

Book Review

Marc van Dongen – *LaTeX and Friends*, Springer-Verlag (X. Media Publishing Series), 2012, Hardback, 324 pp., ISBN-10: 3642238157, ISBN-13: 978-3642238154

In the last quarter of the century since its creation, and especially in the past ten years, a large number of books have been devoted to \LaTeX , some of them extremely well written. Every time a new one is published (or is about to be published) it is natural to ask whether it was, indeed, necessary or at least useful.

Although I was initially a little skeptical, after reading Marc van Dongen's book I discovered that it covers many topics that are not usually touched on in textbooks.

Most \LaTeX books (and this one is no exception) start with a list of Pros and Cons: "Why should I switch to \LaTeX ?" or "Why should I not?". The first argument the author mentions against \LaTeX is its complexity: "It may take one to several months to learn." Is this really true? Not in the opinion of some of my students in mathematics and computer science who usually think they can learn \LaTeX in a day or two. The problem with \LaTeX is exactly this: it is very easy to learn enough to be able to produce a not very complicated document. But what happens next? Unfortunately, in most cases, you need a considerable amount of effort to become a decent user of \LaTeX . Not all users are willing to make this effort. One of the reasons for this is the lack of intermediate textbooks, and van Dongen's intention is to fill this gap.

The "philosophy" of the book is quite different from that of your "usual" textbook. The aim of the author is, as I see it, to teach you how to produce BEAUTIFUL documents, not just functional ones. The structure of the book reflects directly the philosophy I was mentioning previously. What I want to say is that the most important thing is *the result*, what we want to achieve, rather than the tools we use.

The first two parts cover the basic stuff: how \LaTeX works, and how to typeset text and lists. The third part deals with *Tables, Diagrams and Data Plots*. A good title for this part would have been *Graphics*, and it is, probably, the most useful of the entire book.

There are only a few sources where tables are looked at from a graphical point of view. Van Dongen first describes briefly how to include graphics produced with other programs in a \LaTeX document. In the remaining chapters of this "graphics" part, the author's aim is to explain how to *present* the information using \LaTeX .

The *Diagrams* are described by using the `tikZ` package, a favorite of the author. A short introduction to the package is provided, enough to acquire a working knowledge (and, of course, to produce diagrams). The chapter about tables is about *presenting data in tables*, rather than just the mechanics of making a table. While the approach is far from being exhaustive, there is enough so that the reader can produce a presentable result. In

particular, I noted the care he used to produce beautiful tables, and not just to present data in a suitable tabular manner. Finally, he again shows how to use `tikZ` to describe the presentation of data using different kinds of plots.

The fourth part (*Mathematics and Algorithms*) is fairly standard. I particularly liked the part about Algorithms, and the author's style: he focuses on a very small number of packages and describes each in detail. He shows how these packages can be used to achieve the goal, in this particular case to present an algorithm.

The fifth part is, again, a little bit more advanced and covers both standard material (defining commands, counters, etc.) and material that is usually avoided in elementary textbooks, but which is essential in many situations (for instance, the use of keys).

In the sixth part, I was impressed by the chapter on the use of OpenType fonts, although this material is for more advanced users.

The book covers everything a beginner needs to know as well as a significant number of topics not present in elementary textbooks. Van Dongen's style is easy to read and never dull. The author avoids the temptation of covering entire areas or describing all the packages dealing with a particular subject. He prefers instead to focus on the subject and on a small number of appropriate packages.

What I particularly like is his attention to detail. You can find many small things which are usually skipped, but which contribute to the effectiveness of the book.

In fact, this is one of the very few books on \LaTeX that really takes into consideration the beauty of the document as a whole, and not just particular constructions: You can have beautiful fonts or beautiful equations (and \LaTeX is famous for them) but it is rare that a \LaTeX user knows how to arrange them esthetically on the page. Van Dongen's book itself is a good example of its principles. I liked very much the book's page design, as well as the appearance of figure and table captions.

There is, however, a notable absence in the book: a listing of van Dongen's page layout. It would be useful for readers, and I'm sure my \LaTeX students would have liked to see this. Perhaps Dr. van Dongen could post this online, for example on the \PracTeX Journal site?

In conclusion, this is an excellent introduction to \LaTeX and some of the associated software, suitable both for self-study and as a reference. It is written in a very innovative manner and can be used both by newcomers and more advanced users.

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July 2012