

# SIG Emergent Systems, Information and Society Report 6/2019–9/2021

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Wolfgang Hofkirchner | Hans-Jörg Kreowski | Rainer E. Zimmermann

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# 1 About

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The SIG is also affiliated as:

- Research Group @**The Institute for a Global Sustainable Information Society (GSIS)**, Vienna
- Arbeitskreis @**Leibniz-Sozietät der Wissenschaften zu Berlin e.V. (LS)**, Berlin

It aims at:

**advancing systems approaches towards techno-social systems,  
in particular, computer systems**

(joining systems thinkers  
and computer scientists  
with a view to social impacts)

Founded in 2015 to honour and continue  
the lifetime achievement  
of **Klaus Fuchs-Kittowski**, Berlin



# 1 Projects (1/2)

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- **Origins of systems thinking:** Robert K. Logan, Annette Grathoff, Wolfgang Hofkirchner (start 2017; paper *Taking the perspective of the Third: a contribution to the origins of systems thinking*, 2020; *A paradigm shift for the Great Bifurcation*, 2020 – all by W.H.)
- **The Evolution of Information Processing Systems:** Annette Grathoff (talks and paper *Exploration of structural and kinetic components of physical information*, 2019, 2020; talk *Überlegungen zum Speichern physikalischer Information in der Natur*, 2020; paper *On the explicit function of life in a physical universe*, 2021)
- **glossaLAB:** José María Díaz Nafría, Teresa Guarda (start 2019; achievements 2020:
  - conversion of encyclopedic sources to markaton language
  - basic components of the platform;on the way: provision of content, development of trial platform for sustainable management, integration in several congresses, collaboration with Spanish Association for General Systems – SESGE)

## 2.1 Projects (2/2)

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- **Single Integrated Science of Information:** Mark Burgin, Wolfgang Hofkirchner (publications 2019: 7, and 2020: 13)
- **"Lernen lernen":** Film director Sophie Huber-Lachner (resizing the project to a TV documentary)
- **Information Ethics, Responsibility and Sustainability:** Tomás Sigmund, Wolfgang Hofkirchner (follow-up project 2020-2022 of *Systems Approaches to Information Ethics* 2017-2019, co-operation with *Faculty of Informatics and Statistics, University of Economics, Prague*; talks and papers on Transhumanism, theoretical information studies, dialectics in nature, ethical aspects of AI, the information age imperative, the classification of disinformation, metaphors in ICT)
- **COVID-19 Epidemic Austria Simulation Model:** Peter Fleissner
- **"Homeland Earth":** Film director Sophie Huber-Lachner et al. (a documentary for educational use)

## 2.2 Meetings, events, talks (1/6)

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- **Emergent Systems Group Members' presentations at IS4SI Summit 2019 Berkeley** (Joseph E. Brenner, Gordana Dodig-Crnkovic, Annette Grathoff, Wolfgang Hofkirchner, Robert K. Logan)
- **Wittenberg Meeting at Leucorea 2019: "What is truth?"**, together with *Institut für Design Science München* (presentations by Rainer E. Zimmermann, David Braunstein, José María Díaz Nafría, Annette Grathoff, Wolfgang Hofkirchner and Tomáš Sigmund), **27-29 September 2019**
- **Second International Conference on Applied Informatics (ICAI 2019) Madrid: "Building up a Global Sustainable Information Society"**, together with GSIS (keynotes and presentations by Wolfgang Hofkirchner, Modestos Stavrakis, Mark Burgin, José María Díaz Nafría and Teresa Guarda), **6-9 November 2019**
- **Challenging Organisations and Society (COS) Conference 2019: "ARTificial 2019" Linz, Austria**, organised by Christian Stary, **15-17 November 2019**

## 2.2 Meetings, events, talks (2/6)

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- **Künstliche Intelligenz im Wunderland, FlfF-Konferenz 2019, Bremen, 22-24 November 2019**  
(Hans-Jörg Kreowski et al.)
- **Hans-Jörg Kreowski:** Why autonomous weapons should be forbidden (in German), 22.  
Schwarzmarkt für nützliches Wissen und Nicht-Wissen: Captcha! Machines learn to act from human who don't understand what they know, **6 December 2019**
- **Zukunft der Arbeit – soziotechnische Gestaltung der Arbeitswelt im Zeichen von "Digitalisierung" und "Künstlicher Intelligenz":** organised in Berlin, **13 December 2019**
- **Institute for Advanced Studies Köszeg (iASK) Research Group Human 2.0 workshop, Hungary, 11 February 2020** (keynote by Wolfgang Hofkirchner: *The concept of the global citizen – a possible third step in becoming truly human/e*)

## 2.2 Meetings, events, talks (3/6)

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- **How to stop the emergence of hierarchy?** GSIS webinar, featuring Evo Busseniers, **27 March 2020**
- **Post Covid-19 societies:** webinar by Shima Beigi, *Center Leo Apostel for Multidisciplinary Studies, Vrije Universiteit Brussel*, **8 May 2020**
- **Die Covid-19-Pandemie in Österreich. Dynamik, Prognose und gesellschaftliche Folgen:** *transform!at* webinar by Peter Fleissner, **19 May 2020**
- **GAIA 5.0:** a holographic image ambiente by Renate C.-Z.-Quehenberger, at *Milan Digital Week*, **26-29 May 2020**
- **Hans-Jörg Kreowski:** Ethische Aspekte der Rüstungsforschung, DLR-Institut für den Schutz maritimer Infrastrukturen, **3 July 2020**



## 2.2 Meetings, events, talks (4/6)

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- **28th Information Management and Interdisciplinarity Talks (IDIMT) 2020**, organised by Gerhard Chroust et al. on behalf the *Johannes Kepler University Linz* and the *University of Economics Prague*, hybrid, Kutná Hora, Czech Republic, **2-4 September 2020**
- **Wittenberg Meeting at Leucorea 2020: "Dialectics of nature"**, *Institut für Design Science München* (Annette Grathoff, Tomáš Sigmund, Rainer E. Zimmermann), **4-6 September 2020**
- **Hans-Jörg Kreowski**: Künstliche Intelligenz – "künstlich" Ja, "Intelligenz" wohl kaum, FlfF-Klausurtagung online, **10 October 2020**
- **Der Imperativ des Informationszeitalters**: Wolfgang Hofkirchner, Plenum, online, *Leibniz-Sozietät der Wissenschaften zu Berlin*, **12 November 2020**

## 2.2 Meetings, events, talks (5/6)

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- **Informatik zwischen Cyberpeace and Bits&Bäume:** Hans-Jörg Kreowski, Anne Schnerrer, *NatWiss Kongress 2020*, online, **27-28 November 2020**
- **Boundaries of Disinformation**, workshop, Chalmers University of Technology, organised by RISE (Research Institutes of Sweden) (Gordana Dodig-Crnkovic, Wolfgang Hofkirchner), **2 December 2020**
- **Hans-Jörg Kreowski:** Für ein NEIN der Wissenschaft zu Killerdrohnen und autonomen Waffen, Sag Nein! Der aufhaltsame Aufstieg der Militarisierung mit Künstlicher Intelligenz, digitale Zivilklausel-Veranstaltung, **9 March 2021**
- **Hans-Jörg Kreowski:** Digitaler Humanismus, FlfF-Klausurtagung online, **27 March 2021**
- **The media vs. the climate?**, GSIS webinar featuring Livia Regen, **10 May 2021**

## 2.2 Meetings, events, talks (6/6)

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- **Crypto Commons Gathering 2021, Reichenau an der Rax, Austria, 28 August - 3 September**  
(Vangelis Papadimitropoulos: *The politics of cyber-physical commons*)
- **Austrian Study Centre for Peace and Conflict Resolution (ASPR) Summer Academy: "Terre-Patrie", 1-4 September 2021**, co-organised by GSIS, online (invited speakers Helena Knyazeva and Wolfgang Hofkirchner)

## 2.3 Teaching

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- **Wolfgang Hofkirchner:** *Reflections on computer science, society and ethics*, two courses for bachelor students in Informatics, IMC University of Applied Sciences, Krems, Austria, Summer Semester 2021



## 2.4 Co-operation, positions (1/2)

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- Co-operation partners:
  - *Austrian Study Centre for Peace and Conflict Resolution*, Schlaining
  - *Biocommunication and Natural Genome Editing*, Salzburg
  - *BITrum*, León
  - *Convivialist International*, Hamburg
  - *Communications Engineering*, Johannes-Kepler University Linz
  - *Computer Professionals for Peace and Social Responsibility (FlfF)*
  - *Department of Systems Analysis, University of Economics, Prague*
  - *Ernst Bloch Assoziation*, Nürnberg
  - *Ernst Bloch Gesellschaft*, Tübingen
  - *Faculty of Informatics and Statistics, University of Economics, Prague*
  - *Institut für Design Science München*
  - *Institut für Heterodoxe Ökonomie, WU Wien*
  - *International Centre for Philosophy of Information (ICPI)*, Xi'an Jiaotong University
  - *Leibniz-Sozietät der Wissenschaften zu Berlin*

## 2.4 Co-operation, positions (2/2)

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(Co-operation partners continued:)

- *School of Humanities & Social Sciences, Xi'an Jiaotong University*
  - *Schwerpunkt Rhetorik, Universität Koblenz/Landau*
  - *UDIMA, Universidad a Distancia de Madrid*
  - *Ukrainian Synergetic Society, Kyev*
- Positions:
    - Wolfgang Hofkirchner, member, *committee, Classical Ethics in ICTs, The IEEE Global Initiative for Ethical Considerations in Artificial Intelligence and Autonomous Systems (2016–)*
    - Rainer E. Zimmermann, President, *Leibniz-Sozietät der Wissenschaften zu Berlin (2019-2020)*

## 2.5 Publications (1/6)

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**Rainer E. Zimmermann, Silke Järvenpää,  
Ralph-Miklas Dobler (eds.):**

Signifikant, Jahrbuch für Strukturwandel und  
Diskurs 2, Öffentlichkeit im digitalen Zeitalter,  
Berlin 2019 (in German)

**Wolfgang Hofkirchner:**

A Unified Theory of Information Framework,  
Beijing 2020 (in Chinese)



西安交通大学信息哲学丛书

### 涌现信息： 统一信息理论纲要

Emergent Information:  
A Unified Theory of Information Framework

[奥]沃尔夫冈·霍夫科尔希纳 / 著  
王健 邬天启 毕琳 王萍 / 译

中国社会科学出版社

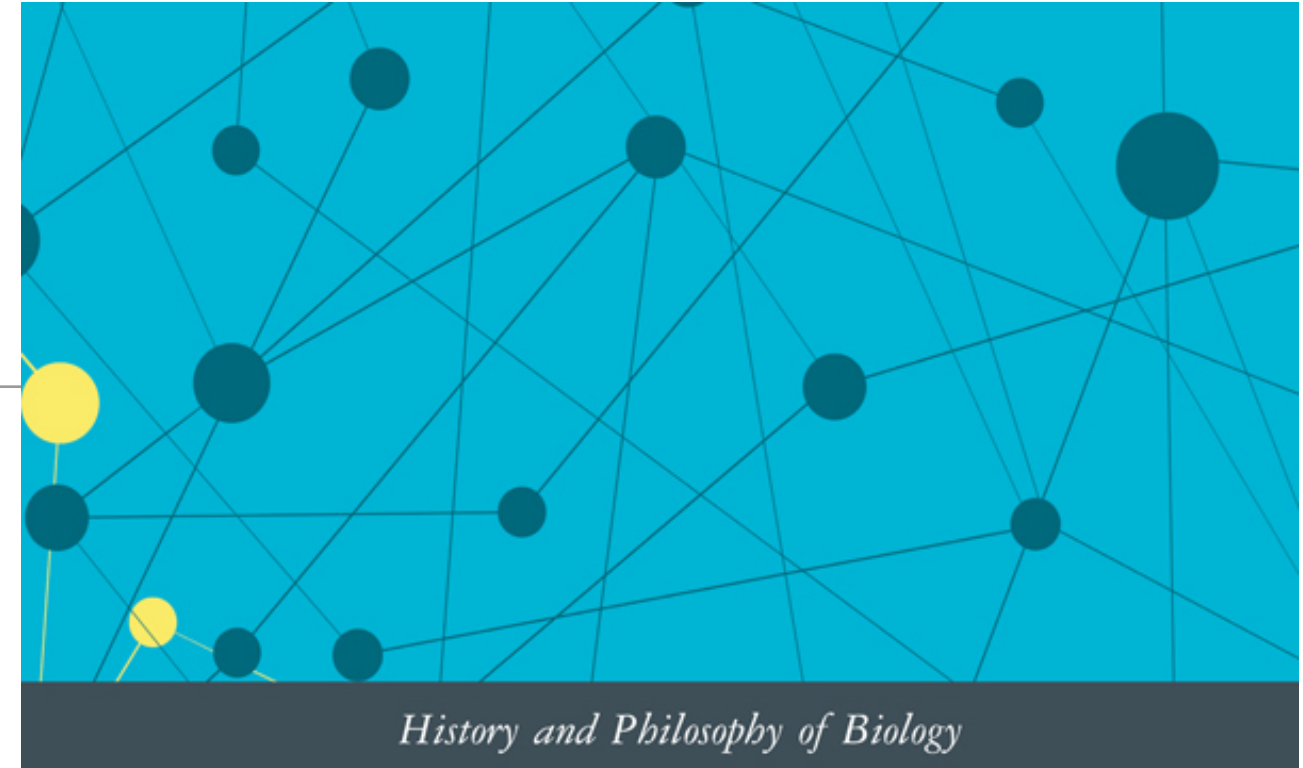
## 2.5 Publications (2/6)

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**John Collier, Michael Stigl:**  
Evolutionary Moral Realism, London 2020

**Mark Burgin, Gordana Dodig-Crnkovic**  
(eds.):  
Theoretical Information Studies, Singapore  
2020

**Mark Burgin, Gordana Dodig-Crnkovic**  
(eds.):  
IS4SI 2019 Summit, Basel 2020



# EVOLUTIONARY MORAL REALISM

John Collier and Michael Stigl





## 2.5 Publications (3/6)

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**Vangelis Papadimitropoulos:**

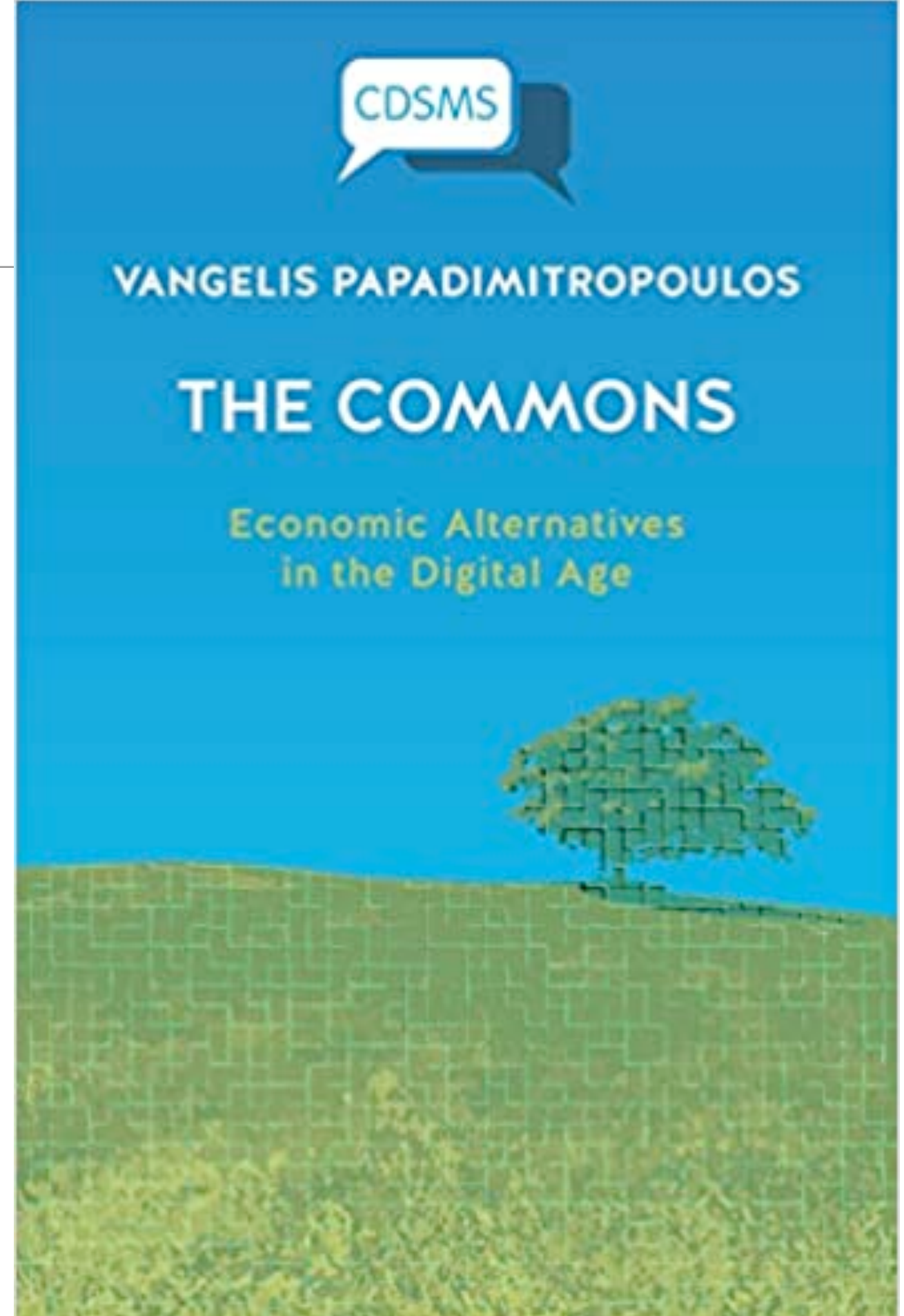
The Commons. Economic Alternatives in the Digital Age, London 2020

**Rainer E. Zimmermann:**

Metaphysik als Grundlegung von Naturdialektik, Berlin 2020 (in German)

**Rainer E. Zimmermann:**

Münchener Vorlesungen zur Grundlegung der Philosophie, Berlin 2020 (in German)



## 2.5 Publications (4/6)

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**Peter Brödner, Klaus Fuchs-Kittowski (eds.):**

Zukunft der Arbeit, Berlin 2020 (in German and English)

with contributions of Group Members Christian Stary, Klaus-Fuchs-Kittowski, Klaus Kornwachs, Werner Kriesel, Vincent Brannigan

**Petr Doucek, Gerhard Chroust, Václav Oškrdal (eds.):**

Digitalized Economy, Society and Information, IDIMT 2020, Linz 2020

with contributions of Group Members Tomáš Sigmund, Gerhard Chroust

ABHANDLUNGEN  
DER LEIBNIZ-SOZIETÄT DER WISSENSCHAFTEN  
BAND 67

# Zukunft der Arbeit

Soziotechnische Gestaltung der Arbeitswelt  
im Zeichen von „Digitalisierung“ und  
„Künstlicher Intelligenz“

Tagung der Leibniz-Sozietät am 13. Dezember 2019  
in Berlin, Hochschule für Technik und Wirtschaft

Herausgegeben von  
Peter Brödner und Klaus Fuchs-Kittowski



## 2.5 Publications (5/6)

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**Hans-Jörg Kreowski et al. (eds.):**

Grundrechte-Report, Frankfurt/Main 2020 and 2021

**Rainer E. Zimmermann, Silke Järvenpää,  
Ralph-Miklas Dobler (eds.):**

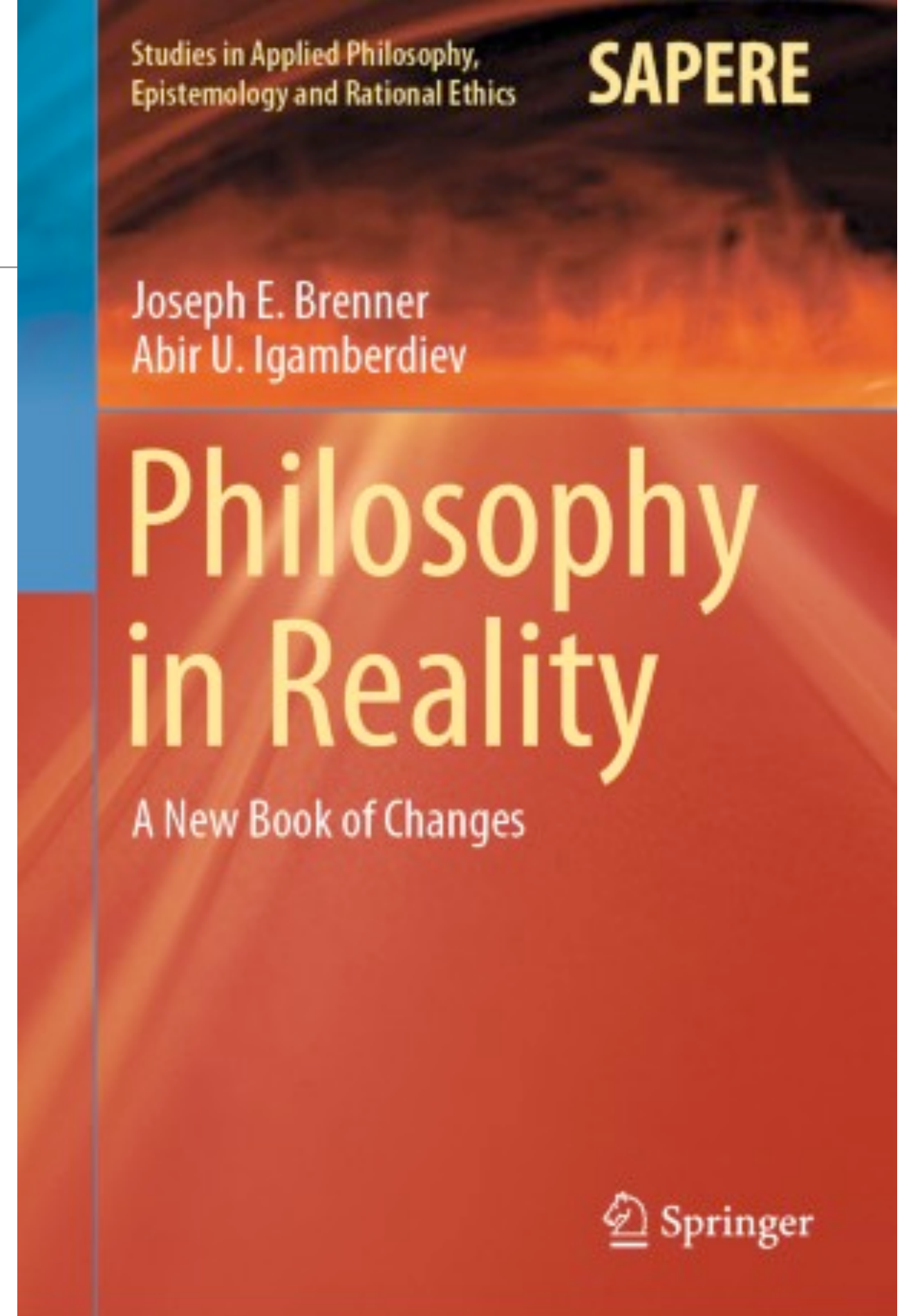
Signifikant, Jahrbuch für Strukturwandel und  
Diskurs 3, Öffentlichkeit im digitalen Zeitalter,  
Berlin 2021 (in German)

with contributions of Group Members

Wolfgang Hofkirchner, David Braunstein

**Joseph E. Brenner, Abir U. Igamberdiev:**

Philosophy in Reality, Cham 2021



Wolfgang Hofkirchner  
Hans-Jörg Kreowski *Editors*

# Transhumanism: The Proper Guide to a Posthuman Condition or a Dangerous Idea?

## 2.5 Publications (6/6)

**Wolfgang Hofkirchner, Hans-Jörg Kreowski (eds.):**

Transhumanism – The Proper Guide to a Posthuman Condition or a Dangerous Idea?, Cham 2021

with contributions of Group Members Klaus Kornwachs, Tomáš Sigmund, Adriana Braga, Robert K. Logan, Wolfgang Hofkirchner, Christian Stary

**Rainer E. Zimmermann:** The Meaning of Life in the Universe, Special Issue, philosophies, 2021

with contributions of Group Members Annette Grathoff, Rainer E. Zimmermann

## 2.6 Outlook (1/2)

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### **Projects:**

continuation of all projects that are not finalised

### **Meetings and events, including talks:**

- *Cyberscience – Wissenschaftsforschung und Informatik. Digitale Medien und die Zukunft der Kultur wissenschaftlicher Tätigkeit*, co-organised with LS Berlin, November 2021 (in German)
- next annual Wittenberg meeting with Institut für Design Science München, September 2022

## 2.6 Outlook (2/2)

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### **Publications:**

- *Signifikant 4*, expected for 2021
- *Signifikant 5*, expected for 2022
- Publication of selected full papers based upon the Digital Humanism workshop at the IS4SI Summit 2021 in *new explorations*, expected for 2022
- Wolfgang Hofkirchner: *Emergent transformation. A transdisciplinary theories framework for the third step in sociogenesis*, Singapore, expected for 2022

### **Videos:**

- "*Heimatland Erde*" (20 minutes pedagogical documentary, also English version), expected for 2021
- all presentations recorded at our Digital Humanism workshop made available at GSIS vimeo channel "*The Great Bifurcation*", expected for 2021

## 3 Organisational

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**Number of group members and friends extended from >60 (2019) to >70 (2021).**

**As always, no financial support from IS4SI** (but from the *Leibniz-Sozietät der Wissenschaften zu Berlin* and the *Institut für Design Science München*, instead).

**Our is4si.org website is in need of presenting our SIGs and our Regional Chapters as well.**  
For the time being, any information about our SIG will be found at the GSIS website here:  
<http://gsis.at/units/emergent-systems-information-and-society-research-group/>.