

Supra-Curricular
Practical Experience Trails Towards Information Science
(SCPE)
OVERVIEWS Trail Course / Lecture Series **MATERIALS**
Summer Term 2025

Dr. rer. nat. Claus-Peter Rückemann

Leibniz Universität Hannover

2025



©

2019, 2025

Dr. rer. nat. Claus-Peter Rückemann

Supra-Curricular Practical Experience Trails Towards Information Science

Supra-Curricular Practical Experience Trails Towards Information Science

Separate lectures on complementary information science topics in this lecture series:

Lecture I Assets

Lecture II Knowledge

Lecture III Decision Making

Lecture IV Conceptual Dimension

Lecture V Procedural Dimension

Lecture VI Metacognitive Dimension

Lecture VII Knowledge-centricity and Data-centricity

Lecture VIII Logic and Method

Lecture IX Structure

Lecture X Analysis

(Lectures marked in light gray colour are currently not scheduled for this term.)

©

2019, 2025

Dr. rer. nat. Claus-Peter Rückemann

Supra-Curricular Practical Experience Trails Towards Information Science

Lecture Series, Epitome

Supra-Curricular Practical Experience Trails Towards Information Science Lecture Series – Epitome

Information science comprises the fields of collection, documentation, classification, analysis, manipulation, storage, retrieval, movement, dissemination, and protection of information. The key to information science is a solid understanding of knowledge and its context for day-to-day application. The goal of this lecture series is an advanced understanding of general information science, knowledge, and its context.

This lecture series (SCPE) discusses selected fields in the universe of information science and aims to convey advanced key qualifications and skills significant for scientific work, research, and management in theory and practice. The lectures cover, in compressed form, most important fundaments of education, application scenarios, information management, decision making, algorithms, and indispensable long-term aspects of information and holistic context, required for practice in scientific and technical disciplines as well as in humanities. The lectures consist of different advanced parts in order to accentuate understanding and to foster application, independent of disciplines. The lectures are illustrated by state of the art application scenarios and present resources, case studies, standard products, and implementations.

The lecture series addresses to participants from all disciplines, spanning natural sciences, humanities, applied sciences, philosophy, informatics, medicine, psychology, economics, legal, business, and management disciplines.

Pre-conditions for participation are a solid background in education (especially non-technical, too) and the interest in improving facilities to abstract complex scenarios and to create methodological, systematical, and practical approaches.

Notes

Preliminary Remarks – General Conditions, Tele-presence Participation

General conditions with respect to procedures mandatory for this content and exercises

① Before the lecture.

Clearing process and confirmation for each lecture are mandatory for participation. Validity requirements: Participants use their real name and official university email address for all communication and attendance.

Communication during all steps is strictly only directly with the lecturer.

Participants have to prepare their computers/clients/applications on their own.

② Lecture.

Prep. & Presentation parts. / Excercise parts. / Discussion & conclusions parts. Participation (video & audio) is only completed if all parts are actively attended.

③ During the lecture.

If any part is missed by any reason: Start at step 1 for future lectures. There will be no communication about technical or associated aspects during a lecture.

If a lecture has to be cancelled during the time of the lecture this is communicated via the conferencing tool or email. A session may end without further emails.

Any materials and information distributed for the lecture are strictly only for personal use of confirmed participants in context with the lecture.

References and further research are communicated during the lecture.

④ After the lecture.

A lecture fully ends after the resp. time frame if not otherwise communicated.

Notes

Preliminary Remarks – Clearing Dialogue

Clearing:

Clearing dialogue: No registration without application!

Registration attempts other than prior application by mail cannot be processed.

The lectures in this lecture series require separate applications due to the fact that attendance and active engagement are compulsory.

The learners ...

- have to be aware of the trying character of this lecture series.
- have to decide upon whether or not it is advantageous for their academic careers to become actively engaged in order to gain credit points.
- have to self-evaluate their skills of scientific English.

Notes

Preliminary Remarks – Clearing Dialogue

Clearing dialogue, application requests, and replies:

Application requests: Deadline: [respective deadlines, see Web announcements]

Regarding application for the lecture, please use the mail subject

Information Science Lecture <INSERT LECTURE MODULE and START DATE HERE>

and directly contact the lecturer at [rueckemann \(at\) luis.uni-hannover.de](mailto:rueckemann(at)luis.uni-hannover.de)

In your mail please fully add the information answering the following mandatory items.

Your request cannot be processed without all the required information explicitly given:

Course/Lecture title:

Salutatory address:

Title:

Firstname:

Lastname:

E-mail (affiliation email address, not private address):

Status, employee of Leibniz Universitaet Hannover?:

Institute/Institution:

Status, student?:

Matriculation number (Leibniz Universitaet Hannover):

Degree or grade (already achieved):

Discipline/study programme:

Replies: Earliest standard replies on application requests will be sent out a few days before the date of the lecture, if possible. Otherwise, replies will be send on short term if an application deadline is less than a few days ahead of the date of a lecture.

Notes

Preliminary Remarks – Fine Print

Fine print: Additional formal information:

Conditions of participation: With your application and registration request you accept the conditions of participating in the Supra-Curricular Approaches to Information Science lectures. Please read the official conditions as published at
<https://www.luis.uni-hannover.de/kurse.html>
<https://www.luis.uni-hannover.de/fileadmin/kurse/Kurse-Teilnahmebedingungen.pdf>

Data protection: Your personal data will be processed and stored by the Leibniz Universitat IT Services in the context and for the purpose of this service, according to the GDPR. Please read the official conditions as published at
<https://www.uni-hannover.de/de/datenschutzerklaerung/#c47285>

ID cards: Please remember always to bring your student ID card or employee ID card when attending a lecture.

General information: Visit the web page of the above institutions for other/further information.

Short term notice information:

!!!!!! **IN CASE OF ANY SHORT TERM CHANGES PLEASE MONITOR !!!!!!!
THE WEB PAGE OF THE RESPECTIVE INSTITUTION.**!!!!!!

Notes

Preliminary Remarks – Formalities and Individuality

Course and Formalities

Attendance and form: For reasonable learning success, the lectures require continuous attendance due to their interactive nature.

Attendees do have the chance to ask questions during the lectures. The form of the lectures is not process oriented. The lectures convey, in compressed form, the fundamental knowledge for further involvement with the matters of information science.

Individual frames of content and topics: The decision, which of the topics will be discussed and practiced and to which extent and detail is incumbent upon the lecturer and can depend on the background and qualification of the individual composition of the respective group of participants.

Computers / network access: Participants can bring private computers / network access, which can be used for inquest and self-assessment exercises during the lectures and during colloquial discussions. Use is on participant's own authority and responsibility.

Caveat and cure: The frames of the lectures are limited by several factors, due to the nature of administrative, time, and context constraints, which are out of scope of practical modification.

Participants interested in further advanced and associated topics in the context of the lectures, please kindly consider the hints given at the end of the lectures.

Course / lecture language: Language of the lecture series is English.

Notes

Sources

Parts of the lectures of this series have been taken from:

- Claus-Peter Rückemann, **Fundamental Aspects of Information Science, Security, and Computing**, 2020, Lecture Series, Winter Term 2020/2021, Postgraduate Lecture Series, 2007 – 2022, EULISP, European Legal Informatics Study Programme, URL: <http://www.eulisp.eu>, Institut für Rechtsinformatik (IRI), Leibniz Universität Hannover, Germany.



References and Credits:

- (2015) [223] (4 ECTS); (2016) [224] (4 ECTS);
 (2017) [225] (4 ECTS); (2018) [37] (4 ECTS);
 (2019) [36] (4 ECTS); (2020) [226] (4 ECTS);
 (2021) [227] (4 ECTS).

- **The International Tutorial Series.**

References: [86] [87] [16] [228] [229] [230]

- **The International Series of Delegates' Summits on Best Practice and Definitions.** References: [6] [91] [90] [89] [163] [222] [231]

Common Information

Information: CV, lectures, studies, materials, research, and networking

Curriculum Vitae:

<http://scienceparagon.de/cpr/x/rueckemann/en/>

Publications, lectures, and materials:

<http://scienceparagon.de/cpr/x/rueckemann/en/#Publications>
<http://scienceparagon.de/cpr/x/frodi/en/#Courses>

Congresses and venues:

<http://scienceparagon.de/cpr/x/rwerkr/en/>

Research

Dr. Claus-Peter Rückemann
 Westfälische Wilhelms-Universität Münster (WWU)
 E-Mail: [ruckema\(at\)uni-muenster.de](mailto:ruckema(at)uni-muenster.de)



Chair of the Board of Trustees, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (uDIMF);

Chair of the Board on Advanced Computing and Emerging Technologies and

Chair of the Symposia Board, International Academy, Research, and Industry Association;

General Chair and Chair of the Steering Committee of

The International Conference on Advanced Communications and Computation (INFOCOMP);

General Chair and Chair of the Steering Committee of

The International Conference on Advanced Geographic Information Systems, Applications, and Services (GEOProcessing);

Chair of the International Symposium on Advanced Computation and Information in Natural and Applied Sciences;

Director GEXI Consortium; Head of research LX Foundation; Senior Member of Knowledge in Motion long-term project;

Fellow Member of the Int. HPC and Artificial Intelligence Advisory Council; Member of the Indexing Committee Board, IARIA;

Westfälische Wilhelms-Universität Münster (WWU);

Senior Scientist and Senior Lecturer Information Science, Security, and Computing at Leibniz Univ. Hannover; IARIA Fellow.

Rights, License, Sources, ...

Rights / Copyright Notice / License

Copyright © 2007, 2011, 2014, 2019, 2025 Claus-Peter Rückemann. All rights reserved.
 No part of this document may be reproduced, stored in a retrieval system, or transmitted,
 in any form or by any means, electronic, mechanical, photocopying, recording, or
 otherwise without the prior written permission from the author.
 No photos and recordings of any part may be made during presentation without prior
 written permission from the author and other possible copyright holders.

Media, Content, and Sources, ...

Sources and references are given via citations in respective context and in the bibliography / references of the lecture series.

Please carefully regard the respective rights of authors and other holders of rights, those named and cited as well as those referred, associated, and implicit.

Notes

Scope of Application Scenarios and Disciplines

The scope of application scenarios and examples is, nevertheless not limited to

- Information management,
- Understanding information and data value,
- Research data,
- Structuring data, data design,
- Improving documentation,
- Creating priorities,
- Multi-disciplinary application scenarios,
- Data-centricity, programming,
- Decision making,
- Implementation planning, ...

Notes

... for a wide range of disciplines, e.g.,

- Natural Sciences,
- Library Science, Humanities,
- Mathematics and Informatics,
- Life Sciences, ...

Lecture I, Epitome

Supra-Curricular Practical Experience Trails Towards Information Science: Assets

This lecture "Assets" is part of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series (SCPE). The lecture covers, in compressed form, selected fundaments, advanced topics, and skills. Focus topics, advanced qualifications, and practical skills conveyed by this lecture are concentrating on:

- Short introduction to selected fundaments and key assets of information science.
- Short introduction to terminology of information science and its context.
- Compact discussion, consolidation, networking, and bibliography tutorial sections.

This lecture addresses to participants from all disciplines, spanning natural sciences, humanities, applied sciences, philosophy, informatics, medicine, psychology, economics, legal, business, and management disciplines.

Pre-conditions for participation are a solid background in education (especially non-technical, too) and the interest in facilities to abstract complex scenarios and to create methodological, systematical, and practical approaches. This lecture represents a significant expenditure of time and preparation. Language of the lecture is English.

The participation for this lecture is limited to a maximum of 8 attendees.

Preconditions: EQF8; postgraduate/univ.; individual presentation/exam options.

Dates: 2025-05-30 10:15–16:00, 2025-06-06 10:15–16:00

Dates: 2025-07-04 10:15–16:00, 2025-07-25 10:15–16:00

Notes

Lecture II, Epitome

Supra-Curricular Practical Experience Trails Towards Information Science: Knowledge

This lecture "Knowledge" is part of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series (SCPE). Pre-condition for participation in the lecture is the prior attendance in the sequence of preparatory lectures of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series or commensurably comparable qualification. The lecture covers, in compressed form, selected fundaments, advanced topics, and skills. Focus topics, advanced qualifications, and practical skills conveyed by this lecture are concentrating on:

- Short introduction to practical fundaments of knowledge (factual, conceptual, procedural, and metacognitive).
- Short introduction to information science systemics and selected approaches.
- Compact discussion, consolidation, networking, and bibliography tutorial sections.

This lecture addresses to participants from all disciplines, spanning natural sciences, humanities, applied sciences, philosophy, informatics, medicine, psychology, economics, legal, business, and management disciplines. This lecture represents a significant expenditure of time and preparation. Language of the lecture is English.

The participation for this lecture is limited to a maximum of 8 attendees.

Preconditions: EQF8; postgraduate/univ.; individual presentation/exam options.

Dates: [CURRENTLY NO FORSEEABLE DATES PLANNED AND SCHEDULED]

Notes

Lecture III, Epitome

Supra-Curricular Practical Experience Trails Towards Information Science: Decision Making

This lecture "Decision Making" is part of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series (SCPE). Pre-condition for participation in the lecture is the prior attendance in the sequence of preparatory lectures of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series or commensurably comparable qualification. The lecture covers, in compressed form, selected fundaments, advanced topics, and skills. Focus topics, advanced qualifications, and practical skills conveyed by this lecture are concentrating on:

- **Short introduction to decision making fundaments in information science.**
- **Compact discussion, consolidation, networking, and bibliography tutorial sections.**

This lecture addresses to participants from all disciplines, spanning natural sciences, humanities, applied sciences, philosophy, informatics, medicine, psychology, economics, legal, business, and management disciplines. This lecture represents a significant expenditure of time and preparation. Language of the lecture is English.

The participation for this lecture is limited to a maximum of 8 attendees.

Preconditions: EQF8; postgraduate/univ.; individual presentation/exam options.

Dates: [CURRENTLY NO FORSEEABLE DATES PLANNED AND SCHEDULED]



©

2019

, 2025

Dr. rer. nat. Claus-Peter Rückemann

Lecture IIII, Epitome

Supra-Curricular Practical Experience Trails Towards Information Science: Conceptual Dimension

This lecture "Conceptual Dimension" is part of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series (SCPE). Prerequisite for participation in the lecture is the prior attendance in the sequence of preparatory lectures of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series or commensurably comparable qualification. The lecture covers, in compressed form, selected fundaments, advanced topics, and skills. Focus topics, advanced qualifications, and practical skills conveyed by this lecture are concentrating on:

- **Short introduction to practical conceptual knowledge.**
- **Short introduction to fundaments of conceptual knowledge (UDC).**
- **Compact discussion, consolidation, networking, and bibliography tutorial sections.**

This lecture addresses to participants from all disciplines, spanning natural sciences, humanities, applied sciences, philosophy, informatics, medicine, psychology, economics, legal, business, and management disciplines. This lecture represents a significant expenditure of time and preparation. Language of the lecture is English.

The participation for this lecture is limited to a maximum of 8 attendees.

Preconditions: EQF8; postgraduate/univ.; individual presentation/exam options.

Dates: 2025-08-11 10:15-16:00, 2025-08-25 10:15-16:00



©

2019

, 2025

Dr. rer. nat. Claus-Peter Rückemann

Notes

Notes

Lecture V, Epitome

Supra-Curricular Practical Experience Trails Towards Information Science: Procedural Dimension

This lecture “Procedural Dimension” is part of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series (SCPE). Prerequisite for participation in the lecture is the prior attendance in the sequence of preparatory lectures of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series or commensurably comparable qualification. The lecture covers, in compressed form, selected fundaments, advanced topics, and skills. Focus topics, advanced qualifications, and practical skills conveyed by this lecture are concentrating on:

- **Short introduction to practical procedural knowledge.**
- **Short introduction to formal descriptive frameworks (UML).**
- **Compact discussion, consolidation, networking, and bibliography tutorial sections.**

This lecture addresses to participants from all disciplines, spanning natural sciences, humanities, applied sciences, philosophy, informatics, medicine, psychology, economics, legal, business, and management disciplines. This lecture represents a significant expenditure of time and preparation. Language of the lecture is English.

The participation for this lecture is limited to a maximum of 8 attendees.

Preconditions: EQF8; postgraduate/univ.; individual presentation/exam options.

Dates: [CURRENTLY NO FORSEABLE DATES PLANNED AND SCHEDULED]



2019/2025



Dr. rer. nat. Claus-Peter Rückemann



Supra-Curricular Practical Experience Trails Towards Information Science

Notes

Lecture VI, Epitome

Supra-Curricular Practical Experience Trails Towards Information Science: Metacognitive Dimension

This lecture “Metacognitive Dimension” is part of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series (SCPE). Prerequisite for participation in the lecture is the prior attendance in the sequence of preparatory lectures of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series or commensurably comparable qualification. The lecture covers, in compressed form, selected fundaments, advanced topics, and skills. Focus topics, advanced qualifications, and practical skills conveyed by this lecture are concentrating on:

- **Short introduction to practical metacognitive knowledge.**
- **Short introduction to multi-disciplinary fundaments of metacognitive knowledge.**
- **Compact discussion, consolidation, networking, and bibliography tutorial sections.**

This lecture addresses to participants from all disciplines, spanning natural sciences, humanities, applied sciences, philosophy, informatics, medicine, psychology, economics, legal, business, and management disciplines. This lecture represents a significant expenditure of time and preparation. Language of the lecture is English.

The participation for this lecture is limited to a maximum of 8 attendees.

Preconditions: EQF8; postgraduate/univ.; individual presentation/exam options.

Dates: [CURRENTLY NO FORSEABLE DATES PLANNED AND SCHEDULED]



2019/2025



Dr. rer. nat. Claus-Peter Rückemann



Supra-Curricular Practical Experience Trails Towards Information Science

Notes

Lecture VII, Epitome

Supra-Curricular Practical Experience Trails Towards Information Science: Knowledge-centricity and Data-centricity

This lecture “Knowledge-centricity and Data-centricity” is part of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series (SCPE). Prerequisite for participation in the lecture is the prior attendance in the sequence of preparatory lectures of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series or commensurably comparable qualification. The lecture covers, in compressed form, selected fundaments, advanced topics, and skills. Focus topics, advanced qualifications, and practical skills conveyed by this lecture are concentrating on:

- *Short introduction to practical knowledge-centricity and data-centricity.*
 - *Compact discussion, consolidation, networking, and bibliography tutorial sections.*

This lecture addresses to participants from all disciplines, spanning natural sciences, humanities, applied sciences, philosophy, informatics, medicine, psychology, economics, legal, business, and management disciplines. This lecture represents a significant expenditure of time and preparation.

Language of the lecture is English

*The participation for this lecture is limited to a maximum of 8 attendees.
Preconditions: EQF8; postgraduate/univ.; individual presentation/exam options.*

Dates: [CURRENTLY NO FORSEEABLE DATES PLANNED AND SCHEDULED]

Lecture VIII, Epitome

Supra-Curricular Practical Experience Trails Towards Information Science: Logic and Method

This lecture "Logic and Method" is part of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series (SCPE). Prerequisite for participation in the lecture is the prior attendance in the sequence of preparatory lectures of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series or commensurably comparable qualification. The lecture covers, in compressed form, selected fundaments, advanced topics, and skills. Focus topics, advanced qualifications, and practical skills conveyed by this lecture are concentrating on:

- *Short introduction to logic in information science context.*
 - *Short introduction to method in information science context.*
 - *The missing link.*
 - *Compact discussion, consolidation, networking, and bibliography tutorial sections.*

This lecture addresses to participants from all disciplines, spanning natural sciences, humanities, applied sciences, philosophy, informatics, medicine, psychology, economics, legal, business, and management disciplines. This lecture represents a significant expenditure of time and preparation. Language of the lecture is English.

The participation for this lecture is limited to a maximum of 8 attendees.

The participation for this lecture is limited to a maximum of 8 attendees.
Preconditions: EOF8; postgraduate/univ ; individual presentation/exam options

Dates: [CURRENTLY NO FORSEEABLE DATES PLANNED AND SCHEDULED]

Notes

Notes

Lecture VIII, Epitome

Supra-Curricular Practical Experience Trails Towards Information Science: Structure

This lecture "Structure" is part of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series (SCPE). Prerequisite for participation in the lecture is the prior attendance in the sequence of preparatory lectures of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series or commensurably comparable qualification. The lecture covers, in compressed form, selected fundaments, advanced topics, and skills. Focus topics, advanced qualifications, and practical skills conveyed by this lecture are concentrating on:

- **Short introduction to structure and information science context.**
- **Compact discussion, consolidation, networking, and bibliography tutorial sections.**

This lecture addresses to participants from all disciplines, spanning natural sciences, humanities, applied sciences, philosophy, informatics, medicine, psychology, economics, legal, business, and management disciplines. This lecture represents a significant expenditure of time and preparation. Language of the lecture is English.

The participation for this lecture is limited to a maximum of 8 attendees.

Preconditions: EQF8; postgraduate/univ.; individual presentation/exam options.

Dates: [CURRENTLY NO FORSEABLE DATES PLANNED AND SCHEDULED]



©

2019

, 2025

Supra-Curricular Practical Experience Trails Towards Information Science

Dr. rer. nat. Claus-Peter Rückemann



Lecture X, Epitome

Supra-Curricular Practical Experience Trails Towards Information Science: Analysis

This lecture "Analysis" is part of the Information Science lecture series (SCPE). Prerequisite for participation in the lecture is the prior attendance in the sequence of preparatory lectures of the Supra-Curricular Practical Experience Trails Towards Information Science lecture series or commensurably comparable qualification. The lecture covers, in compressed form, selected fundaments, advanced topics, and skills. Focus topics, advanced qualifications, and practical skills conveyed by this lecture are concentrating on:

- **Short introduction to analysis in context of information science.**
- **Compact discussion, consolidation, networking, and bibliography tutorial sections.**

This lecture addresses to participants from all disciplines, spanning natural sciences, humanities, applied sciences, philosophy, informatics, medicine, psychology, economics, legal, business, and management disciplines. This lecture represents a significant expenditure of time and preparation. Language of the lecture is English.

The participation for this lecture is limited to a maximum of 8 attendees.

Preconditions: EQF8; postgraduate/univ.; individual presentation/exam options.

Dates: [CURRENTLY NO FORSEABLE DATES PLANNED AND SCHEDULED]



©

2019

, 2025

Supra-Curricular Practical Experience Trails Towards Information Science

Dr. rer. nat. Claus-Peter Rückemann



Notes

Notes

Bibliography / References (lecture excerpt) I

- [1] J. Beaumont, "Knowledge Management: a Systems Case Study from Shearman & Sterling LLP," *Legal Information Management*, vol. 17, no. 4, pp. 220–228, 2017, DOI: 10.1017/S1472669617000433.
- [2] T. Gooley, *How to Read Nature: Awaken Your Senses to the Outdoors You've Never Noticed*. New York, N.Y.: Experiment, 2017, ISBN: 978-1-61519-429-2.
- [3] ———, *The Lost Art of Reading Nature's Signs*. The Experiment, 2015, ISBN: 978-161519-242-7.
- [4] ———, *The Nature Instinct*. The Experiment, 2018, ISBN: 978-1-61519-516-9.
- [5] F. Jabr, "The Reading Brain in the Digital Age: The Science of Paper versus Screens," *Scientific American*, Apr. 11, 2013, URL: <https://www.scientificamerican.com/article/reading-paper-screens/> [accessed: 2018-02-27].
- [6] C.-P. Rückemann, F. Hülsmann, B. Gersbeck-Schierholz, P. Skurowski, and M. Staniszewski, *Knowledge and Computing*. Post-Summit Results, Delegates' Summit: Best Practice and Definitions of Knowledge and Computing, September 23, 2015, The Fifth Symposium on Advanced Computation and Information in Natural and Applied Sciences (SACINAS), The 13th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 23–29, 2015, Rhodes, Greece, 2015, Delegates and other contributors: Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU) / Leibniz Universität Hannover / North-German Supercomputing Alliance (HLRN), Germany; Friedrich Hülsmann, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Birgit Gersbeck-Schierholz, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Przemysław Skurowski, Institute of Informatics, Silesian University of Technology, Gliwice, Poland; Michał Staniszewski, Institute of Informatics, Silesian University of Technology, Gliwice, Poland; International EUISP post-graduate participants, ISSC, European Legal Informatics Study Programme, Leibniz Universität Hannover, Germany; DOI: 10.15488/3409, URL: http://www.icnaam.org/sites/default/files/Preliminary_Program_of_ICNAAM_2015.pdf, URL: http://www.scienceparagon.de/cpr/x/publ/2015/delegatesummit2015/rueckemann_icnaam2015.summit_summary.pdf, URL: <https://www.tib.eu/en/search/id/datacite%3Adoi%10.15488%252F3409/Best-Practice-and-Definitions-of-Knowledge-and-Computing/> (TIB.eu), URL: <https://doi.org/10.15488/3409> (DOI).
- [7] Standards catalogue, 01.140.20 - Information sciences, Including documentation, librarianship and archive systems. International Organization for Standardization (ISO), 2019, URL: <https://www.iso.org/ics/01.140.20/x/> [accessed: 2019-01-01].

Bibliography / References (lecture excerpt) II

- [8] "Was ist so "Big" an Big Data?" *library essentials, LE.Informationsdienst*, April 2014, pp. 6–8, 2014, ISSN: 2194-0126, URL: <http://www.libess.de> [accessed: 2014-11-23].
- [9] C. Sherman, "What's the Big Deal About Big Data?" *Online Searcher*, pp. 10–16, 2014, March/April, 2014.
- [10] "Wissensmanagement in Bibliotheken," *library essentials, LE.Informationsdienst*, April 2014, pp. 9–11, 2014, ISSN: 2194-0126, URL: <http://www.libess.de> [accessed: 2014-11-23].
- [11] S. Yadagiri and T. K. Gireesh Kumar, *Knowledge Management: Changing Role of LIS in the Digital Environment*. B. R. Publishing Corporation, Delhi, 2014, in: Libraries in the Changing Dimensions of Digital Technology, Commemorative Publication in Honour of Prof. D. Chandran, 2013, pp. 476–481, URL: <http://eprints.rclis.org/22813> [accessed: 2014-11-23].
- [12] D. E. Knuth, "Backus Normal Form vs. Backus Naur Form," in *Communications of the ACM*, vol. 7, no. 12, 1964, pp. 735–737, DOI: 10.1145/355588.365140.
- [13] P. Naur, "A Course on Algol Programming," p. 5, 1961, note 1, URL: <http://dl.acm.org/citation.cfm?id=1064049&CFID=648579078&CFTOKEN=25521706> [accessed: 2014-01-01].
- [14] J. W. Backus, "The syntax and semantics of the proposed international algebraic language of the Zurich ACM-GAMM Conference," in *Proceedings of the International Conference on Information Processing*, June 15–20, 1959, Paris. Unesco; Butterworths, 1960, pp. 125–132, URL: http://www.softwarepreservation.org/projects/ALGOL/paper/Backus-Syntax_and_Semantics_of_Proposed_IAL.pdf [accessed: 2014-01-01].
- [15] D. E. Knuth, "Literate Programming," *The Computer Journal*, vol. 27, no. 2, pp. 97–111, 1984, URL: 10.1093/comjnl/27.2.97. [Online]. Available: <https://doi.org/10.1093/comjnl/27.2.97>.

Bibliography / References (lecture excerpt) III

- [16] C.-P. Rückemann, "High End Requirements and Practice: Advances in Sciences and Computing," *International Tutorial, June 21, 2015, The Fifth International Conference on Advanced Communications and Computation (INFOCOMP 2015) / DataSys 2015, International Conference on Advances in Information Mining and Management (IMMM 2015), International Conference on Mobile Services, Resources, and Users (MOBILITY 2015), Advanced International Conference on Telecommunications (AICT 2015), International Conference on Internet and Web Applications and Services (CIW 2015), International Conference on Smart Portable, Wearable, Implantable and Disability-oriented Devices and Systems (SPWID 2015), International Conference on Internet Monitoring and Protection (ICIMP 2015), International Conference on Smart Systems, Devices and Technologies (SMART 2015), June 21–26, 2015, Brussels, Belgium [Lecture]*, 2015, URL: http://www.aria.org/conferences2015/filesINFOCOMP15/rueckemann.infocomp2015_tutorial.sanitized.sec.pdf.
- [17] UDC, *Universal Decimal Classification*. British Standards Institute (BSI), 2005, complete Edition, ISBN: 0-580-45482-7, Vol. 1 and 2.
- [18] M. J. Bates, *Theories of Information Behavior*. Medford, NJ: Information Today, 2005, ch. An Introduction to Metatheories, Theories, and Models, pp. 1–24, K. E. Fisher, S. Erdlez, and L. McKechnie (Eds.).
- [19] B. Hjørland, *Theories of Information, Communication and Knowledge: Studies in History and Philosophy of Science*. Springer, Dordrecht, 2014, vol. 34, ch. Information Science and Its Core Concepts: Levels of Disagreement, Ibekwe-SanJuan, F. and Dousa, T. (Eds.), ISBN: 978-94-007-6972-4, DOI: 10.1007/978-94-007-6973-1-9.
- [20] H. Robinson, "Remembering things differently: Museums, libraries and archives as memory institutions and the implications for convergence," *Museum Management and Curatorship*, vol. 27, no. 4, pp. 413–429, 2012, DOI: 10.1080/09647775.2012.720188.
- [21] B. Brookes, "The foundations of information science, Part 1: Philosophical aspects," *Journal of Information Science*, vol. 2, no. 3–4, pp. 125–133, 1980, ISSN: 0165-5515, DOI: 10.1177/01655158000200302.
- [22] Library of Congress, "ISBN Converter," 2019, Library of Congress (LoC), Washington, USA, URL: <http://pcn.loc.gov/isbnconv.html> [accessed: 2019-01-01].
- [23] M. L. Balice, Ed., *Information Science*. Britannica Educational Publishing in association with The Rosen Publishing Group, Inc., New York, 2017, ISBN: 978-1-68048-233-1.
- [24] R. E. Rubin, *Foundations of Library and Information Science*, 4th ed. Neal-Schuman Publishers, 2015, ISBN: 978-0-8389-1370-3.

Notes

Bibliography / References (lecture excerpt) IV

- [25] C.-P. Rückemann, Ed., *General Data Protection on the Rise: Who Will be the Owner of Data and Who Will be in Control?* International Expert Panel, July 24, 2018, The Eighth International Conference on Advanced Communications and Computation (INFOCOMP 2018), The Eighth International Conference on Advances in Information Mining and Management (IMMM 2018), DataSys, July 22–26, 2018, Barcelona, Spain, 2018, 29 pages, Contributors: Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU) / Leibniz Universität Hannover / North-German Supercomputing Alliance (HLRN), Germany; Iryna Lishchuk, Leibniz Universität Hannover, Germany; Athanasios Tsitsipas, Institute of Information Resource Management, University of Ulm, Germany; Zlatinka Kovacheva, Middle East College, Oman; Valery Covachev, Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, Bulgaria; Nikola Luhovic, Faculty of Economics and Business University of Zagreb, Croatia; URL: http://www.aria.org/conferences2018/filesINFOCOMP18/InformationProcessing_Panel.pdf.
- [26] A. Gray, "Big Data's Small Lie – The Limitation of Sampling and Approximation in Big Data Analysis," *Datanami*, 2015, July 20, 2015, URL: <http://www.datanami.com/2015/07/20/big-datas-small-lie-the-limitation-of-sampling-and-approximation-in-big-data-analysis> [accessed: 2015-07-26].
- [27] C. Lukasik, "Big Data, Big Misnomer," *Datanami*, 2015, July 22, 2015, URL: <http://www.datanami.com/2015/07/22/big-data-big-misnomer> [accessed: 2015-07-26].
- [28] E. König, "From Information Specialist to Data Specialist, (German: Vom Informationspezialisten zum Datenspezialisten)," *library essentials, LE.Informationsdienst*, March 2016, pp. 8–11, 2016, ISSN: 2194-0126, URL: <http://www.libess.de> [accessed: 2016-03-20].
- [29] T. Koltay, "Data literacy for researchers and data librarians," *Journal of Librarianship and Information Science*, pp. 1–12, 2015, Preprint, DOI: 10.1177/0961000615616450.
- [30] Organisation for Economic Co-operation and Development (OECD), "OECD Principles and Guidelines for Access to Research Data from Public Funding," 2007, URL: <https://www.oecd.org/sti/sci-tech/38500813.pdf> [accessed: 2018-05-19].
- [31] Wissenschaftsrat, "Übergreifende Empfehlungen zu Informationsinfrastrukturen, (English: Spanning Recommendations for Information Infrastructures)," *Wissenschaftsrat, Deutschland, (English: Science Council, Germany)*, Drs. 10466-11, Berlin, 28.01.2011, 2011, URL: <http://www.wissenschaftsrat.de/download/archiv/10466-11.pdf> [accessed: 2014-11-23].

Notes

Bibliography / References (lecture excerpt) V

- [32] ——, "Stellungnahme zum Akademienprogramm," *Wissenschaftsrat, Deutschland, Drs. 9035-09, Saarbrücken, 28.05.2009*, 2009, URL: <http://www.wissenschaftsrat.de/download/archiv/9035-09.pdf> [accessed: 2014-11-23].
- [33] G. Ifrah, *A universal history of numbers: From prehistory to the invention of the computer*. London, 1998.
- [34] C.-P. Rückemann, "High Performance Computing: HLRN-II, Norddeutscher Verbund für Hoch- und Höchstleistungsrechnen," *Regionales Rechenzentrum für Niedersachsen (RRZN), Hannover, Deutschland, 4. Mai 2008, 1. Juni 2008, 3. Juli 2008, 10. Juli 2008, Inauguration HLRN-II [Poster]*, 2008, URL: http://www.user.uni-hannover.de/cpr/x/publ/2008/hlrn-ii/hlrn-ii.poster_inauguration.gif.
- [35] ——, "High Performance Computing: HLRN-II World :: Hardware Overview: Cores, Compute Nodes, Disks (LX Hardware Trace) :: Norddeutscher Verbund für Hoch- und Höchstleistungsrechnen," *Regionales Rechenzentrum für Niedersachsen (RRZN), Hannover, Deutschland, 7. Juni 2008, [Poster]*, 2008, URL: http://www.user.uni-hannover.de/cpr/x/publ/2008/hlrn-ii/hlrn-ii.world_poster.gif.
- [36] ——, *Fundamental Aspects of Information Science, Security, and Computing (Univ. Lecture)*. ISSC, EULISP Lecture Notes, European Legal Informatics Study Programme, Institut für Rechtsinformatik (IRI), Leibniz Universität Hannover, 2019, 780 + D Pages, URL: [http://www.eulisp.de \(Lecture Notes\) \(PDF\)](http://www.eulisp.de (Lecture Notes) (PDF)), URL: <http://scienceparagon.de/cpr/x/rfrodi/en/index.html>.
- [37] ——, *Fundamental Aspects of Information Science, Security, and Computing (Univ. Lecture)*. ISSC, EULISP Lecture Notes, European Legal Informatics Study Programme, Institut für Rechtsinformatik (IRI), Leibniz Universität Hannover, 2018, 780 + D Pages, URL: [http://www.eulisp.de \(Lecture Notes\) \(PDF\)](http://www.eulisp.de (Lecture Notes) (PDF)), URL: <http://scienceparagon.de/cpr/x/rfrodi/en/index.html>.
- [38] E. P. Vordran, *Entwicklungsgeschichte des Computers*. VDE-Verlag GmbH Berlin und Offenbach, 1982, ISBN: 3-8007-1267-9.
- [39] G. W. Leibniz, "(Dyadic System)," 2018, LeibnizCentral, URL: <http://dokumente.leibnizcentral.de/index.php?id=54> [accessed: 2018-12-31].
- [40] ——, "De Progressione Dyadica," 2018, LeibnizCentral, (Dyadic System), URL: <http://dokumente.leibnizcentral.de/index.php?id=95> [accessed: 2018-12-31].

Notes

Bibliography / References (lecture excerpt) VI

- [41] A. Woodie, "Forget the Algorithms and Start Cleaning Your Data," *Datanami*, 2014, March 26, 2014, URL: http://www.datanami.com/datanami/2014-03-26/forget_the_algorithms_and_start_cleaning_your_data.html [accessed: 2014-11-23].
- [42] H. Lau, "Four Ways Your Data is Lying to You," *Datanami*, 2015, June 8, 2015, URL: <http://www.datanami.com/2015/06/08/four-ways-your-data-is-lying-to-you/> [accessed: 2015-06-16].
- [43] T. Dunning, "The Role of Bias In Big Data: A Slippery Slope," *Datanami*, 2015, August 3, 2015, URL: <http://www.datanami.com/2015/08/03/the-role-of-bias-in-big-data-a-slippery-slope/> [accessed: 2015-08-09].
- [44] "Wissensverlust vermeiden beim Abgang von WissenschaftlerInnen," *library essentials, LE.Informationsdienst, Juni/Juli 2014*, pp. 9–11, 2014, ISSN: 2194-0126, URL: <http://www.libess.de> [accessed: 2014-11-23].
- [45] M. E. Jennek, "A Proposed Method for Assessing Knowledge Loss Risk with Departing Personnel," vol. 44, no. 2, 2014.
- [46] E. König, "Die Anzahl der wissenschaftlichen Dokumente im öffentlichen Web," *library essentials, LE.Informationsdienst, November 2014*, pp. 32–33, 2014, ISSN: 2194-0126, URL: <http://www.libess.de> [accessed: 2014-11-23].
- [47] M. Khabsa and C. L. Giles, "The Number of Scholarly Documents on the Public Web," *PLoS ONE, Public Library of Science*, 2014, e93949, vol. 9, no. 5, pp. 1–6, 2014, DOI: 10.1371/journal.pone.0093949, URL: <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0093949> [accessed: 2014-11-23].
- [48] Ponemon Institute, "Cost of Data Breach 2011," 2011, Ponemon Institute / Symantec, URL: <http://www.ponemon.org/library/archives/2012/03> [accessed: 2014-11-23].
- [49] ——, "Data-Security," 2013, Ponemon Institute, URL: <http://www.ponemon.org/data-security> [accessed: 2014-11-23].
- [50] Symantec, "Symantec Data Breach Calculator," 2013, Symantec, URL: <https://databreachcalculator.com/> [accessed: 2014-11-23].

Notes

Bibliography / References (lecture excerpt) VII

- [51] Ponemon Institute, "Data-Security," 2014, Ponemon Institute, URL: <http://www.ponemon.org/data-security> [accessed: 2014-11-23].
- [52] Symantec, "Symantec Data Breach Calculator," 2014, Symantec, URL: <https://databreachcalculator.com/> [accessed: 2014-11-23].
- [53] Ponemon Institute, "2013 Cost of Data Breach: Global Analysis," 2013, Ponemon Institute / Symantec, URL: <http://www.ponemon.org/local/upload/file/2013%20Report%20GLOBAL%20CODB%20FINAL%205-2.pdf> [accessed: 2014-11-23].
- [54] —, "2014 Cost of Data Breach: Global Analysis," May 2014, Ponemon Institute / IBM, Ponemon Institute (c) Research Report, Benchmark research sponsored by IBM, Independently conducted by Ponemon Institute LLC, IBM Document Number: SEL03027USEN, URL: <http://www.ibm.com/services/costofbreach> [accessed: 2014-11-23], URL: <http://public.dhe.ibm.com/common/ssi/ecm/en/sel03027usen/SEL03027USEN.PDF> [accessed: 2014-11-23].
- [55] —, "Ponemon Study Shows the Cost of a Data Breach Continues to Increase," 2014, Ponemon Institute, URL: <http://www.ponemon.org/news-2/23> [accessed: 2014-11-23].
- [56] E. König, "Demonstrate the Value of Libraries Using Bibliometric Analyses (German: Den Wert von Bibliotheken mittels bibliometrischer Analysen nachweisen)," *library essentials, LE.Informationsdienst*, Aug. 2016, pp. 11–16, 2016, ISSN: 2194-0126, URL: <http://www.libess.de> [accessed: 2016-08-20].
- [57] C. W. Belter and N. K. Kaske, "Using Bibliometrics to Demonstrate the Value of Library Journal Collections," *College & Research Libraries*, vol. 77, no. 4, pp. 410–422, Jul. 2016, DOI: 10.5860/crl.77.4.410, URL: <http://crl.acrl.org/content/77/4/410.full.pdf+html> [accessed: 2016-08-20].
- [58] E. König, "Knowledge Organisation Systems in Change (German: Wissensorganisationssysteme im Wandel)," *library essentials, LE.Informationsdienst*, Dec. 2016, pp. 7–10, 2016, ISSN: 2194-0126, URL: <http://www.libess.de> [accessed: 2017-01-01].
- [59] M. Lauruhn and P. Groth, "Sources of Change for Modern Knowledge Organization," *Systems*, Nov. 2016, URL: <https://arxiv.org/abs/1611.00217> [accessed: 2017-01-01].

Notes

Bibliography / References (lecture excerpt) VIII

- [60] R. Leming, "Why is information the elephant asset? An answer to this question and a strategy for information asset management," *Business Information Review*, vol. 32, no. 4, pp. 212–219, 2015, ISSN: 0266-3821 (print), ISSN: 1741-6450 (online), DOI: 10.1177/0266382115616301.
- [61] R. Savolainen, "Cognitive barriers to information seeking: A conceptual analysis," *Journal of Information Science*, vol. 41, no. 5, pp. 613–623, 2015, ISSN: 0165-5515, ISSN: 1741-6485, DOI: 11.1177/0165551515587850.
- [62] B. Russell, *The Principles of Mathematics* (1903), 2nd ed. New York, W. W. Norton & Company, 1937.
- [63] Aristotle, *Metaphysics*, 2008, (Written 350 B.C.E.), Translated by W. D. Ross, Provided by The Internet Classics Archive, URL: <http://classics.mit.edu/Aristotle/metaphysics.html> [accessed: 2018-01-01].
- [64] M. Brouard, *Artificial Unintelligence, How Computers Misunderstand the World*. The MIT Press, Cambridge - Massachusetts, London - England, 2018, ISBN: 978-0-262-03800-3.
- [65] D. Etzold, "Data Poisoning - Backdoors in Machine Learning Models: Miseducation, Machine learning can be maliciously manipulated - we'll show you how," *Linux Magazine USA*, no. 268, pp. 16–20, Mar. 2023.
- [66] J. Weizenbaum, *Computer Power and Human Reason: From Judgment To Calculation*. San Francisco: W. H. Freeman, 1976, ISBN: 0-7167-0463-3.
- [67] —, *Die Macht der Computer und die Ohnmacht der Vernunft*. Suhrkamp, 1978, ISBN: 3-518-27874-6, stw, suhrkamp taschenbuch wissenschaft 274, Erste Auflage.
- [68] A. Marshack, *The Roots of Civilisation: the Cognitive Beginning of Man's First Art, Symbol and Notation*. New York: McGraw-Hill, 1972.
- [69] K. Pearson, *The Grammar of Science*. London: Walter Scott, 1892, The Contemporary Science Series, Havelock Ellis (ed.).
- [70] B. S. Everitt, *The Cambridge Dictionary of Statistics*, 3rd ed. Cambridge University Press, Cambridge, 2006, ISBN: 0-521-69027-7.
- [71] C. M. Bishop, *Pattern Recognition and Machine Learning*. Springer, 2006, ISBN: 0-387-31073-8.

Notes

Bibliography / References (lecture excerpt) IX

- [72] Y. Dodge, *The Oxford Dictionary of Statistical Terms*. Oxford University Press, 2006, ISBN: 0-19-920613-9.
- [73] D. Lindley, "The Philosophy of Statistics," *Journal of the Royal Statistical Society*, 2000, JSTOR 2681060, Series D 49 (3), pp. 293–337, DOI: 10.1111/1467-9884.00238.
- [74] Boethius, "The Consolation of Philosophy," 2004, Gutenberg eBook 14328.
- [75] M. W. Shelley, "Frankenstein; Or, The Modern Prometheus," 1993, Gutenberg eBook 84.
- [76] C. Collodi, "Pinocchio: The Tale of a Puppet," 1993, Gutenberg eBook 16865.
- [77] Aristotle, *Physics*, 2009, (Written 350 B.C.E.), Translated by R. P. Hardie and R. K. Gaye, Provided by The Internet Classics Archive, URL: <http://classics.mit.edu/Aristotle/physics.html> [accessed: 2019-01-01].
- [78] ———, *On Interpretation*, 2008, Peri Hermeneias, (Written 350 B.C.E.), Translated by E. M. Edghill, Provided by The Internet Classics Archive, URL: <http://classics.mit.edu/Aristotle/interpretation.html> [accessed: 2021-08-22], (Organon).
- [79] ———, *Categories*, 2008, (Written 350 B.C.E.), Translated by E. M. Edghill, Provided by The Internet Classics Archive, URL: <http://classics.mit.edu/Aristotle/categories.html> [accessed: 2021-08-22], (Organon).
- [80] ———, *Prior Analytics*, 2008, (Written 350 B.C.E.), Translated by A. J. Jenkinson, Provided by The Internet Classics Archive, URL: <http://classics.mit.edu/Aristotle/prior.html> [accessed: 2021-08-22], (Organon).
- [81] ———, *Posterior Analytics*, 2008, (Written 350 B.C.E.), Translated by G. R. G. Mure, Provided by The Internet Classics Archive, URL: <http://classics.mit.edu/Aristotle/posterior.html> [accessed: 2021-08-22] (Organon).
- [82] ———, *Rhetoric*, 2008, (Written 350 B.C.E.), Translated by W. Rhys Roberts Provided by The Internet Classics Archive, URL: <http://classics.mit.edu/Aristotle/rhetoric.html> [accessed: 2021-08-22].
- [83] C. K. Ogden and I. A. Richards, *The Meaning of Meaning: A Study of the Influence of Language upon Thought and of the Science of Symbolism*, 1923.

Bibliography / References (lecture excerpt) X

- [84] "Venice Time Machine," 2017, URL: <http://vtm.epfl.ch/> [accessed: 2017-05-14].
- [85] J. Dean and S. Ghemawat, "MapReduce: Simplified data processing on large clusters," in *Proceedings of the 6th Conference on Operating Systems Design and Implementation (OSDI 2004)*, 2004, DOI: 10.1.1.163.5292.
- [86] C.-P. Rückemann, "Advanced Computing and Data-Centricity: Saving Value and Taming Complexity," *International Tutorial, November 16, 2016, The Eleventh International Multi-Conference on Computing in the Global Information Technology (ICCGI 2016), The Twelfth International Conference on Wireless and Mobile Communications (ICWMC 2016), The First International Workshop on QoS and Energy-aware Algorithms and Protocols in Wireless and Mobile Communications (QoSE WMC 2016), The Fifth International Conference on Advances in Vehicular Systems, Technologies and Applications (VEHICULAR 2016), The Eighth International Conference on Evolving Internet (INTERNET 2016), The Sixth International Conference on Advanced Collaborative Networks, Systems and Applications (COLLA 2016), The Fifth International Conference on Intelligent Systems and Applications (INTELLI 2016), The International Symposium on Intelligent Manufacturing Environments (InManEnt 2016), The First International Conference on Applications and Systems of Visual Paradigms (VISUAL 2016), The Second International Conference on Human and Social Analytics (HUSO 2016), The First International Conference on Neuroscience and Cognitive Brain Information (BRAININFO 2016) / InfoWare 2016, November 13 - 17, 2016, Barcelona, Spain, [Lecture]*, 2016, URL: http://www.iaria.org/conferences2016/filesICWMC16/Rueckemann_InfoWare2016_Tutorial_Sanitized.pdf.
- [87] ———, "Where Data Lives: Centricity with Complex Data and Advanced Computing," *International Tutorial, April 24, 2016, The Eighth International Conference on Advanced Geographic Information Systems, Applications, and Services (GEOProcessing 2016), International Conference on Digital Society and eGovernments (ICDS 2016), International Conference on Advances in Computer-Human Interactions (ACHI 2016), International Conference on eHealth, Telemedicine, and Social Medicine (eTELEMED 2016), International Conference on Information, Process, and Knowledge Management (eKNOW 2016), International Conference on Mobile, Hybrid, and On-line Learning (eL&mL 2016), A Multidisciplinary View on Digital Support for Healthy Living and Self-management for Health (DIGITAL HEALTHY LIVING 2016) / DigitalWorld 2016, April 24 – 28, 2016, Venice, Italy, [Lecture]*, 2016, URL: http://www.iaria.org/conferences2016/filesGEOprocessing16/rueckemann_digitalworld2016_tutorial_sanitized_sec.pdf.

Bibliography / References (lecture excerpt) XI

- [88] ——, "Information Science, its Assets, Applications, and Instruments," *International Tutorial*, February 24, 2019, *The Eleventh International Conference on Advanced Geographic Information Systems, Applications, and Services (GEOProcessing 2019), International Conference on Digital Society and eGovernments (ICDS 2019), International Conference on Advances in Computer-Human Interactions (ACHI 2019), International Conference on eHealth, Telemedicine, and Social Medicine (eTELEMED 2019), International Conference Mobile, Hybrid, and On-line Learning (el&ml 2019), International Conference on Information, Process, and Knowledge Management (eKNOW 2019), International Conference on Universal Accessibility in the Internet of Things and Smart Environments (SMART ACCESSIBILITY 2019), International Conference on Advances in Sensors, Actuators, Metering and Sensing (ALLSENSORS 2019) / DigitalWorld 2019, February 24 – 28, 2019, Athens, Greece [Lecture]*, 2019, URL: <http://www.iaria.org/conferences2019/GEOProcessing19.html> (HTML), URL: <http://www.iaria.org/conferences2019/TutorialsGEOProcessing19.html> (HTML), URL: <http://www.iaria.org/conferences2019/ProgramGEOProcessing19.html> (HTML), (Invited Speech), (International Tutorial).
- [89] C.-P. Rückemann, R. Pavani, L. Schubert, B. Gersbeck-Schierholz, F. Hülsmann, O. Lau, and M. Hofmeister, *Best Practice and Definitions of Data Value*. Post-Summit Results, Delegates' Summit: Best Practice and Definitions of Data Value, September 13, 2018, The Eighth Symposium on Advanced Computation and Information in Natural and Applied Sciences (SACINAS), The 16th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 13–18, 2018, Rhodes, Greece, 2018, delegates and other contributors: Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU) / Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF) / Leibniz Universität Hannover / North-German Supercomputing Alliance (HLRN), Germany; Raffaella Pavani, Department of Mathematics, Politecnico di Milano, Italy; Lutz Schubert, IOMI, University of Ulm, Germany; Birgit Gersbeck-Schierholz, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Friedrich Hülsmann, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Hofmeister, Martin, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Lau, Olaf, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; DOI: 10.15488/3639, URL: http://history.icnaam.org/icnaam_2018/icnaam.org/sites/default/files/Preliminary%20Program%20of%20ICNAAM%202018_Web_version_.70.pdf, URL: http://icnaam.org/sites/default/files/Preliminary%20Program%20of%20ICNAAM%202018_ver_.70.pdf, URL: http://www.scienceparagon.de/cpr/x/publ/2018/delegatesummit2018/rueckemann_icnaam2018_summit_summary.pdf, URL: <https://www.tib.eu/en/search/id/datacite%3Adoi%2010.15488%252F3639/Best-Practice-and-Definitions-of-Data-Value/> (TIB.eu), URL: <https://doi.org/10.15488/3639> (DOI).

Notes

Bibliography / References (lecture excerpt) XII

- [90] C.-P. Rückemann, O. O. Iakushkin, B. Gersbeck-Schierholz, F. Hülsmann, L. Schubert, and O. Lau, *Best Practice and Definitions of Data Sciences – Beyond Statistics*. Post-Summit Results, Delegates' Summit: Best Practice and Definitions of Data Sciences – Beyond Statistics, September 25, 2017, The Seventh Symposium on Advanced Computation and Information in Natural and Applied Sciences (SACINAS), The 15th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 25–30, 2017, Thessaloniki, Greece, 2017, delegates and other contributors: Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU) / Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF) / Leibniz Universität Hannover / North-German Supercomputing Alliance (HLRN), Germany; Oleg O. Iakushkin, Department of Computer Modelling and Multiprocessor Systems at the Faculty of Applied Mathematics and Control Processes, Saint-Petersburg State University, Russia; Birgit Gersbeck-Schierholz, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Friedrich Hülsmann, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Lutz Schubert, IOMI, University of Ulm, Germany; Lau, Olaf, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; DOI: 10.15488/3411, URL: http://icnaam.org/sites/default/files/Preliminary%20Program%20of%20ICNAAM%202017_ver_.60.pdf, URL: http://www.scienceparagon.de/cpr/x/publ/2017/delegatesummit2017/rueckemann_icnaam2017_summit_summary.pdf, URL: <https://www.tib.eu/en/search/id/datacite%3Adoi%2010.15488%252F3411/Best-Practice-and-Definitions-of-Data-Sciences/> (TIB.eu), URL: <https://doi.org/10.15488/3411> (DOI).
- [91] C.-P. Rückemann, Z. Kovacheva, L. Schubert, I. Lishchuk, B. Gersbeck-Schierholz, and F. Hülsmann, *Best Practice and Definitions of Data-centric and Big Data – Science, Society, Law, Industry, and Engineering*. Post-Summit Results, Delegates' Summit: Best Practice and Definitions of Data-centric and Big Data – Science, Society, Law, Industry, and Engineering, September 19, 2016, The Sixth Symposium on Advanced Computation and Information in Natural and Applied Sciences (SACINAS), The 14th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 19–25, 2016, Rhodes, Greece, 2016, delegates and other contributors: Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU) / Leibniz Universität Hannover / North-German Supercomputing Alliance (HLRN), Germany; Zlatinka Kovacheva, Middle East College, Department of Mathematics and Applied Sciences, Muscat, Oman; Lutz Schubert, University of Ulm, Germany; Iryna Lishchuk, Leibniz Universität Hannover, Institut für Rechtsinformatik, Germany; Birgit Gersbeck-Schierholz, Knowledge in Motion / Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Friedrich Hülsmann, Knowledge in Motion / Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; DOI: 10.15488/3410, URL: http://www.icnaam.org/sites/default/files/Preliminary_Program_of_ICNAAM_2016.pdf, URL: http://history.icnaam.org/icnaam_2016/sites/default/files/Preliminary_Program_ICNAAM_2016_68th.pdf, URL: http://www.scienceparagon.de/cpr/x/publ/2016/delegatesummit2016/rueckemann_icnaam2016_summit_summary.pdf, URL: <https://www.tib.eu/en/search/id/datacite%3Adoi%2010.15488%252F3410> (DOI).

Notes

Bibliography / References (lecture excerpt) XIII

- 3Adoi~10.15488%252F3410/Best-Practice-and-Definitions-of-Data-centric-and/ (TIB.eu), URL: <https://doi.org/10.15488/3410> (DOI).
- [92] R. L. Cooke, *The History of Mathematics: A Brief Course*. John Wiley & Sons, 2005, ISBN: 978-1-118-46029-0.
- [93] R. C. Russel and M. K. Odell, "U.S. patent 1261167," 1918, (Soundex algorithm), patent issued 1918-04-02.
- [94] C.-P. Rückemann, "Archaeological and Geoscientific Objects used with Integrated Systems and Scientific Supercomputing Resources," *International Journal on Advances in Systems and Measurements*, vol. 6, no. 1&2, pp. 200-213, 2013, pages 200-213, ISSN: 1942-261x, LCCN: 2008212470 (Library of Congress), URL: http://www.thinkmind.org/download.php?articleid=sysmea_v6_n12_2013_15 [accessed: 2014-01-12], URL: <http://lccn.loc.gov/2008212470> (LCCN Permalink) [accessed: 2014-01-12].
- [95] "LX SNDX, a Soundex Module Concept for Knowledge Resources," *LX-Project Consortium Technical Report*, 2013, URL: <http://www.user.uni-hannover.de/cpr/x/rprojs/en/> [accessed: 2018-12-31].
- [96] E. Rempel, "tcllib, soundex.tcl, Soundex Tcl Port," 1998, (code after Donald E. Knuth).
- [97] A. Kupries, "tcllib, soundex.tcl, Soundex Tcl Port Documentation," 2003, (code after Donald E. Knuth).
- [98] M. Stok, "Perl, Soundex.pm, Soundex Perl Port," 1994, (code after Donald E. Knuth).
- [99] National Archives and Records Administration, "The Soundex Indexing System," 2007, 2007-05-30, URL: <http://www.archives.gov/research/census/soundex.html> [accessed: 2019-01-01].
- [100] D. E. Knuth, *The Art of Computer Programming: Sorting and Searching*. Addison-Wesley, 1973, vol. 3, ISBN: 978-0-201-03803-3, OCLC: 39472999.
- [101] L. C. Bradley, *Handbook of Data Center Management*, 2nd ed. CRC Press, Taylor & Francis Group, Boca Raton, London, New York, 2018, ISBN: 978-1-138-50574-2.

Notes

Bibliography / References (lecture excerpt) XIV

- [102] B. B. Moran and C. J. Morner, *Library and Information Center Management*, 9th ed. Libraries Unlimited, ABC-CLIO, LLC; Santa Barbara, California; Denver, Colorado; Library and Information Science Text Series, 2018, ISBN: 978-1-4408-5447-7, (first edition authored by Stuart, R. D. and Eastlick, J. T.).
- [103] C. T. Leondes, Ed., *Intelligent Systems, Technology and Applications*. CRC Press, Boca Raton, London, New York, Washington D.C., 2003, ISBN: 0-8493-1121-7, (Six Volume Set), Implementation Techniques: Fuzzy Systems, Neural Networks, and Expert Systems; Signal, Image, and Speech Processing; Database and Learning Systems; Manufacturing, Industrial, and Management Systems; Control and Electric Power Systems;
- [104] L. Wiese, *Advanced Data Management, for SQL, NoSQL, Cloud and Distributed Databases*. De Gruyter Graduate, Oldenbourg, 2015, ISBN: 978-3-11-044140-6.
- [105] J. Taheri, Ed., *Big Data and Software Defined Networks*. IET The Institution of Engineering and Technology, London, UK, 2018, ISBN: 978-1-78561-304-3, COMPUTING SERIES.
- [106] S.-H. Chen, Ed., *Big Data in Computational Social Science and Humanities*. Springer, 2018, ISBN: 978-3-319-95464-6.
- [107] A. M. Cox and E. Verbaan, *Exploring Research Data Management*. Facet Publishing, London, 2018, ISBN: 978-1-78330-279-6.
- [108] S. Buchenau and R. L. Presti, Eds., *Human and Animal Cognition in Early Modern Philosophy and Medicine*. University of Pittsburgh Press, 2017, ISBN: 978-0-8229-4472-0.
- [109] Y. Li and D. Rafiei, *Natural Language Data Management and Interfaces*. Morgan & Claypool Publishers, 2018, ISBN: 978-1-68173-410-1.
- [110] M. N. Zozus, *The Data Book, Collection and Management of Research Data*. Chapman & Hall, CRC Press, Taylor & Francis Group, Boca Raton, London, New York, 2017, vol. 1, ISBN: 978-1-4987-4224-5, Interdisciplinary Statistics Series.
- [111] S. S. Stevens, "On the theory of scales of measurement," *Science*, vol. 102, pp. 677-680, 1946.
- [112] R. McNamee, "How to Fix Social Media Before it's Too Late, an Early Investor on How Facebook Lost its Way," *Time Magazine*, vol. 193, no. 3, pp. 22-28, 2019, Technology, illustrated by John W. Tomac for Time.

Notes

Bibliography / References (lecture excerpt) XV

- [113] G. Frege, *Begriffsschrift, eine der arithmetischen nachgebildete Formelsprache des reinen Denkens*, 1879, Louis Nebert, Halle a. S., URL: <https://gallica.bnf.fr/ark:/12148/bpt6k65658c> [accessed: 2019-01-26].
- [114] B. Russel, "On Denoting," *Mind*, vol. 14, no. 56, pp. 479–493, Oct. 1905, ISSN: 0026-4423, JSTOR: 2248381.
- [115] H. Bußmann, *Lexikon der Sprachwissenschaft*, 2nd ed. Kröner, Stuttgart, 1990, ISBN: 3-520-45202-2.
- [116] H. Bußmann, Ed., *Lexikon der Sprachwissenschaft*, 4th ed. Kröner, Stuttgart, 1990, ISBN: 978-3-520-45204-7.
- [117] A. M. Turing, "On Computable Numbers, with an Application to the Entscheidungsproblem," in *Proceedings of the London Mathematical Society*, vol. s2-42, no. 1, 1937, pp. 230–265, DOI: 10.1112/plms/s2-42.1.230.
- [118] "Sky Disk of Nebra, Astronomical Memogram," 2019, Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt, Landesmuseum für Vorgeschichte, URL: https://www.lda-lsa.de/filme/die_himmelsscheibe_von_nebra/memogramm_und_kalender/ [accessed: 2019-02-02] (Video).
- [119] "The Antikythera Mechanism," 2019, Hellenic Republic Ministry of Culture and Tourism, Hublot, NVP3D, URL: <http://www.antikythera-mechanism.gr/project/overview> [accessed: 2019-02-02] (Video), Alternative: URL: <https://youtu.be/NbLReXJ7EjM> [accessed: 2020-06-20] (Video).

©

2019, 2025

Supra-Curricular

Practical

Experience

Trials

Towards

Information

Science

Supra-Curricular Practical Experience Trials Towards Information Science

Notes

Bibliography / References (lecture excerpt) XVI

- [120] C.-P. Rückemann, Y. Doytsher, P. E. Cruvine, and M. Haris, *Joint International Expert Panel on Quality of Data and Services: Quality of Data and Services: The Essences From Geo-computing, Society/Crowd Sensing, and Mobility/Service-related Sensing, Post-Panel Summary*, March 27, 2018, The Tenth International Conference on Advanced Geographic Information Systems, Applications, and Services (GEOProcessing 2018), and The Third International Conference on Advances in Sensors, Actuators, Metering and Sensing (ALLSENSORS 2018) and The Twelfth International Conference on Digital Society and e-Governments (ICDS 2018), DigitalWorld 2018, March 25 – 29, 2018, Rome, Italy, 2018, 45 pages, Contributors: Claus-Peter Rückemann (Moderator), Westfälische Wilhelms-Universität Münster (WWU) / Leibniz Universität Hannover / North-German Supercomputing Alliance (HLRN), Germany; Yerach Doytsher, Technion - Israel Institute of Technology, Israel; Paulo E. Cruvine, Embrapa Instrumentation, Brazil; Muhammad Haris, GIS Center, PUCIT of the Punjab, Pakistan; Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU) / Leibniz Universität Hannover / North-German Supercomputing Alliance (HLRN), Germany; URL: <http://www.iaria.org/conferences2018/GEOProcessing18.html> (HTML), URL: <http://www.iaria.org/conferences2018/ProgramGEOProcessing18.html> (Programme) (HTML), URL: https://www.iaria.org/conferences2018/filesGEOProcessing18/GEOProcessing_ICDS_ALLSENSORS_2018.ExpertPanel.pdf (PDF). (Invited Speech), (International Expert Panel).
- [121] "Unified Modeling Language (UML)," 2019, URL: <http://uml.org/> [accessed: 2019-03-24].
- [122] "About the Unified Modeling Language Specification 2.5.1," Dec. 2017, OMG – Object Management Group, URL: <https://www.omg.org/spec/UML/> [accessed: 2019-03-24].
- [123] A. E. Bell, "Death by UML Fever," 2004, URL: <https://queue.acm.org/detail.cfm?id=984495> [accessed: 2019-04-07].
- [124] D. Dörner, *Die Logik des Mißlingens, Strategisches Denken in komplexen Situationen*, 3rd ed. Rowohlt, 2003, ISBN: 978-3-499-61578-8.
- [125] D. Dörner and U. Schmid, *Psychologie, Eine Einführung in ihre Grundlagen und Anwendungsfelder*. Kohlhammer, 2011, ch. Modellierung psychischer Prozesse, A. Schütz, M. Brand, H. Selg, S. Lautenbacher, (Eds.), ISBN: 978-3-17-021456-9.
- [126] J. Lloyd, "The Alexander Mosaic," 2015, Ancient History Encyclopedia, Edited and narrated by James Lloyd, (Video), URL: <http://www.ancient.eu> [accessed: 2019-04-07].

©

2019, 2025

Supra-Curricular

Practical

Experience

Trials

Towards

Information

Science

Notes

Bibliography / References (lecture excerpt) XVII

- [127] Amouroux, V., "The End of memory?" 2014, (Video and Trailer), URL: <https://www.zed.fr/en/tv/distribution/catalogue/programme/end-of-memory-the> [accessed: 2019-04-07], Alternative: (VTM part) URL: <https://youtu.be/7wJ8frgSn44> [accessed: 2020-06-20] (Video).
- [128] Plato, *Cratylus*, 2008, (Written 360 B.C.E.), Translated by Benjamin Jowett, Provided by The Internet Classics Archive, URL: <http://classics.mit.edu/Plato/cratylus.html> [accessed: 2019-04-21].
- [129] A. Stern, *The Fall of Language, Benjamin and Wittgenstein on Meaning*. Harvard University Press, Cambridge, Massachusetts, London, England, 2019, ISBN: 978-0-674-24062-9.
- [130] R. B. McMaster and E. L. Usery, Eds., *A Research Agenda for Geographic Information Science*. CRC Press, Boca Raton London New York Washington, D.C., 2015, University Consortium for Geographic Information Science, ISBN: 978-0-8493-2728-5.
- [131] D. Raber, *The Problem of Information, An Introduction to Information Science*. The Scarecrow Press, Inc., Lanham, Maryland, and Oxford, 2003, ISBN: 978-1-4616-7345-3.
- [132] Ancientvine.com, "The Lighthouse of Alexandria and the Ancient Port of Alexandria," 2013, (Video), URL: <https://www.youtube.com/watch?v=kRTPugHpUho> [accessed: 2019-05-05].
- [133] OOWK MEDIA, "Library of Alexandria." –, Ancient Mysteries, (Video), URL: <https://www.youtube.com/watch?v=dgVyR3aeEl4> [accessed: 2019-05-05].
- [134] H. Swindell, "Universal Decimal Classification," 2017, SLIS 731, (Video), URL: <https://www.youtube.com/watch?v=kZQbSs5dsb4> [accessed: 2019-05-05].
- [135] M. P. Satija, "Universal Decimal Classification," 2015, Ministry of Human Resource Development (MHRD), Government of India, Content for Post Graduate Courses, LIS P02 M12c, (Video), URL: <https://www.youtube.com/watch?v=MOKcc-SEUco> [accessed: 2019-05-05].
- [136] "Die Rechenmaschine," 2019, LeibnizCentral – Das Wissensportal zu Gottfried Wilhelm Leibniz. URL: <http://dokumente.leibnizcentral.de/index.php?id=42> [accessed: 2019-05-05].

Notes

Bibliography / References (lecture excerpt) XVIII

- [137] K. Badur, "Operating manual for Leibniz' calculating machine," 2009, Gottfried-Wilhelm-Leibniz-Bibliothek. (Translation: Friedrich Hülsmann), PPN: 624812626, URL: <http://www.leibniz-bibliographie.de/DB=1.95/PPNSET?PPN=624812626> [accessed: 2019-05-05].
- [138] S. F. Mjølsnes, Ed., *A Multidisciplinary Introduction to Information Security*. CRC Press, Taylor and Francis Group, 2012, ISBN: 978-1-4665-0651-0, Discrete Mathematics and Its Applications, Kenneth H. Rosen (Series Ed.).
- [139] F. E. A. El-Samie, Ed., *Information Security for Automatic Speaker Identification*. Springer, 2011, ISBN: 978-1-4419-9697-8, Springer Briefs in Electrical and Computer Engineering / Springer Briefs in Speech Technology, Amy Neustein (Series Ed.).
- [140] O. Blazy and C. Y. Yeun, Eds., *Proceedings of the 12th International Conference on Information Security Theory and Practice (IFIP / WISTP 2018)*, December 10–11, 2018, Brussels, Belgium. LNCS 11469, 2019, ISBN: 978-3-030-20074-9.
- [141] M. E. Whitman and H. J. Mattord, Eds., *Management of Information Security*, 6th ed. Cengage, 2018, ISBN: 978-1-337-40571-3.
- [142] U. H. Rao and U. Nayak, Eds., *The InfoSec Handbook: An Introduction to Information Security*. Apress open, 2014, ISBN: 978-1-4302-6382-1.
- [143] Y. D. Sergeyev, *Arithmetic of Infinity*. Edizioni Orizzonti Meridionali; illustrated edition (October 2003), 2003, ISBN: 978-8889064016.
- [144] B. McKay and K. McKay, "7 Reasons You Should Still Keep a Paper Map in Your Glovebox," 2019, URL: <https://www.artofmanliness.com/articles/paper-road-map/> [accessed: 2019-05-25].
- [145] J. Wegner, "Künstliche Intelligenzen überlegen nicht, was sie nach Feierabend tun," *Die Zeit*, 19. April, 2019, S. 29–30, 2019.
- [146] J. Dräger and R. Müller-Eiselt, "Wir Ahnungslosen," *Die Zeit*, 11. April, 2019, S. 64, 2019.
- [147] F. Bacon, *Novum Organum; Or, True Suggestions for the Interpretation of Nature*. New York, P. F. Collier & Son, MCMII, 1902, Editor: Joseph Devey, Original publication by Sir Francis Bacon in 1620; Project Gutenberg, eBook, EBook-No.: 45988, Release Date: June 15, 2014, Digitised Version of the Original Publication, Produced by Jana Smá, Marie Bartolo, Bryan Ness, URL: <http://www.gutenberg.org/ebooks/45988> [accessed: 2019-01-01].

Notes

Bibliography / References (lecture excerpt) XIX

- [148] F. de Saussure, *Cours de linguistique générale*, 1916, (English: Course in General Linguistics), Charles Bally and Albert Sechehaye (eds.).
- [149] Free Software Foundation, Inc., "What is free software? The Free Software Definition," 2019, URL: <http://www.gnu.org/philosophy/free-sw.en.html> [accessed: 2019-11-10].
- [150] R. D. Stacey and C. Mowles, *Strategic Management and Organisational Dynamics: The Challenge of Complexity to ways of thinking about organisations*, 7th ed. Pearson Education Limited, 2015, ISBN: 978-1-292-07874-8.
- [151] F. R. David and F. R. David, *Strategic Management: A Competitive Advantage Approach, Concepts and Cases*, 16th ed. Pearson, 2016, ISBN: 978-0-13-416784-8.
- [152] D. J. Power and C. Heavin, *Data-Based Decision Making and Digital Transformation*. Business Expert Press, 2018, power, D. J. (ed.), ISBN: 978-1-63157-658-4.
- [153] Y. Lau, A. K. Y. Ng, and J. Acevedo, *Principles of Global Supply Chain Management*. Anthem Press, 2019, ISBN: 978-1-78308-955-0.
- [154] R. Lee, Ed., *Proceedings of the Twelfth IEEE/ACIS International Conference on Computer and Information Science (ICIS 2013), June 16-20, 2013, Toki Messe, Niigata, Japan*, vol. 493. Springer, 2013, Studies in Computational Intelligence 493, ISBN: 978-3-319-00804-2, ISSN: 1860-949X.
- [155] C. Kahraman, S. Cebi, S. C. Onar, B. Oztaysi, A. C. Tolga, and I. U. Sari, Eds., *Proceedings of the Conference on Intelligent and Fuzzy Techniques in Big Data Analytics and Decision Making (INFUS 2019), July 23-25, 2019, Istanbul, Turkey, Advances in Intelligent Systems and Computing, Volume 1029*, vol. 1029. Springer, Jun 2019, ISBN: 978-3-030-23755-4, ISSN: 2194-5357.
- [156] J. E. Prescott and S. H. Miller, Eds., *Proven Strategies in Competitive Intelligence, Lessons From the Trenches*. John Wiley and Sons, Inc., 2001, ISBN: 0-471-40178-1.
- [157] J. B. Baker, *The Antitrust Paradigm: Restoring a Competitive Economy*. Harvard University Press, Cambridge, Massachusetts, London, England, Feb 2019, ISBN: 978-0-674-97578-1.

Bibliography / References (lecture excerpt) XX

- [158] A. Lebron, *The Laws of Trading: A Trader's Guide to Better Decision-Making for Everyone*. John Wiley and Sons, Inc., 2019, ISBN: 978-1-119-57421-7.
- [159] "Gcal," 2019, URL: <http://www.gnu.org/software/gcal/> [accessed: 2019-11-10].
- [160] C.-P. Rückemann, "Information Science and Formalisation – Fundaments for Digitisation and Reasoning," *International Expert Panel on Digital Investigations and the Reliability of Evidence - Digital (Uncertainties, Panel on Digital Society, July 31, 2019, The Fifteenth International Conference on Telecommunications (AICT 2019), DataSys, July 28 – August 1, 2019, Nice, France [Lecture]*, 2019, URL: <http://www.iaria.org/conferences2019/AICT19.html> (HTML), URL: <http://www.iaria.org/conferences2019/ProgramAICT19.html> (Programme) (HTML), URL: http://www.iaria.org/conferences2019/filesICIMP19/DigitalInvestigations_ExpertPanel.pdf (PDF), (Invited Speech), (International Expert Panel).
- [161] C.-P. Rückemann, Ed., *Preserving Quality During Information/Data Creation and Processing*. International Expert Panel, July 30, 2019, The Ninth International Conference on Advanced Communications and Computation (INFOCOMP 2019), DataSys, July 28 – August 1, 2019, Nice, France, 2019, 22 pages. Contributors: Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU) / DIMF / Leibniz Universität Hannover, Germany; Małgorzata Pankowska, Department of Informatics, University of Economics in Katowice, Poland; Ahmed Gomaa, University of Scranton, USA; Mauro Dell'Orco, Polytechnic University of Bari, Italy; URL: <http://www.iaria.org/conferences2019/INFOCOMP19.html> (HTML), URL: <http://www.iaria.org/conferences2019/ProgramINFOCOMP19.html> (Programme) (HTML), URL: http://www.iaria.org/conferences2019/filesINFOCOMP19/PreservingQuality_ExpertPanel.pdf (PDF), (Invited Speech), (International Expert Panel).
- [162] C.-P. Rückemann, "The Practical Significance of Information Science and Information Life-cycle," *International Expert Panel on Preserving Quality During Information/Data Creation and Processing, Panel on Information Processing, July 30, 2019, The Ninth International Conference on Advanced Communications and Computation (INFOCOMP 2019), DataSys, July 28 – August 1, 2019, Nice, France [Lecture]*, 2019, URL: <http://www.iaria.org/conferences2019/INFOCOMP19.html> (HTML), URL: <http://www.iaria.org/conferences2019/ProgramINFOCOMP19.html> (Programme) (HTML), URL: http://www.iaria.org/conferences2019/filesINFOCOMP19/PreservingQuality_ExpertPanel.pdf (PDF), (Invited Speech), (International Expert Panel).

Bibliography / References (lecture excerpt) XXI

- [163] C.-P. Rückemann, R. Pavani, B. Gersbeck-Schierholz, A. Tsitsipas, L. Schubert, F. Hülsmann, O. Lau, and M. Hofmeister, *Best Practice and Definitions of Formalisation and Formalism*. Post-Summit Results, Delegates' Summit: Best Practice and Definitions of Formalisation and Formalism, September 25, 2019, The Ninth Symposium on Advanced Computation and Information in Natural and Applied Sciences (SACINAS), The 17th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 23–28, 2019, Rhodes, Greece, 2019, delegates and other contributors: Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU) / Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF) / Leibniz Universität Hannover / North-German Supercomputing Alliance (HLRN), Germany; Raffaella Pavani, Department of Mathematics, Politecnico di Milano, Italy; Birgit Gersbeck-Schierholz, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Athanasis Tsitsipas, IOMI, University of Ulm, Germany; Lutz Schubert, IOMI, University of Ulm, Germany; Friedrich Hülsmann, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Olaf, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Hofmeister, Martin, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; DOI: 10.15488/5241, URL: http://www.scienceparagon.de/cpr/x/publ/2019/delegatesummit2019/rueckemann_icnaam2019_summary.pdf, URL: <https://doi.org/10.15488/5241> (DOI).
- [164] C.-P. Rückemann, "Superordinate Knowledge Based Comprehensive Subset of Conceptual Knowledge for Practical Mathematical-Computational Scenarios," in *The Ninth Symposium on Advanced Computation and Information in Natural and Applied Sciences, Proceedings of The 17th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 23–28, 2019, Rhodes, Greece, Proceedings of the American Institute of Physics (AIP), AIP Conference Proceedings 2293, Volume 2293 A*. AIP Press, American Institute of Physics, Melville, New York, USA, Nov. 2020, pp. 040002-1 – 040002-4, Simos, T. E., Tsitouras, C. (eds.), ISBN-13: 978-0-7354-4025-8, ISSN: 0094-243X (American Institute of Physics Conference Proceedings, print), ISSN: 1551-7616 (online) (eISSN), DOI: 10.1063/5.0026478, URL: <http://proceedings.aip.org/>, URL: <http://link.aip.org/link/?APCPCS/2293/1> (Permalink), URL: <http://dx.doi.org/10.1063/5.0026478> (DOI).
- [165] S. Singh, *The Code Book: The Science of Secrecy from Ancient Egypt to Quantum Cryptography*. Anchor Books, A Division of Random House Inc., New York, 1999, ISBN: 978-0-307-87884-2 (eBook).
- [166] Information Resources Management Association, USA, Ed., *Cryptography: Breakthroughs in Research and Practice*. IGI Global, Hershey, PA, 2020, ISBN: 978-1-79981-763-5.
- [167] R. A. Mollin, *An Introduction to Cryptography*, 2nd ed. Chapman & Hall/CRC, Taylor & Francis Group, 1998, Discrete Mathematics and Its Applications, Rosen, K. H. (ser. ed.), ISBN: 978-1-58488-618-1.

Notes

Bibliography / References (lecture excerpt) XXII

- [168] D. Link, *Archaeology of Algorithmic Artefacts*. Univocal Publishing, 2016, ISBN: 978-1-94541-404-6.
- [169] A. Bäck, *Aristotle's Theory of Abstraction*. Springer: Cham, Heidelberg, New York, Dordrecht, London, 2014, ISBN: 978-3-319-04758-4, ISSN: 1879-8578, The New Synthese Historical Library, (Book Series), Texts and Studies in the History of Philosophy, Volume 73.
- [170] L. Učník, I. Chvatík, and A. Williams, *The Phenomenological Critique of Mathematization and the Question of Responsibility: Formalisation and the Life-World*. Springer, 2015, ISBN: 978-3-319-09827-2, (Collection), Contributions to Phenomenology, Volume 76.
- [171] B. R. J. Schneider, *Travels in Computerland; or, Incompatibilities and Interfaces*. Addison-Wesley Publishing Company, Reading, Massachusetts; Menlo Park, California; London; Amsterdam; Don Mills, Ontario; Sydney, 1974, A Full and True Account of the Implementation of the London Stage Information Bank, ISBN: 0-201-06737-4.
- [172] J. E. Edlund and A. L. Nichols, Eds., *Advanced Research Methods for the Social and Behavioral Sciences*. Cambridge University Press, 2019, ISBN: 978-1-108-42593-3.
- [173] R. Acharyya and N. Bhattacharya, Eds., *Research Methodology for Social Sciences*, ser. Contemporary Issues in Social Science Research. Routledge, Taylor & Francis Group, London and New York, 2020, ISBN: 978-1-38-39051-5.
- [174] K. R. Gupta, *Probability Theory – The Logic of Science*. Atlantic Publishers & Distributors (P) Ltd., 2011.
- [175] A. Davis, Ed., *The Death of Public Knowledge? How Free Markets Destroy the General Intellect*. Goldsmiths Press, 2017, ISBN: 978-1-906897-39-0.
- [176] C.-P. Rückemann, "Knowledge Resource Object Development and Mining with a Knowledge-centric Architecture," *International Journal on Advances in Intelligent Systems*, vol. 13, no. 1&2, pp. 109–118, 2020, 2nd edition, August 24, 2020, Sehring, H.-W., (ed.), pages 109–118, ISSN: 1942-2679, TMDL: intsys.v13.n12.2020.8, (Invited Paper), (Peer Review), URL: http://www.ariajournals.org/intelligent_systems/intsys_v13_n12_2020_paged.pdf (PDF), URL: http://www.thinkmind.org/index.php?viewarticle=articleid=intsys_v13_n12_2020_8 (ThinkMind(TM) Digital Library), URL: http://www.thinkmind.org/download.php?articleid=intsys_v13_n12_2020_8 (PDF) (ThinkMind(TM) Digital Library), URL: http://www.ariajournals.org/intelligent_systems/tocv13n12.html (TOC) (HTML), URL: http://www.ariajournals.org/intelligent_systems/, URL: <http://www.ariajournals.org/indeximpact.html> .

Notes

Bibliography / References (lecture excerpt) XXIII

- [177] ——, "From Knowledge and Meaning Towards Knowledge Pattern Matching: Processing and Developing Knowledge Objects Targeting Geoscientific Context and Georeferencing," in *Proceedings of The Twelfth International Conference on Advanced Geographic Information Systems, Applications, and Services (GEOProcessing 2020)*, (FIRST DATES: March 22 – 26, 2020, Valencia, Spain), (SECOND DATES: June 22 – 25, 2020, Valencia, Spain), November 21 – 25, 2020 - Valencia, Spain. XPS Press, Wilmington, Delaware, USA, 2020, pp. 36–41, rückemann, C.-P. and Dotysher, Y. and Ritz, T. (eds.), ISSN: 2308-393X, ISBN-13: 978-1-61208-762-7, ISBN-13: 978-1-61208-098-7 (Electronic Proceedings), URL: http://www.thinkmind.org/download.php?articleid=geoprocessing_2020_3_10_30035 (PDF), URL: http://www.thinkmind.org/index.php?view=article&articleid=geoprocessing_2020_3_10_30035 (HTML), URL: <http://www.iaria.org/conferences2020/ProgramGEOProcessing20.html> (Programme (HTML)), URL: <http://www.iaria.org/conferences2020/GEOProcessing20.html> (HTML).

- [178] ——, "Practice of Formalised Conceptual Knowledge Complements Realising Multi-disciplinary Knowledge Resources for Natural Sciences and Humanities," *International Journal on Advances in Systems and Measurements*, vol. 12, no. 3&4, 2019, international Academy, Research, and Industry Association (IARIA), Paleologu, C. and Yurish, S. Y., (eds.), pages 169–180, ISSN: 1942-261x, LCCN: 2008212470 (Library of Congress), OCLC: 835720764, EL 3000043646522 (European Library), TMDL: sysmea.v12.n34.2019.3. (Invited Paper), (Peer Review): http://www.iariajournals.org/systems_and_measurements/sysmea_v12_n34_2019_paged.pdf (PDF), URL: http://www.thinkmind.org/index.php?view=article&articleid=sysmea_v12_n34_2019_3 (ThinkMind(TM) Digital Library), URL: http://www.thinkmind.org/download.php?articleid=sysmea_v12_n34_2019_3 (PDF) (ThinkMind(TM) Digital Library), URL: http://www.iariajournals.org/systems_and_measurements/tocv12n34.html (TOC) (HTML), URL: http://www.iariajournals.org/systems_and_measurements/.

Notes

Bibliography / References (lecture excerpt) XXIV

- [179] C.-P. Rückemann, Ed., *Best Practice and Definitions of Formalisation and Formalism*. The Ninth Symposium on Advanced Computation and Information in Natural and Applied Sciences (SACINAS), The 17th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 23–28, 2019, Rhodes, Greece, September 25, 2019, [Lecture], 2019, delegates and other contributors: Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU) / Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF) / Leibniz Universität Hannover / North-German Supercomputing Alliance (HLRN), Germany; Raffaella Pavani, Department of Mathematics, Politecnico di Milano, Italy; Birgit Gersbeck-Schierholz, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Athanasios Tsitsipas, University of Ulm, Germany; Lutz Schubert, University of Ulm, Germany; Friedrich Holsmann, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Lau, Olaf, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Hofmeister, Martin, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; URL: http://history.icnaam.org/icnaam_2019/icnaam.org/sites/default/files/Preliminary%20Program%20ICNAAM%202019%20Working%2042.pdf; URL: <http://icnaam.org/sites/default/files/Preliminary%20Program%20ICNAAM%202019%20Working%2042.pdf>.

- [180] C.-P. Rückemann, "Keynote Lecture: The Reality of Formalisation and Artificial Achievements," *The Ninth Symposium on Advanced Computation and Information in Natural and Applied Sciences (SACINAS), Proceedings of The 17th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 23–28, 2019, Rhodes, Greece, September 25, 2019*, [Lecture], URL: <http://icnaam.org/sites/default/files/Preliminary%20Program%20ICNAAM%202019%20Working%2042.pdf>, 2019.

- [181] ——, "Components and Computational Modules for Knowledge Mapping: A Case of Spatial Knowledge," *International Journal on Advances in Software*, vol. 12, no. 1&2, 2019, international Academy, Research, and Industry Association (IARIA), Dini, P., (ed.), pages 1–10, ISSN: 1942-2628, TMDL: soft.v12.n12.2019.1, (Invited Paper), (Peer Review), Publication date: August 8, 2019, URL: http://www.iariajournals.org/software/soft_v12_n12_2019_paged.pdf (PDF), URL: http://www.thinkmind.org/index.php?view=article&articleid=soft_v12_n12_2019_1 (ThinkMind(TM) Digital Library), URL: http://www.thinkmind.org/download.php?articleid=soft_v12_n12_2019_1 (PDF) (ThinkMind(TM) Digital Library), URL: <http://www.iariajournals.org/software/tocv12n12.html> (TOC) (HTML), URL: <http://www.iariajournals.org/software/>, URL: <http://www.iariajournals.org/indeximpact.html>, URL: <http://lccn.loc.gov/2008212462> (LCCN Permalink), .

Notes

Bibliography / References (lecture excerpt) XXV

- [182] ——, "A Knowledge-centric Computation Architecture and the Case of Knowledge Mining," in *Proceedings of The Ninth International Conference on Advanced Communications and Computation (INFOCOMP 2019), July 28 – August 1, 2019, Nice, France*. XPS Press, Wilmington, Delaware, USA, 2019, rückemann, C.-P. and Doytsher, Y. and Kovacheva, Z. (eds.), pages 35–40, ISSN: 2308-3484, ISBN: 978-1-61208-732-0, ISBN: 978-1-61208-093-2 (Electronic Proceedings), TMDL: infocomp_2019.3_20.60044, Publication date: July 28, 2019, URL: http://www.thinkmind.org/download.php?articleid=infocomp_2019.3_20.60044 (PDF), URL: http://www.thinkmind.org/index.php?view=article&articleid=infocomp_2019.3_20.60044 (HTML), URL: <http://www.thinkmind.org/index.php?view=instance&instance=INFOCOMP+2019> URL: <http://www.aria.org/conferences2019/ProgramINFOCOMP19.html> (Programme) (HTML), URL: <http://www.aria.org/conferences2019/INFOCOMP19.html> (HTML), URL: http://www.aria.org/conferences2019/awardsINFOCOMP19_infocomp2019_e4.pdf (Best Paper Award) (PDF), URL: <http://www.aria.org/conferences2019/AwardsINFOCOMP19.html> (Best Paper Award) (HTML) .

- [183] ——, "Principles of Superordinate Knowledge: Separation of Methodology, Implementation, and Realisation," in *The Eighth Symposium on Advanced Computation and Information in Natural and Applied Sciences. Proceedings of The 16th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 13–18, 2018, Rhodes, Greece, Proceedings of the American Institute of Physics (AIP), AIP Conference Proceedings, Volume 2116, no. 1*. AIP Press, American Institute of Physics, Melville, New York, USA, Jul. 2019, simos, T. E., Tsitouras, C. (eds.), ISBN-13: 978-0-7354-1854-7, ISSN: 0094-243X (American Institute of Physics Conference Proceedings, print), ISSN: 1551-7616 (online) (eISSN), DOI: 10.1063/1.5114033, published July 24, 2019, URL: <http://proceedings.aip.org/>, URL: <https://aip.scitation.org/doi/abs/10.1063/1.5114033> (Permalink), URL: <http://dx.doi.org/10.1063/1.5114033> (DOI), URL: <http://scitation.aip.org/content/aip/proceeding/aipc/2116>, URL: <http://adsabs.harvard.edu/abs/2019AIPC.2116e002R> (The Smithsonian/NASA Astrophysics Data System, SAO/NASA ADS Physics Abstract Service), URL: <https://ui.adsabs.harvard.edu/abs/2019AIPC.2116e002R/abstract> (The Smithsonian/NASA Astrophysics Data System, SAO/NASA ADS Physics Abstract Service), URL: <https://ui.adsabs.harvard.edu/abs/2019AIPC.2116e002R/abstract> (The Smithsonian/NASA Astrophysics Data System, SAO/NASA ADS Physics Abstract Service). [Online]. Available: <http://scitation.aip.org/content/aip/proceeding/aipc/10.1063/1.5114033>

Notes

Bibliography / References (lecture excerpt) XXVI

- [184] C.-P. Rückemann, Ed., *Joint International Expert Panel on Geo-Processing Sensor Information*, February 26, 2019, The Eleventh International Conference on Advanced Geographic Information Systems, Applications, and Services (GEOProcessing 2019), and The Fourth International Conference on Advances in Sensors, Actuators, Metering and Sensing (ALLSENSORS 2019) DigitalWorld 2019, February 24 – 28, 2019, Athens, Greece, 2019, 30 pages, Contributors: Claus-Peter Rückemann (Moderator), Westfälische Wilhelms-Universität Münster (WWU) / Knowledge in Motion, DIMF / Leibniz Universität Hannover, Germany; Douglas Galarus, Utah State University, USA; Weiping Yang, ESRI, USA; Newton Silva de Lima, SEDUC-ULBRA, Manaus, Brazil; Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU) / Knowledge in Motion, DIMF / Leibniz Universität Hannover, Germany; URL: <http://www.aria.org/conferences2019/GEOProcessing19.html> (HTML), URL: <http://www.aria.org/conferences2019/ProgramGEOProcessing19.html> (Programme) (HTML), URL: https://www.aria.org/conferences2019/filesGEOProcessing19/SensingAndDigitalServices_ExpertPanel.pdf (PDF), (Invited Speech), (International Expert Panel).

- [185] C.-P. Rückemann, "Information Science and Geosciences: The Complements of Sensor Information." *Joint International Expert Panel on Geo-Processing Sensor Information, February 26, 2019, The Eleventh International Conference on Advanced Geographic Information Systems, Applications, and Services (GEOProcessing 2019), and The Fourth International Conference on Advances in Sensors, Actuators, Metering and Sensing (ALLSENSORS 2019) DigitalWorld 2019, February 24 – 28, 2019, Athens, Greece [Lecture]*, 2019.

- [186] ——, "Superordinate Knowledge Based Comprehensive Subset of Conceptual Knowledge for Practical Geo-spatial Application Scenarios," in *Proceedings of The Eleventh International Conference on Advanced Geographic Information Systems, Applications, and Services (GEOProcessing 2019), February 24 – 28, 2019, Athens, Greece*. XPS Press, Wilmington, Delaware, USA, 2019, rückemann, C.-P. and Doytsher, Y. (eds.), pages 52–58, ISSN: 2308-393X, ISBN-13: 978-1-61208-687-3, ISBN-13: 978-1-61208-088-8 (Electronic Proceedings), URL: <http://www.thinkmind.org/index.php?view=instance&instance=GEOProcessing+2019>, TMDL: geoprocessing.2019.3_30.30039, Publication date: February 24, 2019, URL: http://www.thinkmind.org/download.php?articleid=geoprocessing_2019_3_30_30039 (PDF), URL: http://www.thinkmind.org/index.php?view=article&articleid=geoprocessing_2019_3_30_30039 (HTML), URL: <http://www.aria.org/conferences2019/ProgramGEOProcessing19.html> (Programme) (HTML), URL: <http://www.aria.org/conferences2019/GEOProcessing19.html> (HTML), URL: http://www.aria.org/conferences2019/awardsGEOprocessing19/geoprocessing2019_a3.pdf (Best Paper Award) (PDF), URL: <http://www.aria.org/conferences2019/AwardsGEOProcessing19.html> (Best Paper Award) (HTML) .

Notes

Bibliography / References (lecture excerpt) XXVII

- [187] ——, "Multi-dimensional Context Creation Based on the Methodology of Knowledge Mapping," *International Journal on Advances in Software*, vol. 11, no. 3&4, 2018, international Academy, Research, and Industry Association (IARIA), Lavazza, L., (ed.), pages 286–298, ISSN: 1942-2628. LCCN: 2008212462 (Library of Congress), TMDL: soft.v11.n34.2018.7, OCoLC: (OCoLC)ocn226966899, (Invited Paper), (Peer Review), Publication date: December 31, 2018, URL: http://www.ariajournals.org/software/soft_v11_n34_2018_paged.pdf (PDF), URL: http://www.thinkmind.org/index.php?view=article&articleid=soft_v11_n34_2018.7 (ThinkMind(TM) Digital Library), URL: http://www.thinkmind.org/download.php?articleid=soft_v11_n34_2018.7 (PDF) (ThinkMind(TM) Digital Library), URL: <http://www.ariajournals.org/software/tocv11n34.html> (TOC) (HTML), URL: <http://www.ariajournals.org/software/>, URL: <http://www.ariajournals.org/indeximpact.html>, URL: <http://lccn.loc.gov/2008212462> (LCCN Permalink), .
- [188] C.-P. Rückemann, Ed., *Best Practice and Definitions of Data Quality*. The Eighth Symposium on Advanced Computation and Information in Natural and Applied Sciences (SACINAS), The 16th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 13–18, 2018, Rhodes, Greece, September 13, 2018, [Lecture], 2018, delegates and other contributors: Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU) / Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF) / Leibniz Universität Hannover / North-German Supercomputing Alliance (HLRN), Germany; Raffaella Pavan, Department of Mathematics, Politecnico di Milano, Italy; Lutz Schubert, IOMI, University of Ulm, Germany; Birgit Gersbeck-Scherholz, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Friedrich Hülemann, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Lau, Olaf, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Hofmeister, Martin, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; URL: http://history.icnaam.org/icnaam_2018/icnaam.org/sites/default/files/Preliminary%20Program%20of%20ICNAAM%202018_Web_version_70.pdf, URL: http://icnaam.org/sites/default/files/Preliminary%20Program%20of%20ICNAAM%202018_ver_70.pdf.
- [189] C.-P. Rückemann, "Learning From Millenniums: Principles of Superordinate Knowledge: Separation of Methodology, Implementation, and Realisation," *The Eighth Symposium on Advanced Computation and Information in Natural and Applied Sciences, Proceedings of The 16th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 13–18, 2018, Rhodes, Greece, Proceedings of the American Institute of Physics (AIP), September 13, 2018, [Lecture]*, URL: http://history.icnaam.org/icnaam_2018/icnaam.org/sites/default/files/Preliminary%20Program%20of%20ICNAAM%202018_Web_version_70.pdf, URL: http://icnaam.org/sites/default/files/Preliminary%20Program%20of%20ICNAAM%202018_ver_70.pdf, 2018.

Notes

Bibliography / References (lecture excerpt) XXVIII

- [190] ——, "Keynote Lecture: Value of Knowledge and Computing Galore or The Objectives Are Governing the Embodiment of Instruments," *The Eighth Symposium on Advanced Computation and Information in Natural and Applied Sciences (SACINAS), Proceedings of The 16th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 13–18, 2018, Rhodes, Greece, September 13, 2018, [Lecture]*, URL: http://icnaam.org/sites/default/files/Preliminary%20Program%20of%20ICNAAM%202018_ver_70.pdf, 2018.
- [191] C.-P. Rückemann, Ed., *Proceedings of The Thirteenth International Multi-Conference on Computing in the Global Information Technology (ICCGI 2018)*, June 22 – 24, 2018, Venice, Italy. Curran Associates, Inc. (2018), 57 Morehouse Lane, Red Hook, NY 12571, USA, Jul. 2018. ISBN-13: 978-1-51086-549-5 (softcover), URL: <http://www.proceedings.com/40120.html>, URL: <http://toc.proceedings.com/40120webtoc.pdf>.
- [192] C.-P. Rückemann and K. Daimi, Eds., *Proceedings of The Sixth International Conference on Building and Exploring Web Based Environments (WEB 2018)*, May 20–24, 2018, Nice, France. Curran Associates, Inc. (2018), 57 Morehouse Lane, Red Hook, NY 12571, USA, Jul. 2018. ISBN-13: 978-1-51086-545-7 (softcover), URL: <http://www.proceedings.com/40116.html>, URL: <http://toc.proceedings.com/40116webtoc.pdf>.
- [193] C.-P. Rückemann, "Darknet and Its Public Awareness: Is Reputation of Sciences and Technologies Part of a Gambit?" *International Expert Panel on Facets of Digital Society Drawbacks: How Dark is the Darknet? – Dangers and Possibilities for the Digital Society*, July 25, 2018, DataSys / The Eighth International Conference on Advanced Communications and Computation (INFOCOMP 2018), MODOPT 2018, The International Symposium on Modeling and Optimization, The Thirteenth Advanced International Conference on Telecommunications (AICT 2018), The Thirteenth International Conference on Internet and Web Applications and Services (ICIW 2018), The Thirteenth International Conference on Internet Monitoring and Protection (ICIMP 2018), The Seventh International Conference on Smart Cities, Systems, Devices and Technologies (SMART 2018), The Eighth International Conference on Advances in Information Mining and Management (IMMM 2018), The Eighth International Conference on Mobile Services, Resources, and Users (MOBILITY 2018), The Fourth International Conference on Smart Portable, Wearable, Implantable and Disability-oriented Devices and Systems (SPVID 2018), The Third International Conference on Advances in Computation, Communications and Services (ACCSE 2018), July 22–26, 2018, Barcelona, Spain [Lecture], 2018, uRL: <http://www.aria.org/conferences2018/INFOCOMP18.html> (HTML), URL: <http://www.aria.org/conferences2018/ProgramINFOCOMP18.html> (Programme) (HTML), URL: http://www.aria.org/conferences2018/filesICIMP18/Darknet_Panel.pdf (PDF), (Invited Speech), (International Expert Panel).

Notes

Bibliography / References (lecture excerpt) XXIX

- [194] ——, "The Endangered Species and the Beneficiaries of Data Protection – Cui Bono?" *International Expert Panel on General Data Protection on the Rise: Who Will be the Owner of Data and Who Will be in Control?*, July 24, 2018, *The Eighth International Conference on Advanced Communications and Computation (INFOCOMP 2018), The Eighth International Conference on Advances in Information Mining and Management (IMMM 2018), DataSys, July 22–26, 2018, Barcelona, Spain [Lecture]*, 2018, uRL: <http://www.aria.org/conferences2018/INFOCOMP18.html> (HTML), URL: <http://www.aria.org/conferences2018/ProgramINFOCOMP18.html> (Programme) (HTML), URL: http://www.aria.org/conferences2018/filesINFOCOMP18/InformationProcessing_Panel.pdf (PDF), (Invited Speech), (International Expert Panel).

- [195] ——, "Computation and Knowledge Mapping for Data Entities," in *Proceedings of The Eighth International Conference on Advanced Communications and Computation (INFOCOMP 2018), July 22–26, 2018, Barcelona, Spain*. XPS Press, Wilmington, Delaware, USA, 2018, ruckemann, C.-P. and Flood, I. and Schifano, S. F. and Calore, E. (eds.), pages 7–12, ISSN: 2308-3484, ISBN: 978-1-61208-655-2, ISBN: 978-1-61208-084-0 (Electronic Proceedings), TMDL: infocomp.2018_1.20.60031, Publication date: July 22, 2018, URL: http://www.thinkmind.org/download.php?articleid=infocomp_2018_1_20_60031 (PDF), URL: http://www.thinkmind.org/index.php?view=article&articleid=infocomp_2018_1_20_60031 (HTML), URL: <http://www.thinkmind.org/index.php?view=instance&instance=INFOCOMP+2018> URL: <http://www.aria.org/conferences2018/ProgramINFOCOMP18.html> (Programme) (HTML), URL: <http://www.aria.org/conferences2018/INFOCOMP18.html> (HTML), URL: http://www.aria.org/conferences2018/awardsINFUCOMP18/infocomp2018_a2.pdf (Best Paper Award) (PDF), URL: <http://www.aria.org/conferences2018/AwardsINFUCOMP18.html> (Best Paper Award) (HTML) .

Notes

Bibliography / References (lecture excerpt) XXX

- [196] ——, "Methodology Enabling Knowledge Mining Computation Based on Conceptual Knowledge and Verbal Description," in *The Seventh Symposium on Advanced Computation and Information in Natural and Applied Sciences, Proceedings of The 15th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 25–30, 2017, Thessaloniki, Greece, Proceedings of the American Institute of Physics (AIP), AIP Conference Proceedings, Volume 1978, no. 1*. AIP Press, American Institute of Physics, Melville, New York, USA, Jul. 2018, simos, T. E., Tsitouras, C. (eds.), ISBN-13: 978-0-7354-1690-1 (Book), ISSN: 0994-243X (American Institute of Physics Conference Proceedings, print), ISSN: 1551-7616 (online) (eISSN), DOI: 10.1063/1.5043723, Catkey: 10318871 (Stanford), OCLC: 8154765814, OCLC: 7795784811, (SciVerse Scopus), Deutsche Nationalbibliothek: 011025107 (German National Library), Online publication date: Jul 10, 2018, U.S. Copyright Clearance Center Code: 978-0-7354-1690-1/\$30.00, URL: <http://proceedings.aip.org/>, URL: <http://dx.doi.org/10.1063/1.5043723> (DOI), URL: <http://adsabs.harvard.edu/abs/2018AIPC.1978g002R> (The Smithsonian/NASA Astrophysics Data System, SAO/NASA ADS Physics Abstract Service), URL: <http://adsabs.harvard.edu/abs/2018AIPC.1978g002R> (The Smithsonian/NASA Astrophysics Data System, SAO/NASA ADS Labs), URL: <http://library.mit.edu/item/002637767> (MIT, Massachusetts Institute of Technology Permalink), URL: <https://catalog.princeton.edu/catalog/10943389> (Princeton University), URL: https://catalog.princeton.edu/catalog?q=oocl_s%3A1044757867 (Princeton University), URL: <https://searchworks.stanford.edu/?q=1044757867> (Stanford), URL: <http://www.worldcat.org/oclc/8154765814> (WorldCat Permalink), URL: <http://www.worldcat.org/oclc/7795784811> (WorldCat Permalink), URL: <http://www.worldcat.org/oclc/1044757867> (WorldCat Permalink), URL: <http://www.worldcat.org/oclc/7795784811> (WorldCat Permalink), URL: <http://www.tib.eu/en/search/id/aip3adoi-10.1063/252f1.5043723/Methodology-enabling-knowledge-mining-computation/> (Permalink, OPAC, TIB.eu), URL: <http://www.worldcat.org/oclc/7795784811> (OPAC, TIB-UB) . [Online]. Available: <https://aip.scitation.org/doi/abs/10.1063/1.5043723>

- [197] ——, "Progressive Advancement of Knowledge Resources and Mining: Integrating Content Factor and Comparative Analysis Methods for Dynamical Classification and Concordances," *International Journal on Advances in Systems and Measurements*, vol. 11, no. 1&2, 2018, international Academy, Research, and Industry Association (IARIA), Paleologu, C., (ed.), pages 47–60, ISSN: 1942-261x, LCCN: 20080212470 (Library of Congress), OCLC: 835720764, EL 3000043646522 (European Library), TMDL: sysmea.v11.n12.2018.5, (Invited Paper), (Peer Review), URL: http://www.ariajournals.org/systems_and_measurements/sysmea_v11_n12_2018_paged.pdf (PDF), URL: http://www.thinkmind.org/index.php?view=article&articleid=sysmea_v11_n12_2018_5 (ThinkMind(TM) Digital Library), URL: http://www.thinkmind.org/download.php?articleid=sysmea_v11_n12_2018_5 (PDF) (ThinkMind(TM) Digital Library), URL: http://www.ariajournals.org/systems_and_measurements/tocv11n12.html (TOC) (HTML), URL: http://www.ariajournals.org/systems_and_measurements/ .

Notes

Bibliography / References (lecture excerpt) XXXI

- [198] ——, *Sustainable Knowledge and Resources Management for Environmental Information and Computation*. Business Expert Press, Manhattan, New York, USA, Mar. 2018, Chapter 3, pages 45–88, in: Huong Ha (ed.), Climate Change Management: Special Topics in the Context of Asia ISBN-13: 978-1-94784-327-1 (paperback), ISBN-13: 978-1-94784-328-8 (e-book), OCLC: 1023537309, OCLC: 1028052190, URL:
<http://www.businessexpertpress.com/books/climate-change-management-special-topics-in-the-context-of-asia/>, URL:
<http://mit.worldcat.org/oclc/1023537309> (MIT Libraries, Massachusetts Institute of Technology Worldcat Permalink), URL:
<http://beacon.worldcat.org/oclc/1023537309> (Jet Propulsion Laboratory Library, California Institute of Technology Permalink), URL:
<http://www.worldcat.org/oclc/1023537309> (Worldcat Permalink), URL:
<http://mit.worldcat.org/oclc/1028052190> (MIT Libraries, Massachusetts Institute of Technology Worldcat Permalink), URL:
<http://beacon.worldcat.org/oclc/1028052190> (Jet Propulsion Laboratory Library, California Institute of Technology Permalink), URL:
<http://www.worldcat.org/oclc/1028052190> (Worldcat Permalink), URL:
<https://www.safaribooksonline.com/library/view/climate-change-management/9781947843288/chapter03.xhtml> (Information) (HTML), URL: <https://books.google.de/books?id=TURLdwAAQBAJ> (Information) (Google Books), in: Robert Soufe (ed.), Business Expert Press Environmental and Social Sustainability for Business Advantage Collection, ISSN: 2327-333X (collection, print), ISSN: 2327-3348 (collection, electronic), URL: <http://www.businessexpertpress.com> (Information) (HTML).
- [199] C.-P. Rückemann, Ed., *Joint International Expert Panel on Quality of Data and Services: Quality of Data and Services: The Essences From Geo-computing, Society/Crowd Sensing, and Mobility/Service-related Sensing*: March 27, 2018, The Tenth International Conference on Advanced Geographic Information Systems, Applications, and Services (GEOProcessing 2018), and The Third International Conference on Advances in Sensors, Actuators, Metering and Sensing (ALLSENSORS 2018) and The Twelfth International Conference on Digital Society and eGovernments (ICDS 2018), DigitalWorld 2018, March 25 – 29, 2018, Rome, Italy, 2018, 45 pages, Contributors: Claus-Peter Rückemann (Moderator), Westfälische Wilhelms-Universität Münster (WWU) / Leibniz Universität Hannover / North-German Supercomputing Alliance (HLRN), Germany; Yerach Dotsher, Technion - Israel Institute of Technology, Israel; Paula E. Crivinel, Embrapa Instrumentation, Brazil; Muhammad Haris, GIS Center, PUCIT University of the Punjab, Pakistan; Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU) / Leibniz Universität Hannover / North-German Supercomputing Alliance (HLRN), Germany; URL:
<http://www.iaria.org/conferences2018/GEOProcessing18.html> (HTML), URL:
<http://www.iaria.org/conferences2018/ProgramGEOProcessing18.html> (Programme) (HTML), URL:
https://www.iaria.org/conferences2018/filesGEOProcessing18/GEOProcessing_ICDS_ALLSENSORS_2018_ExpertPanel.pdf (PDF). (Invited Speech), (International Expert Panel).

Bibliography / References (lecture excerpt) XXXII

- [200] C.-P. Rückemann, "A Knowledge View on Quality of Data and Services: The Grade of Value and its Contemporary Invigoration," *Joint International Expert Panel on Quality of Data and Services: The Essences From Geo-computing, Society/Crowd Sensing, and Mobility/Service-related Sensing, March 27, 2018, The Tenth International Conference on Advanced Geographic Information Systems, Applications, and Services (GEOProcessing 2018), and The Third International Conference on Advances in Sensors, Actuators, Metering and Sensing (ALLSENSORS 2018) and The Twelfth International Conference on Digital Society and eGovernments (ICDS 2018), DigitalWorld 2018, March 25 – 29, 2018, Rome, Italy, [Lecture]*, 2018, uRL:
<http://www.iaria.org/conferences2018/GEOProcessing18.html> (HTML), URL:
<http://www.iaria.org/conferences2018/ProgramGEOProcessing18.html> (Programme) (HTML), URL:
https://www.iaria.org/conferences2018/filesGEOProcessing18/GEOProcessing_ICDS_ALLSENSORS_2018_ExpertPanel.pdf (PDF). (Invited Speech), (International Expert Panel).
- [201] ——, "Faceting the Holocene-prehistoric Inventory of Volcanological Features Groups, Towards Sustainable Multi-disciplinary Context Integration in Prehistory and Archaeology Based on the Methodology of Coherent Conceptual Knowledge Contextualisation," *International Journal on Advances in Intelligent Systems*, vol. 15, no. 3&4, 2022, sehring, H.-W., (ed.), pages 115–129, ISSN: 1942-2679, LCCN: 2008212456 (Library of Congress), TMDL: intsys.v15.n34.2022.4, (Invited Paper), (Peer Review), URL:
http://www.iariajournals.org/intelligent_systems/intsys_v15_n34_2022_paged.pdf (PDF), URL:
http://www.thinkmind.org/index.php?view=article&articleid=intsys_v15_n34_2022_4 (ThinkMind(TM) Digital Library), URL: http://www.thinkmind.org/download.php?articleid=intsys_v15_n34_2022_4 (PDF) (ThinkMind(TM) Digital Library), URL: http://www.iariajournals.org/intelligent_systems/tocv15n34.html (TOC) (HTML), URL: http://www.iariajournals.org/intelligent_systems/, URL: <http://www.iariajournals.org/indeximpact.html>, .
- [202] ——, "Component Framework Implementation and Realisation for Development and Deployment of a Coherent Multi-disciplinary Conceptual-Knowledge-based Holocene-prehistoric Inventory of Volcanological Features Groups and Faceting," *International Journal on Advances in Intelligent Systems*, vol. 15, no. 3&4, 2022, sehring, H.-W., (ed.), pages 103–114, ISSN: 1942-2679, LCCN: 2008212456 (Library of Congress), TMDL: intsys.v15.n34.2022.3, (Invited Paper), (Peer Review), URL:
http://www.iariajournals.org/intelligent_systems/intsys_v15_n34_2022_paged.pdf (PDF), URL:
http://www.thinkmind.org/index.php?view=article&articleid=intsys_v15_n34_2022_3 (ThinkMind(TM) Digital Library), URL: http://www.thinkmind.org/download.php?articleid=intsys_v15_n34_2022_3 (PDF) (ThinkMind(TM) Digital Library), URL: http://www.iariajournals.org/intelligent_systems/tocv15n34.html (TOC) (HTML), URL: http://www.iariajournals.org/intelligent_systems/, URL: <http://www.iariajournals.org/indeximpact.html>, .

Bibliography / References (lecture excerpt) XXXIII

- [203] ——, "Cognitics and Knowledge Used With Dynamical Processing," *International Journal on Advances in Software*, vol. 8, no. 3&4, pp. 361–376, 2015, [avazza, L., (ed.) Università dell'Insubria - Varese, Italy, ISSN: 1942-2628, LCCN: 2008212462 (Library of Congress), URL: http://www.ariajournals.org/software/soft_v8_n34_2015_page.pdf (PDF), URL: <http://www.ariajournals.org/software/tocv8n34.html> (TOC) (HTML), URL: http://www.thinkmind.org/index.php?view=article&articleid=soft_v8_n34_2015_6 (ThinkMind(TM) Digital Library), URL: <http://www.ariajournals.org/software/>.]
- [204] ——, "Keynote Lecture: The Multi-disciplinary Case of Prehistorical Insight: Information Science at the Edge of Structured Data Comprehension," *The XI-th International Conference - Mathematics of Informational Modeling, Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, July 1-2, 2021, Varna, Bulgaria*, URL: <http://math.bas.bg>, 2021.
- [205] F. Conway and J. Siegelman, *Dark Hero of the Information Age. In Search of Norbert Wiener, The Father of Cybernetics*. Basic Books, Perseus Books Group, New York, 2005, ISBN: 978-0-786-73561-7.
- [206] M. A. L. Bonaventura, *Pompeii Reconstructed*. ArcheoLibri, 2007, ISBN: 978-88-95512-23-5.
- [207] M. My, *Pompeii Reconstructed (DVD)*. ArcheoLibri, produced by MyMax, in: Bonaventura, Maria Antonietta Lozzi (2007): Pompeii Reconstructed, 2007.
- [208] N. T. Nikolitsis, "Archäologische Unterwasser-Expedition bei Rhodos, (English: Archaeological Underwater-Expedition at Rhodes)," *Antike Welt, Zeitschrift für Archäologie und Kulturgeschichte*, (English: Antike Welt, Magazine for Archaeology and Cultural History), vol. 12. Jg., Heft 1, (English: 12th Year, Issue 1), pp. 45–58, 1981.
- [209] J.-F. Champollion, "Lettre à M. Dacier relative à l'alphabet des hiéroglyphes phonétiques," 1822.
- [210] Aristotle, *On Sophistical Refutations*, 2008, (Written 350 B.C.E.), Translated by W. A. Pickard-Cambridge, Provided by The Internet Classics Archive, URL: <http://classics.mit.edu/Aristotle/sophist.refut.html> [accessed: 2021-08-22], (Organon).
- [211] S. F. Mjølsnes, Ed., *A Multidisciplinary Introduction to Information Security*. CRC Press, Taylor and Francis Group, 2012, ISBN: 978-1-4665-0651-0, Discrete Mathematics and Its Applications, Kenneth H. Rosen (Series Ed.).

Notes

Bibliography / References (lecture excerpt) XXXIV

- [212] C.-P. Rückemann, "Enabling Dynamical Use of Integrated Systems and Scientific Supercomputing Resources for Archaeological Information Systems," in *Proceedings of The Second International Conference on Advanced Communications and Computation (INFOCOMP 2012), October 21–26, 2012, Venice, Italy*. XPS, Xpert Publishing Services, 2012, pp. 36–41, pages 36–41, ISBN-13: 978-1-61208-226-4, URL: http://www.thinkmind.org/index.php?view=article&articleid=infocomp_2012_3..10..10012.
- [213] C.-P. Rückemann, Ed., *Integrated Information and Computing Systems for Natural, Spatial, and Social Sciences*. Premier Reference Source, Information Science Reference, IGI Global, 701 E Chocolate Avenue, Suite 200, Hershey PA 17033-1240, USA, Oct. 2012, 543 (xiv + 519) pages, 21 chapters, ill., ISBN: 1-4666-2190-9 (hardcover), DOI: 10.4018/978-1-4666-2190-9, LCCN: 2012019278 (Library of Congress), ISBN-13: 978-1-4666-2190-9 (hardcover), EISBN: 978-1-4666-2191-6 (e-book), ISBN: 978-1-4666-2192-3 (print & perpetual access), OCLC: 798809710, OCLC: 811354262, (Peer Review), (SciVerse Scopus), BNB: GBB373241 (British National Bibliography), System number: 016258550, UIN: BLL01016258550 (British Library), AMICUS: 40804145 (American National Catalogue), uOttawa: b4369678 (University of Ottawa), uOttawa: b4537477 (University of Ottawa), UniSA Record: 1831366 (University of South Australia), UTPA: o798809710 (The University of Texas Pan-American Library), (Texas Tech University), MU: mu3ugb4283235 (Miami Libraries, Florida), CARLI record number: 13161318, Copac UK and Ireland national libraries catalogue, EL 300005313569 (European Library), NBN: GBB373241 (National Bibliography Number), OL2537193M (Open Library), a0312256596 (The Free Library), DocID: 10607845 (Ebrary), Library ID: 219889, URL: <http://www.igi-global.com/book/integrated-information-computing-systems-natural/67413> (Information) (HTML), URL: <http://dx.doi.org/10.4018/978-1-4666-2190-9> (DOI), URL: <http://lccn.loc.gov/2012019278> (LCCN Permalink).
- [214] C.-P. Rückemann, "Methodology and Integrated Knowledge for Complex Knowledge Mining: Natural Sciences and Archaeology Case Study Results," in *Proceedings of The Ninth International Conference on Advanced Geographic Information Systems, Applications, and Services (GEOProcessing 2017), March 19 – 23, 2017, Nice, France*. XPS Press, Wilmington, Delaware, USA, 2017, Rückemann, C.-P. and Doytsher, Y., and Xia, J. C. and Braz, F. J. (eds.), pages 103–109, ISSN: 2308-393X, ISBN-13: 978-1-61208-539-5, ISBN-13: 978-1-61208-069-7 (Electronic Proceedings), URL: http://www.thinkmind.org/index.php?view=article&articleid=geoprocessing_2017-7_10..30036 (HTML).
- [215] Business Insider, "The brain and how we process language," 2016, (Video, Produced by Emma Fierberg, Jessica Orwig), URL: https://www.youtube.com/watch?v=fUSt2UHnj_S8 [accessed: 2019-05-05].

Notes

Bibliography / References (lecture excerpt) XXXV

- [216] N. Doidge, *The Brain That Changes Itself: Stories of Personal Triumph from the Frontiers of Brain Science*. Penguin, 2013, ISBN: 978-0-12-262274-8.
- [217] "The Scientific Power of Thought," 2013, (Video), (audible), URL: <https://www.youtube.com/watch?v=-v-IMSKOtoE> [accessed: 2019-05-05].
- [218] J. Caesar, *De Bello Gallico*, 51 B.C.E.
- [219] C.-P. Rückemann, "Coherent Knowledge Solutions From Prehistory to Future – Towards Coherent Multi-disciplinary Knowledge Reference Implementation Blueprints for Industrial Learning: Insight from Consistent Coherent Conceptual Integration of Prehistory, Archaeology, Natural Sciences, and Humanities," *ML4I – Machine Learning for Industry Forum 2021; hosted by the High-Performance Computing Innovation Center (HPCIC) and Data Science Institute (DSI), at the Lawrence Livermore National Laboratory (LLNL), August 10–12, 2021, Livermore, California, U.S.A.*, (Invited Speech), URL: <http://www.llnl.gov>, 2021.
- [220] ——, "The Information Science Paragon: Allow Knowledge to Prevail, from Prehistory to Future – Approaches to Universality, Consistency, and Long-term Sustainability," *The International Journal "Information Models and Analyses" (IJIMA)*, vol. 9, no. 3, pp. 203–226, 2020, Markov, K. (ed.), ISSN: 1314-6416 (print), Submitted accepted article: November 18, 2020, Publication date: August 17, 2021, URL: <http://www.foibg.com/ijima/vol09/ijima09-03-p01.pdf> [accessed: 2021-08-22].
- [221] ——, "Keynote Lecture: The Information Science Paragon: Allow Knowledge to Prevail, from Prehistory to Future – Approaches to Universality, Consistency, and Long-term Sustainability," *October 20, 2020, Informational Modeling – Theory and Practice, Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, October 20–21, 2020, Sofia, Bulgaria*, URL: <http://math.bas.bg> [accessed: 2021-08-22], 2020.

Notes

Bibliography / References (lecture excerpt) XXXVI

- [222] C.-P. Rückemann, R. Pavani, Z. Kovacheva, B. Gersbeck-Schierholz, F. Hülsmann, and I. Naydenova, *Best Practice and Definitions – Concepts of Cognostic Addressing Structured and Non-structured Data*. Post-Summit Results, Delegates' Summit: Best Practices and Definitions – Concepts of Cognostic Addressing Structured and Non-structured Data, September 20, 2021, The Eleventh Symposium on Advanced Computation and Information in Natural and Applied Sciences (SACINAS), The 19th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 20–26, 2021, Rhodes, Greece, 2021, delegates and other contributors: Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU), Germany / Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany / Leibniz Universität Hannover, Germany; Raffaella Pavani, Department of Mathematics, Politecnico di Milano, Italy; Zlatinka Kovacheva, Institute of Mathematics and Informatics, Bulgarian Academy of Sciences / University of Mining and Geology, Sofia, Bulgaria; Birgit Gersbeck-Schierholz, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Friedrich Hülsmann, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Ina Naydenova, Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, Sofia, Bulgaria; URL: http://www.scienceparagon.de/cpr/x/publ/2021/delegatesummit2021/rueckemann_icnaam2021_summit_summary.pdf, (to appear).
- [223] C.-P. Rückemann, *Fundamental Aspects of Information Science, Security, and Computing* (Univ. Lecture). ISSC, EULISP Lecture Notes, European Legal Informatics Study Programme, Institut für Rechtsinformatik (IRI), Leibniz Universität Hannover, 2015, 780 + D Pages, URL: <http://www.eulisp.de> (Lecture Notes) (PDF), URL: <http://scienceparagon.de/cpr/x/rfrodi/en/index.html> (Abstract) (HTML).
- [224] ——, *Fundamental Aspects of Information Science, Security, and Computing* (Univ. Lecture). ISSC, EULISP Lecture Notes, European Legal Informatics Study Programme, Institut für Rechtsinformatik (IRI), Leibniz Universität Hannover, 2016, 780 + D Pages, URL: <http://www.eulisp.de> (Lecture Notes) (PDF), URL: <http://scienceparagon.de/cpr/x/rfrodi/en/index.html> (Abstract) (HTML).
- [225] ——, *Fundamental Aspects of Information Science, Security, and Computing* (Univ. Lecture). ISSC, EULISP Lecture Notes, European Legal Informatics Study Programme, Institut für Rechtsinformatik (IRI), Leibniz Universität Hannover, 2017, 780 + D Pages, URL: <http://www.eulisp.de> (Lecture Notes) (PDF), URL: <http://scienceparagon.de/cpr/x/rfrodi/en/index.html> (Abstract) (HTML).
- [226] ——, *Fundamental Aspects of Information Science, Security, and Computing* (Univ. Lecture). ISSC, EULISP Lecture Notes, European Legal Informatics Study Programme, Institut für Rechtsinformatik (IRI), Leibniz Universität Hannover, 2020, 800 + D Pages, URL: <http://www.eulisp.eu> (Lecture Notes) (PDF), URL: <http://www.scienceparagon.de/cpr/x/rfrodi/en/index.html> (Abstract) (HTML), ORIG-URL: <http://www.user.uni-hannover.de/cpr/x/rfrodi/en/index.html> (Abstract) (HTML).

Notes

Bibliography / References (lecture excerpt) XXXVII

- [227] ——, *Fundamental Aspects of Information Science, Security, and Computing (Univ. Lecture)*. ISSC, EULISP Lecture Notes, European Legal Informatics Study Programme, Institut für Rechtsinformatik (IRI), Leibniz Universität Hannover, 2021, 800 + D Pages, URL: <http://www.eulisp.eu> (Lecture Notes) (PDF). URL: <http://www.scienceparagon.de/cpr/x/rfrodi/en/index.html> (Abstract) (HTML). ORIG-URL: <http://www.user.uni-hannover.de/cpr/x/rfrodi/en/index.html> (Abstract) (HTML).
- [228] ——, "Digital Speedup Meets Long-term Requirements: Sciences, Knowledge, and Computing," *International Tutorial, March 23, 2014, The Sixth International Conference on Advanced Geographic Information Systems, Applications, and Services (GEOProcessing 2014), International Conference on Digital Society (ICDS 2014), International Conference on Advances in Computer-Human Interactions (ACHI 2014), International Conference on eHealth, Telemedicine, and Social Medicine (eTELEMED 2014), International Conference on Information, Process, and Knowledge Management (eKNOW 2014), International Conference on Mobile, Hybrid, and On-line Learning (eL&ML 2014) / DigitalWorld 2014, March 23–27, 2014, Barcelona, Catalonia, Spain [Lecture]*, 2014, URL: http://www.aria.org/conferences2014/filesICDS14/ICDS2014.Tutorial_rueckemann_digitalworld2014.tutorial_sanitized_sec.pdf.
- [229] ——, "Advances in Geosciences, Natural Sciences, and Humanities: Significance of Knowledge, Processing, and Computing," *International Tutorial, February 24, 2013, The Fifth International Conference on Advanced Geographic Information Systems, Applications, and Services (GEOProcessing 2013), International Conference on Digital Society (ICDS 2013), International Conference on Advances in Computer-Human Interactions (ACHI 2013), International Conference on eHealth, Telemedicine, and Social Medicine (eTELEMED 2013), International Conference on Information, Process, and Knowledge Management (eKNOW 2013), International Conference on Mobile, Hybrid, and On-line Learning (eL&ML 2013), International Conference on Technical and Legal Aspects of the e-Society (CYBERLAWS 2013) / DigitalWorld 2013, February 24 – March 1, 2013, Nice, French Riviera, France, [Lecture]*, 2013, URL: http://www.aria.org/conferences2013/filesGEOProcessing13/rueckemann_digitalworld2013.tutorial_sanitized_sec.pdf.
- [230] ——, "Decision Making and High End Computing," *International Tutorial, October 21, 2012, The Second International Conference on Advanced Communications and Computation (INFOCOMP 2012), International Conference on Advances in Information Mining and Management (IMMM 2012), International Conference on Social Eco-Informatics (SOTICS 2012), International Conference on Mobile Services, Resources, and Users (MOBILITY 2012), International Conference on Global Health Challenges (GLOBAL HEALTH 2012), International Conference on Communications, Computation, Networks and Technologies (INNOV 2012) / DataSys 2012, October 21–26, 2012, Venice, Italy, [Lecture]*, 2012, URL: http://www.aria.org/conferences2012/filesINFOCOMP12/rueckemann_infocomp2012_tutorial_sec.pdf.

Bibliography / References (lecture excerpt) XXXVIII

- [231] C.-P. Rückemann, K. Kaloyanova, Z. Kovacheva, I. Naydenova, F. Hülsmann, and B. Gersbeck-Schierholz, *Best Practice and Definitions – Quality of Knowledge and Quality of Data*. Post-Summit Results, Delegates' Summit: Best Practice and Definitions – Quality of Knowledge and Quality of Data, September 19, 2022, The Twelfth Symposium on Advanced Computation and Information in Natural and Applied Sciences (SACINAS), The 20th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), September 19–25, 2022, Heraklion, Crete, Greece, 2022, delegates and other contributors: Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU), Germany / Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany / Leibniz Universität Hannover, Germany; Kaloyanova, Kalinka, Faculty of Mathematics and Informatics, Sofia University "St. Kliment Ohridski"; Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, Bulgaria; Zlatinka Kovacheva, Institute of Mathematics and Informatics, Bulgarian Academy of Sciences / University of Mining and Geology, Sofia, Bulgaria; Ina Naydenova, Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, Bulgaria; Frieder Hülsmann, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; Birgit Gersbeck-Schierholz, Knowledge in Motion, Unabhängiges Deutsches Institut für Multi-disziplinäre Forschung (DIMF), Germany; DOI: 10.15488/12666, Deutsche Nationalbibliothek: 1271339706 (German National Library), URL: http://www.scienceparagon.de/t/cpr/x/pub1/2022/delegatesummit2022/rueckemann_icnam2022_summit_summary.pdf, URL: <https://www.tib.eu/de/suchen/id/TIBKAT:1780010273/Delegates-Summit-Best-Practice-and-Definitions> (TIB.eu), URL: <https://www.tib.eu/de/suchen/id/datacie:17fdc92965cde6186545b9b5c231a6a24d52f56/Delegates-Summit-Best-Practice-and-Definitions> (TIB.eu), URL: https://www.tib.eu/de/suchen/id/base:sha_15f5ddc5bb799c992eacd22694bec5fd5fd70f/Best-Practice-and-Definitions-Concepts-of-Cognostic (TIB.eu), URL: https://www.repo.uni-hannover.de/bitstream/handle/123456789/12766/rueckemann_icnam2022_summit.pdf, URL: <https://www.repo.uni-hannover.de/handle/123456789/12766?show=full>, URL: <https://doi.org/10.15488/12666> (DOI), URL: <http://d-nb.info/1271339706> (DNB), URL: <http://d-nb.info/1271339706/34> (DNB).