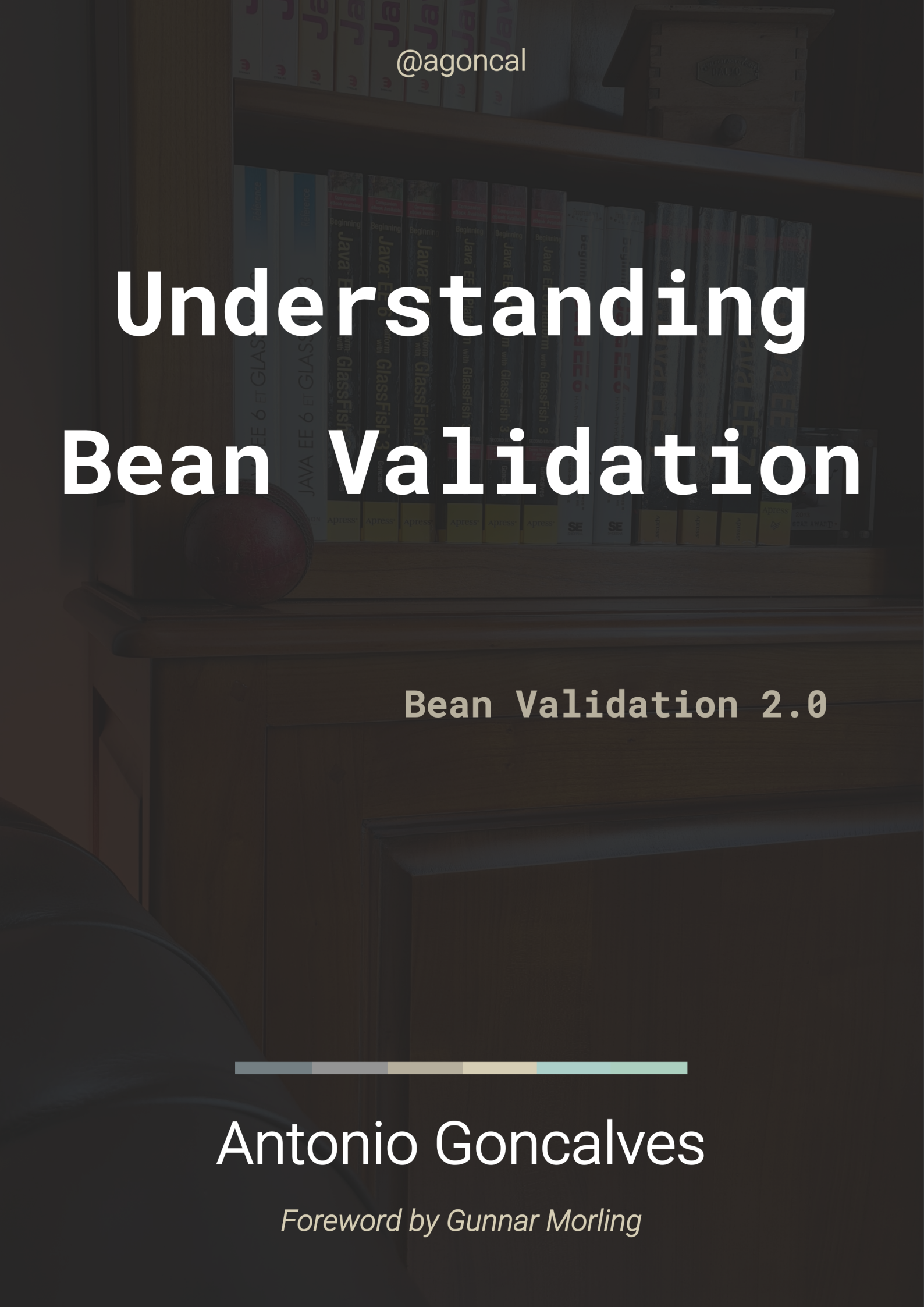
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Understanding Bean Validation
Bean Validation 2.0
Antonio Goncalves
Foreword by Gunnar Morling

Understanding Bean Validation 2.0

Bean Validation

Antonio Goncalves

2021-05-03

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The distribution of the book is made through Amazon KDP (Kindle Direct Publishing).[1]

Any source code referenced by the author in this text is available to readers at https://github.com/agoncal/agoncal-fascicle-bean-validation/tree/2.0. This source code is available for reproduction and distribution as it uses an MIT licence.[2]

- www.antoniogoncalves.org
- agoncal.teachable.com
- www.amazon.com/author/agoncal

You can find two different formats of this fascicle:

- eBook (PDF/EPUB): https://agoncal.teachable.com/p/ebook-understanding-bean-validation
- Paper book: http://amazon.com/Understanding-Bean-Validation-2-0-fascicle/dp/1980399026 (ISBN: 9781980399025)

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> To my wonderful kids, Eloise, Ligia and Ennio, who are the best thing life has given me.

Foreword

Exactly nine years ago, I received an email which would fundamentally change my professional life fundamentally.

The sender was Emmanuel Bernard, spec lead of Bean Validation at that time, asking me whether I'd be interested in writing the documentation for the Bean Validation reference implementation. I had published a few blog posts on Bean Validation and apparently Emmanuel liked them, so he offered me this job. I felt honoured ("Wow, they read my blog?!"), excited ("Yeah, I'll become a famous open source contributor!") but also a bit scared ("Hmm, can I even do that?"). Without thinking too long, I accepted the challenge and went off to write the first chapters of the Hibernate Validator reference documentation. After a while, I sent in a patch file which was eventually committed to the SVN repository. Boy, was I proud?!

I had no idea that this would be the first step on my path to working full-time on open source and even becoming the Bean Validation spec lead myself one day. But I had learned an important thing: thorough documentation, written in an easy-to-follow style is a vital factor for software to become successful. The challenge lies in hitting the sweet spot of completeness (all the relevant features should be covered) and conciseness (the reader should be able to quickly find the information they're after). The best functionality isn't worth much if potential users cannot easily find out about it.

That's why I was immediately convinced of Antonio's idea of ripping apart his tremendously successful book on Java EE and extracting multiple, smaller fascicles out of it. Each one focuses on one specific API, providing a gentle introduction to it as well as discussing more advanced topics at the same time. It's with great joy that I see that the first of these fascicles is dedicated to Bean Validation.

Based on his extensive experience of using Bean Validation in many Java EE and Spring based projects, Antonio did an outstanding job writing this fascicle. Starting with the basics of putting data validation into the wider context of application development and of setting up your first Bean Validation application, the fascicle touches all the important aspects of Bean Validation such as using built-in and custom constraints, message interpolation, validation groups, method validation and much more. A wide range of examples shows, in depth, how to use the API, and there's even detailed instructions for setting up your development environment, making it very easy to get started.

Since I received that email from Emmanuel in February 2009, Bean Validation has come a long way. Closely integrated with many other specifications and technologies such as JPA, JAX-RS, CDI, JavaFX or Spring, it's successfully used in countless projects. Bean Validation 1.1 added the notion of method validation, making it trivial to automatically validate parameters and return values upon method invocation. Bean Validation 2.0, released in 2017 and part of Java EE 8, brought closer integration with Java 8 and the long-awaited support for validating the elements of any generic container type. How this is done? Find out about this and much more by turning over and diving into this excellent fascicle!

Gunnar Morling
Spec Lead of Bean Validation 2.0 (JSR 380)

Hamburg, February 2018

[1] KDP https://kdp.amazon.com

[2] MIT licence https://opensource.org/licenses/MIT

About the Author

Antonio Goncalves is a senior software architect living in Paris. Having been focused on Java development since the late 1990s, his career has taken him to many different countries and companies where he now works as a recognised consultant. As a former employee of BEA Systems (acquired by Oracle), he developed a very early expertise on distributed systems. He is particularly fond of open source and is a member of the OSSGTP (Open Source Solution Get Together Paris). Antonio loves to create bonds with the community. So, he created the Paris Java User Group in 2008 and co-created Devoxx France in 2012 and Voxxed Microservices in 2018.[3]

Antonio wrote his first book on Java EE 5, in French, in 2007. He then joined the JCP to become an Expert Member of various JSRs (Java EE 8, Java EE 7, Java EE 6, CDI 2.0, JPA 2.0, and EJB 3.1) and wrote *Beginning Java EE 7* and *Beginning Java EE 8* with Apress.[4] Still hooked on sharing his knowledge, Antonio Goncalves decided to then self-publish his later fascicles.

For the last few years, Antonio has given talks at international conferences, mainly on Java, distributed systems and microservices, including JavaOne, Devoxx, GeeCon, The Server Side Symposium, Jazoon, and many Java User Groups. He has also written numerous technical papers and articles for IT websites (DevX) and IT magazines (Java Magazine, Programmez, Linux Magazine). Since 2009, he has been part of the French Java podcast called Les Cast Codeurs.[5]

In recognition of his expertise and all of his work for the Java community, Antonio has been elected **Java Champion**.[6]

Antonio is a graduate of the Conservatoire National des Arts et Métiers in Paris (with an engineering degree in IT), Brighton University (with an MSc in object-oriented design), Universidad del Pais Vasco in Spain, and UFSCar University in Brazil (MPhil in Distributed Systems). He also taught for more than 10 years at the Conservatoire National des Arts et Métiers where he previously studied.

Follow Antonio on Twitter (@agoncal) and on his blog (www.antoniogoncalves.org).

[3] Devoxx France https://devoxx.fr

[4] Amazon https://www.amazon.com/author/agoncal

[5] Les Cast Codeurs https://lescastcodeurs.com

[6] Java Champions https://developer.oracle.com/javachampions

Acknowledgments

In your hands, you have a technical fascicle that comes from my history of writing, learning and sharing. When writing, you need a dose of curiosity, a glimpse of discipline, an inch of concentration, and a huge amount of craziness. And of course, you need to be surrounded by people who help you in any possible way (so you don't get totally crazy). And this is the space to thank them.

First of all, I really want to thank my proofreading team. After the process of writing, I was constantly in contact with Gunnar, Youness, and Guillaume who reviewed the book and gave me precious advice. I have to say, it was a real pleasure to work with such knowledgeable developers.

It is a great honour to have **Gunnar Morling** write the foreword for this fascicle. Gunnar is the Specification Lead for Bean Validation 2.0 (JSR 380) and works as a Principal Software Engineer for Red Hat. An open source enthusiast by heart, he contributes to projects such as Hibernate Validator, Search, ORM and OGM and is the lead of Debezium, a platform for change data capture. He is also the founder of MapStruct, a code generator for bean mappings. Gunnar has spoken at conferences such as Devoxx, JavaOne, JavaZone and many others. He tweets as @gunnarmorling and occasionally blogs at http://in.relation.to/gunnar-morling. Gunnar lives and works in Hamburg, Germany.[7]

Youness Teimouri is a Senior Software Java Developer with over a decade of experience in Java development. He has utilised Java stack to grow numerous companies in a variety of industries such as Telecoms, ERP systems and Mobile Banking. He has co-authored and contributed to some papers on Cloud-Computing and some of my previous books. Youness is fascinated by the endless possibilities of Java in different industries and enjoys mentoring junior developers, inspiring them to develop their own Java skill-set. He lives in Canada.[8]

Guillaume Smet is a Senior Software Engineer at Red Hat. He works primarily on Hibernate Validator, Hibernate Search and Hibernate OGM. An Open Source contributor since 2001, he has contributed to a lot of Open Source software (PostgreSQL, pgFouine, GForge etc.). In his spare time, he plays volleyball, does yoga and enjoys a good book - preferably from John Irving. Guillaume blogs about Hibernate at http://in.relation.to/guillaume-smet. He lives in Lyon, France.[9]

Thanks to my proofreader, **Gary Branigan**, who added a Shakespearean touch to the fascicle.

I could not have written this fascicle without the help and support of the Java community: blogs, articles, mailing lists, forums, tweets etc.

The fascicle you have in your hands uses a rich Asciidoctor 2.0.14 toolchain, making it possible to create PDF, EPUB and MOBI files. I am really grateful to the entire Asciidoctor community, and to Dan Allen and Marat Radchenko in particular, who helped me in sorting out a few things so that the end result looks so great.[10] PlantUML is an amazing tool with a very rich syntax for drawing diagrams… and sometimes, you need a bit of help. So, thanks to the PlantUML community.[11] As for the text editor used to write this fascicle, you might have guessed: it's an IDE! Thank you JetBrains for providing me with a free licence for your excellent IntelliJ IDEA.[12]

Living in Paris, I also have to thank all the bars who have given me shelter so that I could write while drinking coffee and talking to people: La Fontaine, Le Chat Bossu, La Grille, La Liberté and

Bottle Shop.

As you might have guessed, I have a passion for IT. But I have other passions such as science, art, philosophy, cooking… and music (I even play jazz guitar). I cannot work without listening to music, so while I was writing this fascicle, I spent most of my time listing to the best radio ever: FIP.[13] Thank you FIP.

And a big kiss to my wonderful kids, Eloise, Ligia and Ennio. They are the best present life has given me.

Thank you all!

[7] Gunnar Morling http://in.relation.to/gunnar-morling

[8] Youness Teimouri http://www.youness-teimouri.com

[9] Guillaume Smet http://in.relation.to/guillaume-smet

[10] Asciidoctor http://asciidoctor.org

[11] PlantUML http://plantuml.com

[12] IntelliJ IDEA https://www.jetbrains.com/idea

[13] FIP https://www.fip.fr