, sondern von juristischen Personen, zum Teil aus dem Ausland.)

C Outlook 2023

1 Projects

All projects not yet finalised will be continued.

A new project proposal in the aftermath of glossaLAB is a fix starter: **INSIGHT**.

Due to lack of funds or the changed international political environment as well as other reasons, certain planned or envisaged projects could not be started (such as an English version of the documentary “Heimatland Erde”) or not yet be pursued further (such as the concept of a new documentary “Hope” and a cooperation with Russian researchers). Notwithstanding this, all of them are still on the agenda.

2 Events

Recurring events will be held and/or joined:

IS4SI Summit 2023: Paradigm Change in the Information Discipline, 14-18 August, Beijing

IDIMT 2023: New Challenges for ICT and Mangement, 6-8 September, Hradec Králové

Strukturwandel und Diskurs 2023, 8-10 September, Wittenberg

ARTIIS 2023, 18-20 October, Madrid

A new GSIS event is planned for autumn:

Utopia(s) Reloaded: Science und Activism and the Techno-eco-social Transformation, 26-28 October, Wien

Meetings will be scheduled in the framework of the **glossaLAB** project continuation in the first half of the year in León and Syros.

Because of an insufficiency of our technological infrastructure in connection with several illnesses due to the then still pandemic situation in 2022, some of the events scheduled were postponed and will be made up for (such as lectures online or by visiting scholars – Stavrakis, Chroust, Maciag, Banfield-Mumb).

For details of scheduled events see Meetings and Lectures at our websites

<https://gsis.at/meetings/> and <https://gsis.at/lectures/>.

3 Networking

Our relationships with the **Convivialist International (ICA)** will be further strengthened.

The same holds for the **Arbeitskreis Muslim-Jewish Educational Initiative** at the *Private Pädagogische Hochschule der Diözese Linz*.

4 Teaching

An advanced postgraduate course on **“Political Economies of the Media. Theories and Methods”** is envisaged to be given at the Inter-University Centre in Dubrovnik, Croatia.

A Chinese PhD student will be incoming in early 2023. Furthermore, it is planned that we take advantage of Erasmus+ funds for the mobility to and from the other partners mentioned above (our Institute is registered with an EU OID).

So far, the following course is still postponed: **“Information and Society”** at the *School of Humanities & Social Sciences, Xi’an Jiaotong University*, to be held face-to-face by Wolfgang Hofkirchner.

5 Publications

Among others, the publication of a monograph on **“Academic Labour in Times of Precarisation and Digitalisation”** with Routledge (T. Allmer) will be finalised in 2023.

“Digital Humanism and AI” (W. Hofkirchner and H.-J. Kreowski) will be published in the **Handbook of Critical Studies of Artificial Intelligence** with Emerald. A contribution to **Bits & Bäume Journal** is invited for publication too.

An edited volume on **“Technology, Business, Innovation, and Entrepreneurship in Industry 4.0”** will be released by Springer (T. Guarda, C. Fernandes, M. F. Augusto).

Also with Springer, the publication **“About the relationship between ethics and the economy in Aristotle”** is expected (D. Braunstein).

“Imperative der Konvivialität für das ‘Anthropozän’” will be printed in *Signifikant* 6, **“Zur Konzeption des techno-sozialen Systems”** in *Vorschein* 39 (W. Hofkirchner).

Another German version of the paper on war in Ukraine will appear under the title **“Die Verantwortung, die gesamte Menschheit vor Vernichtung zu schützen”** in PAX REPORT by Deutscher Friedensrat e.V. (W. Hofkirchner).

Publications on the **Global Sustainable Information Society** are under consideration, thus replacing the 2021 intent to guest-edit a special issue of *Sustainability* on the topic **“Sustainability and Information Society”**.