

authored by the

iSAQB

Working Groups

Commented collection of

Software Architecture References

Version 1 (November 2016)



References: Books, articles and other resources on software architecture

This book provides a list of references (books, articles, online-resources, etc.) that are used by the iSAQB e.V. to support the definition of the content of the foundation-curriculum.

English and German

The references in this overview contain both German [DE] and English [EN] entries, and will be referenced from both DE and EN curricula. References written in German are marked with a [DE] prefix.

Comments

For certain references some of the members of iSAQB added their (mostly personal) opinion. Such personal comments are formatted in the following way – to be clearly distinguishable from the pure reference itself:

G.Starke: This is an example of such a personal opinion: I like such comments, as they help readers to select from the otherwise overly broad spectrum of available literature.

B

[Bachmann2000]

Felix Bachmann, Len Bass, Jeromy Carriere, Paul Clements, David Garlan, James Ivers, Robert Nord, Reed Little: Software Architecture Documentation in Practice: Documenting Architectural Layers. Special Report CMU/SEI-2000-SR-004 March 2000, CMU, 2000.

[Bass+2012]

Bass, L., Clements, P. und Kazman, R.: Software Architecture in Practice. 3rd Edition, Addison-Wesley, Reading, Mass., 2012.

Gernot Starke: Although the title suggests otherwise, a quite fundamental (and sometimes abstract) book. The authors have a strong background in ultra-large scale (often military) systems - so their advice might sometimes conflicts with small or lean kinds of projects.

[Bosch2000]

Jan Bosch: Design and Use of Software Architectures: Adopting and Evolving a Product-Line Approach (ACM Press). 07. June 2000, Addison-Wesley Longman, Amsterdam, 2000.

[Brown2015]

Simon Brown: Software Architecture For Developers.
eBook: <http://leanpub.com/software-architecture-for-developers>.

G.Starke: Very pragmatic and practical approach to software architecture.

[Buschmann+1996]

Frank Buschmann, Regine Meunier, Hans Rohnert, Peter Sommerlad: A System of Patterns: Pattern-Oriented Software Architecture: 1 (Wiley Software Patterns). 1. edition 1996, Wiley.

G.Starke: Most likely the most famous and groundbreaking book on architecture patterns.

[Buschmann+2007]

Frank Buschmann, Kevlin Henney, Douglas C. Schmidt: Pattern-Oriented Software Architecture: A Pattern Language for Distributed Computing. Volume 4: Pattern Language for Distributed Object Computing v. 4. 1. edition, John Wiley & Sons, 2007,

C

[Clements+2002]

Paul Clements, Rick Kazman, Mark Klein: Evaluating Software Architectures Methods and Case Studies. Addison-Wesley Longman, Amsterdam, 2001.

[Clements+2010]

Paul Clements, Felix Bachmann, Len Bass, David Garlan, James Ivers, Reed Little, Paulo Merson, Robert L. Nord: Documenting Software Architectures Views and Beyond. 2nd edition, Addison Wesley, 2010.

D

[Dern2006]

[DE] Gernot Dern: Management von IT-Architekturen: Leitlinien für die Ausrichtung, Planung und Gestaltung von Informationssystemen, 3., Aufl. 2009, Vieweg Verlag.

E

[Evans2004]

Eric J. Evans: Domain-Driven Design: Tackling Complexity in the Heart of Software. 2003, Addison-Wesley.

GStarke: The classic textbook on Domain-Driven Design by the creator of this term and discipline. Covers both strategic and tactical design, both organized in pattern families.

F

[Fowler2003]

Martin Fowler: Patterns of Enterprise Application Architecture. Addison-Wesley 2002.

G

[Gamma+1995]

Erich Gamma, Richard Helm, Ralph Johnson, John M. Vlissides: Design Patterns: Elements of Reusable Object-Oriented Software. Addison-Wesley, 1995.

[Gharbi+2014]

[DE] Gharbi M., Koschel, A., Rausch, A., Starke, G.: Basiswissen für Softwarearchitekten. 2. edition, Dpunkt Verlag, 2014.

[Gorton2011]

Gorton, I.: Essential Software Architecture. 2nd edition, Springer, 2011.

H

[Hargis+2004]

Gretchen Hargis, Michelle Carey, Ann Hernandez: Developing Quality Technical Information: A Handbook for Writers and Editors 2nd ed. 2004, Prentice Hall.

[Hofmeister+2000]

Christine Hofmeister, Robert Nord, Dilip Soni: Applied Software Architecture. 1 edition (November 14, 1999), Addison-Wesley Professional, 1999.

[Hohpe+2004]

Hohpe, Gregor und Woolfe, Bobby: Enterprise Integration Patterns: Designing, Building, and Deploying Messaging Solutions. Addison-Wesley 2004.

I

[iSAQB-Glossary]

Starke G., Bohlen M., Mahlberg M., Lilienthal C., Gharbi M., Becker U., Kölsch S., Rausch A.: iSAQB Glossary of Software Architecture Terminology. An extensive glossary of software architecture (and development) terminology. Leanpub (E-Book and online)

<https://leanpub.com/isaqbglossary>

G.Starke: Has been compiled by numerous members of the iSAQB. Explains the terms used and referenced in the iSAQB foundation and advanced level curricula, plus translations from DE to EN and vice versa.

K

[Koschel+2008]

[DE] Dunkel J., Eberhart A., Fischer S., Kleiner C, Koschel A.: Systemarchitekturen für Verteilte Anwendungen - Client-Server, Multi-Tier, SOA, Event-Driven Architectures, P2P, Grid, Web 2.0., 1. Edition, Carl Hanser Verlag München, 2008.

[Kruchten1995]

Philippe Kruchten: The 4+1 View Model of Architecture. Vol. 12 [6], pp. 45-50, 1995. DOI: 10.1109/52.469759, IEEE Software, p. 16, 1995.

M

[Martin2003]

Martin, R. C.: Agile Software Development, Principles, Patterns and Practices., Prentice Hall, 2002.

[MVP]

<http://en.wikipedia.org/wiki/Model%E2%80%93view%E2%80%93presenter>

P

[Parnas1972]

David Parnas: On the criteria to be used in decomposing systems into modules. Volume 15 Issue 12, Dec. 1972 Pages 1053-1058, Communications of the ACM, CACM Homepage archive, 1972.

P.Ghadir: One of the most influential articles ever written in software engineering, introducing encapsulation and modularity.

Q

[Quian+2010]

Qian, K., Fu, X., Tao, L., Xu Ch., Herrera, J.: Software Architecture and Design Illuminated. 1st edition, Jones and Bartlett, 2010.

G.Starke: Well-structure and readable collection of architecture styles and patterns.

R

[Reussner+2008]

[DE] Ralf Reussner (Hrsg.), Wilhelm Hasselbring (Hrsg.): Handbuch der Software-Architektur (Gebundene Ausgabe). 2. Auflage 2008, dpunkt Verlag.

[Rozanski+2011]

Rozanski, Nick/Woods, Eoin: Software Systems Architecture - Working with Stakeholders Using Viewpoints and Perspectives, 2nd Edition, Addison Wesley 2011.

G.Starke: Presents a set of architectural viewpoints and perspectives.

[Rupp+2012]

[DE] Rupp, Ch., Queins, S., SOPHISTen: UML 2 glasklar. 4. Auflage, Carl Hanser Verlag München, 2012.

S

[Schmidt+2000]

Douglas C. Schmidt, Michael Stal, Hans Rohnert, Frank Buschmann: Pattern-Oriented Software Architecture: Volume 2: Patterns for Concurrent and Networked Objects. Wiley, 2000.

[Shaw+1996]

Mary Shaw, Shaw, David Garlan: Software Architecture: Perspectives on an Emerging Discipline., Prentice Hall, 1996.

[Siedersleben2004]

[DE] Johannes Siedersleben: *Moderne Software-Architektur: Umsichtig planen, robust bauen mit Quasar*. 1., Aufl. (Juli 2004), Dpunkt Verlag.

[Starke2015]

[DE] Gernot Starke: *Effektive Softwarearchitekturen*. 7. überarbeitete Auflage, Carl Hanser Verlag, 2015.

[Starke2016]

Gernot Starke: *Effective Software Architectures: iSAQB CPSA-Foundation® Certification Study Guide*. Leanpub, 2016. Available online:

<https://leanpub.com/esa42>.

G.Starke: A compact study guide for the CPSA-Foundation examination, not a comprehensive textbook! Some parts are translated from my German book [Starke2015]

[SWEBOK]

IEEE Software Engineering Body of Knowledge, online:
<https://www.computer.org/web/swebok/v3>

T

[Tilkov+2015]

[DE] Tilkov, S., Eigenbrodt, M., Schreier, S., Wolf, O.: *REST und HTTP: Einsatz der Architektur des Web für Integrationsszenarien*. 3. Auflage, dpunkt Verlag 2015.

[Toth2015]

[DE] Toth, S.: *Vorgehensmuster für Softwarearchitektur - Kombinierbare Praktiken in Zeiten von Agile und Lean*. 2. Auflage, Hanser Verlag 2015.

V

[Vernon2013]

Vernon, V.: *Implementing Domain Driven Design*. 1st edition (Febr. 2013), Addison Wesley, p. 656, 2013.

[Vernon2016]

Vernon, V.: *Domain Driven Design Distilled*. Addison Wesley, 2016.

Z

[Zörner2015]

[DE] Zörner, St.: *Softwarearchitekturen dokumentieren und kommunizieren*. 2. Auflage, Hanser Verlag, 2015.