

Key Topics and related Publications by Gerhard Chroust 12:40

February 18, 2020

Table of Contents

1 Cultural and Human Aspects of Systems Engineering	1
2 Sw-Processes: Modeling, Enactment, Improvement and Support Environments	2
3 Formal Methods, Definitions and Programming Languages	3
4 Systems Theory	3
5 Disaster Management	3
6 e-Health	4
7 Humans, Society and ICT	4
8 Architectural Alternatives in Systems Design	5
9 Microprogramming	6
10 History of ICT	6

1 Cultural and Human Aspects of Systems Engineering

[Chroust-19p] G Chroust. Software-Entwicklung im Lichte kultureller Unterschiede. In O. Linsen, M. Mikusz, A. Volland, Y. Yigitbas, M. Engstler, M. and Fazal-Baquaie, and M. Kuhrmann, editors, *Projektmanagement und Vorgehensmodelle 2019 (PVM-2019) - Neue Vorgehensmodelle in Projekten - Führung, Kulturen und Infrastrukturen im Wandel*, pages 83–96. Gesellschaft f. Informatik, Lecture Notes in Informatics, Vol. P-298, 2019, 2019.

[Chroust-16c] G. Chroust and R. (eds.) Motschnig. Workshop: Software-Entwicklungsprozesse und -Produkte im Licht kultureller Unterschiede. In H.C. Mayr and M. Pinzger, editors, *INFORMATIK 2016, Lecture Notes in Informatics (LNI)*, pages 57–126. Gesellschaft für Informatik, Bonn 2016, 2016.

[Chroust-15d] G. Chroust. Chapter 12 : Localization, cultural preferences and global commerce - software like a cooperative partner. In Sushil and G. Chroust, editors, *Systemic Flexibility and Business Agility*, pages 205–222. Springer 2015, 2015. Vienna 2013, Chroust-15d.

[Chroust-08j] G. Chroust. Psychologische Widerstände bei der Einführung computer-gestützter Vorgehensmodelle. In R. Höhn, R. Petrasch, and O. Linssen, editors, *Vorgehensmodelle und der Product Life-cycle - Projekt und Betrieb von IT-Lösungen (15. Workshop der FG WI-VM der GI)*, pages 258–259. Shaker Verlag, Aachen 2008, 2008. nachgeholt von 2007, see also Chroust-07k.

[Chroust-08b] G. Chroust. Localization, culture and global communication. In Goran D. Putnik and Maria Manuela Cunha, editors, *Encyclopedia of Networked and Virtual Organizations, vol II*, pages 829–837. Information Science reference, IGI Global, Hershey USA 2008, 2008.

[Chroust-06a] G. Chroust. Motivation in component-based software development. In Claude Ghaoui, editor, *Encyclopedia of Human Computer Interaction*, pages 414–421. Idea Group Reference, Hershey, London, Melbourne, Singapore, 2006, also: Springer Book Series (electronic), 2006.

2 Sw-Processes: Modeling, Enactment, Improvement and Support Environments

[Chroust-16d] G. Chroust, G. Aumayr, G. Haider, R. Randus, and A. Thür. Prozessmanagement im Katastropheneinsatz: agil, strikt, tolerant und robust? (Process management in disaster management: agile, strict, tolerant and robust?). In M. Engstler, M. Fazal-Baqae, E. Hanser, O. Linssen, M. Mikusz, and A. Volland, editors, *Projektmanagement und Vorgehensmodelle 2016 - Arbeiten in hybriden Projekten: Das Sowohl-als-auch von Stabilität und Dynamik*, pages 93–107. Lecture Notes in Informatics (LNI), vol P-263, Gesellschaft für Informatik, Bonn 2016, 2016.

[Kuhrmann-10w] M. Kuhrmann, G. Kalus, and G. Chroust. Tool-support for software development processes. In M. M. Cruz-Cunha, editor, *Social, Managerial and Organizational Dimensions of Enterprise Information Systems*, pages 213–231. IGI-Publishing, Hershey, USA 2010, 2010.

[Chroust-10v] G. Chroust, M. Kuhrmann, and E. Schoitsch. Modeling software development processes. In M. M. Cruz-Cunha, editor, *Social, Managerial and Organizational Dimensions of Enterprise Information Systems*, pages 31–62. IGI-Publishing, Hershey, USA 2010, 2010.

[Chroust-00f] G. Chroust. Software process models: Structure and challenges. In *Feng, Y. and Notkin, D. and Gaudel, M.C.(ed.): Software: Theory and Practice - Proceedings, IFIP Congress 2000, Aug. 2000, Beijing*, pages 279–286. Kluwer, 2000.

[Chroust-99g] G. Chroust. Inspections. In *G. Chroust and P. Grünbacher: Proceedings European Software Day, Milano, Sept. 1999*, pages 7–11, 1999.

[Spire-98z] SPIRE Project Team. *The SPIRE Handbook - Better, Faster, Cheaper - Software Development in Small Organisations*. Centre of Software Engineering Ltd, Dublin 9, Ireland, 1998.

[Chroust-93e] G. Chroust. Development environments: a multi-level enactment scenario. *Rosenblit J. (ed.): AIS-93, 4th Conf. on AI, Simulation, and Planning in High Autonomy Systems, Tuscon Sept, IEEE C/S Press*, pages 2–13, 1993.

[Chroust-92a] G. Chroust. *Modelle der Software-Entwicklung - Aufbau und Interpretation von Vorgehensmodellen*. Oldenbourg Verlag, 1992, 1992.

[Chroust-90b] G. Chroust, H. Goldmann, and O. Gschwandtner. The role of work management in application development. *IBM System Journal*, 29:2:189–208, 1990.

[Chroust-88g] G. Chroust, O. Gschwandtner, and D. Mutschmann-Sanchez. Das Entwicklungssystem ADPS der IBM. *Gutzwiller T., Österle H. (eds.): Anleitung zu einer praxisorientierten Software-Entwicklungsumgebung, Band 2, AIT Verlag München*, pages 123–148, 1988.

3 Formal Methods, Definitions and Programming Languages

[Chroust-19k] G. Chroust, G. Neubauer, and K. Rainer. Similarity of definitions - challenges of comparison. In P. Doucek, G. Chroust, and V. Oskrdal, editors, *IDIMT-2019, Innovation and Transformation in a Digital World, 28th Interdisciplinary Information Management Talks*, pages 207–215. Trauner Verlag Linz, Sept. 2019, 2019.

[Chroust-03e] G. Chroust. Arithmetische Ausdrücke, Halbordnungen und Compilerbau - Blick zurück mit Wehmut. In *Blaschek, G. and Ferscha, A. and Mössenböck H. and Pomberger, G. (Eds.): Peter Rechenberg - Forscher, Lehrer, Mensch*. Universitätsverlag Rudolf Trauner, 2003. Springer 2003, 2003.

[Chroust-89f] G. Chroust. Application Development with ADPS. *Softwaretechnik - Trends*, 9:3:13–30, 1989.

[Walk-68] K. Walk, K. Alber, K. Bandat, H. Bekic, G. Chroust, V. Kudielka, P. Oliva, and G. Zeisel. Abstract syntax and interpretation of PL/I. Technical report, IBM Laboratory Vienna, TR 25.082, June 1968, 1968.

[Chroust-74c] G. Chroust. *Halbgruppen über Auswertestrategien für arithmetische Ausdrücke*. PhD thesis, Dissertation, Techn. Univ. Wien 1974, 1974.

4 Systems Theory

[Chroust-16j] G. Chroust and D. Finlayson. Anticipation and systems thinking: A key to resilient systems. In J.J. Kineman, editor, *Realizing Sustainable Futures in Socio-Ecological Systems*, pages paper no 2016–2787, 11 pp. International Society for the Systems Sciences (ISSS) 2016, 2016.

5 Disaster Management

[Chroust-18f] G. Chroust. Measuring process management capability in disaster management. In P. Doucek, G. Chroust, and V. Oskrdal, editors, *IDIMT-2018, Strategic Modeling in Management, Economy and Society*, pages 181 –188. Trauner Verlag Linz, no 47, Sept. 2018, 2018.

[Chroust-16d] G. Chroust, G. Aumayr, G. Haider, R. Randus, and A. Thür. Prozessmanagement im Katastropheneinsatz: agil, strikt, tolerant und robust? (Process management in disaster management: agile, strict, tolerant and robust?). In M. Engstler, M. Fazal-Baqae, E. Hanser, O. Linszen, M. Mikusz, and A. Volland, editors, *Projektmanagement und Vorgehensmodelle*

2016 - *Arbeiten in hybriden Projekten: Das Sowohl-als-auch von Stabilität und Dynamik*, pages 93–107. Lecture Notes in Informatics (LNI), vol P-263, Gesellschaft für Informatik, Bonn 2016, 2016.

[Chroust-15b] G. Chroust, G. Ossimitz, M. Roth, N. Sturm, and P. Ziehesberger. First responders in regional disasters: a social responsibility. In M. Mulej and R.G. Dyck, editors, *Social Responsibility - Range of Perspectives per topic and Countries*, page 23. Bentham Science Publishing Ltd., 2015, 2015. Volume 4 of the Series on Social Responsibility.

[Chroust-11e] G. Chroust and G. Ossimitz. A systemic view of interventions in regional disasters. In P. Doucek, G. Chroust, and V. Oskrdal, editors, *IDIMT 2011 Interdisciplinarity in Complex Systems*, vol.36 Sept 2011, pages 81 – 94. Trauner Verlag Linz, 2011, 2011.

[Chroust-17j] G. Chroust and G. Aumayr. Resilience 2.0: Computer-aided disaster management. *J Syst Sci Syst Eng* 2017, vol 26, (2017) no 3, pages 321–335, 2017.

[Chroust-11j] G. Chroust, K. Rainer, N. Sturm, M. Roth, and P. Ziehesberger. Improving resilience of critical human systems in CBRN-emergencies: Challenges for first responders. *Journal of Systems Research and Behavioral Science*, vol 28 (2011), no 5, pages 476–490, 2011.

6 e-Health

[Chroust-18k] G. Chroust and G Aumayr. Applying process view to active and healthy aging (aha) problems. In D. Rousseau, editor, *Innovation and Optimization in Nature and Design , Proc. ISSS 2018, Corvallis*,, page 14. Oregon State University, Corvallis, 2018, id: 3458-12301-1-PB, 2018.

[Chroust-17g] G. Chroust. Software-basierte Prozessunterstützung für lebenswertes Altern. In A. Volland, M. Engstler, M. Fazal-Baqiae, Hanser E., O. Linssen, and Mikusz M., editors, *Projektmanagement und Vorgehensmodelle 2017 (PVM-2017*, pages 199–206. Gesellschaft f. Informatik, Lecture Notes in Informatics, Vol. P-276, 2017, 2017.

[Chroust-17h] G. Chroust and G. Aumayr. Supporting active and healthy aging - an assistive process improvement approach. In L. Berntzen and G. Aumayr, editors, *Smart Interfaces 2017, The Sixth International Conference on Smart Systems, Devices and Technologies*, pages paper 48003, 6 pages. IARIA, Italy 2017, 2017.

[Chroust-15n] G. Chroust and G. Aumayr. Resilience 2.0: ICT for Resilience of Systems. In P. Doucek, G. Chroust, and V. Oskrdal, editors, *IDIMT-2015, Information Technology and Society - Interaction and Interdependence*, pages 13–22. Trauner Verlag Linz, Sept. 2015, 2015.

7 Humans, Society and ICT

[Chroust-16h] G. Chroust. Rumors during crises - the dark brothers of social media. In P. Doucek, G. Chroust, and V. Oskrdal, editors, *IDIMT-2016, Information Technolog, Society and Economy, Strategic Cross-Influences*, pages 107 – 114. Trauner Verlag Linz, Sept. 2016, 2016.

- [Chroust-08zc] G. Chroust. Bridging gaps by cooperation engineering. In G. Kotsis, D. Taniar, E. Pardede, and I. Khalil, editors, *Proc. of the 10th Int. Conference on Information Integration and Web-based Applications and Services (iiWAS2008)*, pages 382–389. OCG (Austrian Computer Sociey) and ACM 2008, 2008.
- [Chroust-08k] G. Chroust. Mutually reenforcing innovations in ICT, business, and society. In M. Mulej, M. Rebernik, and B. Bradec, editors, *STIQUE 2008 - 9th int. Conference on Linking Systems Thinking, Innovation, Quality, Entrepreneurship, and Environment. Maribor 2008*, pages 19–26. University of Maribor and Slovenian Society for System Research, 2008, 2008.
- [Chroust-08n] G. Chroust. E-teaching - eroding the stronghold of teachers. In J. Wilby, editor, *ISSS 2008 "Systems that Make a Difference", Madison 2008*, pages File 981, 14 pages. Int. Systems Science Society, USA 2008 CD-ROM, 2008.
- [Chroust-05m] G. Chroust. The impact of information and communication technology on society's paradigms. In Hoyer, C. and Chroust, G.: *IDIMT 2005 - 13th Interdisciplinary Information Management Talks*, pages 263–284. Verlag Trauner, Linz 2005, 2005.
- [Chroust-04u] G. Chroust and C. Hoyer. Bridging gaps in cooperative environments. In Hofer, C. and Chroust, G.: *IDIMT-2004, 12th Interdisciplinary Information Management Talks, Sept, 2004, Budweis, Verlag Trauner Linz, 2004, Linz*, pages 97–110, 2004.
- [Chroust-96n] G. Chroust and A. Pamminger. Pqs-team-room, need or annoyance? In G. Chroust and Doucek, P. (eds.): *IDIMT-96 : 4nd Interdisciplinary Information Management Talks, Schriftenreihe der Österr. Computergesellschaft, Oldenbourg 1996*, pages 140–148, 1996.

8 Architectural Alternatives in Systems Design

- [Chroust-11f] G. Chroust. The evolution of ict by mutual reinforcing loops: innovation, achievements and new paradigms. In A. Piecq, editor, *8eme Congres International de l' Union Europeenne de Systemique, Oct 19-22. Bruxelles*, page 10. Union Europeenne de Systemique, Bruxelles 2011 (CDROM), 2011.
- [Chroust-08a] G. Chroust and E. Schoitsch. Choosing basic architectural alternatives. In P. F. Tiako, editor, *Designing Software-Intensive Systems: Methods and Principles*, pages 161–221. Idea Group Inc., Hershey, USA 2008, 2008. S-, P-, E- W-systems, SPEW, p164f.
- [Chroust-07b] G. Chroust. Teaching system architecture by architectural dichotomic alternatives. In A. Skavhaug and E. Schoitsch, editors, *Proceedings of the Second ERCIM / DECOs Workshop on Dependable Embedded Systems - Dependability Issues of Networked Embedded Systems: Research, Industrial Experience and Education, Cavtat, Croatia, August 29, 2006*, 2007.
- [Chroust-04c] G. Chroust. The empty chair - uncertain futures and systemic dichotomies. *Systems Research and Behavioral Science*, vol. 21 (2004), pages 227–236, 2004.
- [Chroust-05a] G. Chroust. You can't keep a cake and eat it! dichotomies in systems engineering. In Kokol, P.: *The IASTED International Conference on SOFTWARE ENGINEERING 2005, Innsbruck, Austria*. Acta Press 2005, paper 455-083, 2005.

9 Microprogramming

- [Chroust-89a] G. Chroust. *Mikroprogrammierung und Rechnerentwurf*. Verlag Oldenbourg, (Feb. 1989), 1989.
- [Chroust-84b] G. Chroust. Vertikale verlagerung. *Informatik-Spektrum*, 7:4:243–245, 1984.
- [Chroust-83c] G. Chroust. Software unterstützung durch firmware. *in: Maurer H.(ed.): Überblicke Informationsverarbeitung*, pages 9–53. BI Wissenschaftsverlag, Mannheim, 1983.
- [Chroust-82e] G. Chroust. Firmware engineering. *in: van Spronsen C.J., Richter L. (eds.): Microsystems: Architecture, Integration and Use MICRO-82, North Holland*, pages 131–132, 1982.
- [Chroust-81p] G. Chroust. Firmware and microprogramming in high-end computers. *Proc. SEAS Anniv. Meeting, Nice, SHARE European Association*, pages 795–805, 1981.
- [Chroust-79f] G. Chroust. *Mikroprogrammierung als Werkzeug der Praktischen Informatik*. PhD thesis, Joh. Kepler Univ. Linz, Habilitationsschrift, Nov. 1979, 1979.

10 History of ICT

- [Chroust-20d] G. Chroust. Charles françois (1922-2019): Being an encyclopedia and creating an encyclopedia. *Systems Research and Behavioral Science*, vol 37, no. 1 (Jan 2020) and <https://doi.org/10.1002/sres.2661>, 2020.
- [Chroust-17r] G. Chroust, P. Doucek, and L. Nedomova. A short journey through 25 years of IDIMT conferences. In P. Doucek, G. Chroust, and V. Oskrdal, editors, *IDIMT-2017, Digitalization in Management, Society and Economy*, pages 9–15. Trauner Verlag Linz, no 46, Sept. 2017, 2017.
- [Chroust-09za] G. Chroust and H. Mössenböck, editors. *Informatik macht Zukunft - Zukunftsmacht Informatik - 40 Jahre Informatik an Österreichs Universitäten - Festschrift*. books@ocg, Österreichische Computer Gesellschaft, 2009, 2009.
- [Chroust-09ze] G. Chroust and Zemanek H. *Die Geschichte der Datenverarbeitung - Bibliographie zur Geschichtswand – The History of Data Processing - A Bibliography for the History Wall, Verbesserte und auf den neuesten Stand gebrachte Version*. Institute for Systems Engineering and Automation, J. Kepler Universität Linz, 2009, 2009.
- [Adam-04h] A. Adam and G. Chroust. *Vom himmlischen Uhrwerk zur statistischen Fabrik*. neu herausgegeben und erweitert von Gerhard Chroust, Trauner Verlag Linz, Österr. Computergesellschaft, 2004. mit CD-ROM.