

ASTIN NEWSLETTER

Sep-Oct 2021 | ASTIN, the Non-Life Section of the International Actuarial Association

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Dear members,

Welcome to the September-October 2021 edition of ASTIN Newsletter. This is a general update of ASTIN activities over the past two months as well as its future planned activities.

New ASTIN bulletin

Volume 51, Issue 3 of the ASTIN bulletin was released in September. Article topics range from economic scenario generators and solvency requirements to retirement and pension financing to an assessment of catastrophe insurance markets, the use of AdaBoost to measure driver behaviour and more.

The new issue may be found at [this link](#).

ASTIN Chapters Meeting

Leaders of the ASTIN Chapters representing the ASTIN communities of several countries met for their quarterly meeting on 15 September 2021. They focused the discussion around feedback and lessons learned from the organization and execution of the recent ASTIN Online Colloquium in May of 2021. This [fully online event](#) had been hosted by the Casualty Actuarial Society and the ASTIN Chapters from Denmark, France, Switzerland, Italy, Japan, and Germany, and therefore much of the discussion centred around the success of the online format and areas of improvement. The suggestions and positive feedback received from the Chapters indicated that future online events are viable. Information about future actuarial events was also shared, including upcoming events in Italy, Denmark, and France. If you are interested in joining or forming an ASTIN Chapter, please visit our [website](#) and [contact us](#).

In this context, the Danish ASTIN Chapter organized on the 27th of September its first in-person meeting in a long time, and by the same token celebrated with a year's delay the 20th anniversary of its foundation. The picture below illustrates how well attended it was, and this little [movie](#) demonstrates how happy the members of the Danish Chapter felt to be together again.

In support of actuarial aspects of the OER movement, the ASTIN Section (the non-life section of the International Actuarial Association) recently created a working group called the [ASTIN Academy](#). An international team of 15 contributors from four countries recently developed a [short course](#) based on the first five chapters of the open actuarial textbook, [Loss Data Analytics](#). This book is useful for those who are interested in both property/casualty and health applications and is summarized in greater detail in a later section.

Although the book itself does not depend on any statistical language, the focus of the short course is to demonstrate loss data analytic techniques using R statistical software. In particular,

- There are several sections in each chapter. In each section, we have one or two short videos (5-10 minutes). Following each video is one or two interactive R based tutorial problems. In total, there are 34 videos and 52 exercise tutorials.
- The short course is not tied to any course at an educational institution, nor is there a requirement for completing one section before moving on to another. At many institutions, instructors of statistics courses catering to an actuarial audience often seek insurance/actuarial applications. If you are teaching a course on how to fit a negative binomial or a gamma distribution, we have insurance examples to help support students learning the course material.
- All materials are free and available on the web. The website is based in "html" and requires little bandwidth for users. We wanted to make this course accessible to students who are in the very beginnings of their actuarial journey.
- Students can participate in the course without downloading any software (including R), nor data or overheads to review.

The open actuarial textbook, [Loss Data Analytics](#) was designed to integrate classical actuarial loss data models from applied probability with modern analytic tools, including tools utilized in data science. In particular, we recognized the availability of big data (including social media and usage-based insurance) and high-speed computation.

Two versions of the book exist. One is an online version that contains the content of the book, plus many interactive objects, such as quizzes, computer demonstrations, and interactive graphs, to promote deeper learning. In addition to the online version, there are [pdf and e-pub](#) versions of the book that can be downloaded for reading offline.

We are hopeful to expand the online text to other languages to promote access to a worldwide audience. ¿Habla Español? For Spanish-speaking students, most of the book has translated, primarily by the actuarial group at the Universitat de Barcelona.

This book is reflective of the actuarial academic community, as it features nineteen authors from eight countries: Australia, Belgium, Canada, Egypt, Malaysia, South Korea, Turkey, and United States. Moreover, an additional 40 reviewers from around the world donated their time to reviewing portions of the book.

Below are a few other efforts currently underway or contemplated:

- Translations. ¿Habla Español? As described earlier, nearly all of Loss Data Analytics has been translated into Spanish. Clearly, as with many other OERs, much of the (freely available) base work could be translated into languages other than English.
- Other Textbooks. A small team (Vali Asimit, City University of London, Dani Bauer, University of Wisconsin-Madison, Adam Butt, Australian National University, Emiliano Valdez, University of Connecticut) is developing a framework for a life contingencies textbook. As an aspirational goal, we would like to have resources available for all of the foundational actuarial courses. With the changing exam systems, open textbooks can be more flexible for updating with new material, and certainly more cost effective for the students.

- Alternative Software. Much of the content developed to date has been based on R as the choice of computational software. Going forward, there are many advantages to supplementing this with other languages, such as Python.
- Case Studies. The work so far has been on relatively low-level technical aspects that form the foundation of our profession. Another next step will be to include case studies or a broad computing platform (such as Anaconda) to demonstrate the impact of the mathematical approaches being presented.

This is an exciting time in actuarial education. For decades, teaching meant getting your fingers dirty with chalk from writing on blackboards while reading from faded, yellowish lecture notes. Now, education initiatives invite creative approaches and have a similar thrill as when one does research. We believe in pushing the boundaries and creating new ways of effectively teaching for the future. Innovative use of technology and open-source materials are the way to create diversity, equity, and inclusion in the actuarial profession. For those interested in contributing, contact Jed Frees jfrees@bus.wisc.edu or Miyuki Ebisaki mebisaki.astin@gmail.com in their roles as caretakers of the ASTIN Academy.

Decision on Cyber Risk Working Party

During the summer, the ASTIN Board was facing a tough decision regarding the funding of an ambitious Working Party, which had the potential to significantly advance our understanding of cyber risk. In order to analyze a huge data set, consisting of several hundred thousand unstructured claims descriptions, and extract the relevant risk information, the Champions of this proposed Working Party required an advanced natural language processing software capable of performing sophisticated semantic analysis. ASTIN would have had to invest about 45,000 EUR in this software, and although we planned to encourage further Working Parties to deploy it in other research projects, the ASTIN Board was split and hesitant to spend this unprecedentedly high sum of money, which amounted to nearly 10% of the organization's assets.

We therefore decided last month to inquire among ASTIN's broader membership how you think our organization should best spend your money.

We received about 40 answers, some of which quite long and explicit, and we thank you for the thoughts you have put in this issue. Although a significant number of the respondents enthusiastically acclaimed the idea of funding applied research, in this particular case and in general, it nevertheless turns out that a slim but material majority prefers ASTIN concentrating its efforts and funds on educational and charity projects.

In the end it still remained a decision for your elected ASTIN Board had to make, but your opinions were helpful in its thoughts, both for this particular project and for future ASTIN activities. The ASTIN Board decided not to endorse this Working Party, and from now on it will shift its focus away from the active promotion of applied actuarial research.

Orlando Call for Abstracts

There is still a bit of time to submit a proposal for a paper or presentation at the 2022 Actuarial Colloquia. Read more about that here: <https://actuarialcolloquia2021.org/callforpapers-presentations/>. The colloquia will take place in Orlando, Florida 17-20 May 2022.

ASTIN webinars

Thanks for watching Michael Fackler's presentation "Three-layer problems and the Generalized Pareto". I found it a very interesting and practical approach to excess reinsurance pricing.

For information about future ASTIN webinars please refer to the '[ASTIN Section Webinars](#)' page on the ASTIN website. If you are interested in proposing a webinar, please contact [Roger Hayne](#), or [Brian Fannin](#).

Forthcoming Events

IAA Meetings

Sydney, Australia 28 May – 1 June 2023

ASTIN Colloquia

May 2022 - Orlando, FL, USA

Postponed from 2021



2023 — 28 May - 1 June, Sydney, Australia (postponed from 2022)

ASTIN Colloquium will be held as part of 32nd ICA.



2026 - Tokyo, Japan

ASTIN Colloquium will be held as part of 33rd ICA.



Resources

Don't forget the following resources which have a lot of information about ASTIN, and its research:

[ASTIN Annual Report](#) | [ASTIN Bulletin](#) | [ASTIN Video](#) | [ASTIN Newsletters](#) | [ASTIN website](#)

Also, please follow us on social media: [LinkedIn](#), [Twitter](#) and [Facebook](#).

Contacts

Key contacts on the ASTIN Board

- [Frank Cuypers](#) [Chairman]
- [Axel Wolfstein](#) [Secretary]