

Crash course on Python Programming

Here we report on the second ABC-EU-XVA Event, in A Coruña, Spain, i.e., the Python crash course and the ICCF2019 congress.

Python is a powerful and highly productive multipurpose object oriented programming language: good for scripting, prototyping and building complex libraries, as well as a glue between different languages. Thanks to this power and versatility it has spread among all environments with large software requirements, such as engineering and finance, achieving huge software ecosystems in these fields, among many others.

In the frame of the European Industrial Doctorate ABC-EU-XVA, a Crash Course on Python Programming was organized at the University of A Coruña on July 4 and 5th, 2019. The aim of this course was to give an introduction to the Python programming language, with applications in scientific and financial computing. The course was 12 hours long in a hands-on modality: students had the opportunity to follow the teachers explanations and to program small examples and codes.

It was taught by Iñigo Arregui (associate professor at University of A Coruña), José A. García (associate professor at University of A Coruña) and Álvaro Leitao (who was post-doctoral researcher at University of Barcelona and is now a post-doctoral researcher in University of A Coruña). The main attendants were the six ESRs of ABC-EU-XVA, who had just started their doctoral stage at their respective universities. Moreover, it was also open to a small number other students and researchers. Finally, one professor on applied mathematics, one doctoral student on applied mathematics and one master student on physics also attended the course.

The program of the course and additional information are available at the web site http://dm.udc.es/crashpython2019/

International Congress on Computational Finance 2019 (ICCF2019)

The 3rd International Conference on Computational Finance (ICCF2019) was held in A Coruña from July 8 to 12, 2019 (see http://iccf2019.udc.es/). Approximately 120 academic experts and professionals from the field of Quantitative Finance and their computational aspects participated in ICCF2019, in order to present recent advances of great interest in topics related to the financial and insurance sectors. Participants came from 24 different countries (Germany, Saudi Arabia, Australia, Austria, Belgium, Brazil, Canada, Colombia, Denmark, United Arab Emirates, Slovakia, Spain, United States, France, Holland, Hungary, Ireland, Italy, Japan, New Zealand, Portugal, United Kingdom, Republic of Korea and Switzerland).

The program is available at http://iccf2019.udc.es/index.php/preliminary-program and included 12 world-renowned plenary speakers:

- Stéphane Crépey, Université d'Évry-Val d'Essonne, France
- Griselda Deelstra, Université Libre de Bruxelles, Belgium
- Bruno Dupire, Bloomberg, USA
- Peter A. Forsyth, University of Waterloo, Canada
- Julien Guyon, Bloomberg, USA



- Monique Jeanblanc, Université d'Évry-Val d'Essonne, France
- Rüdiger Kiesel, Universität Duisburg-Essen, Germany
- Andrea Pallavicini, Banca IMI, Italy
- Olivier Pironneau, Université Pierre et Marie Curie, France
- <u>Christoph Reisinger</u>, University of Oxford, United Kingdom
- <u>Nizar Touzi</u>, École Polytechnique, France
- Antony Ware, University of Calgary, Canada

The plenary conferences of Stéphane Crépey, Monique Jeanblanc and Andrea Pallavicini were on current aspects of the XVA, the central theme of the EID ABC-EU-VVA. In addition, thematic minisimposiums and communications were held. The main headquarters of the congress is the Barrié Foundation building in A Coruña.

An Industrial Day held on Wednesday 10 at the headquarters of Afundación, with lectures given by three world-renowned professionals: Bruno Dupire (Head of Quantitative Research in Bloomberg), Julien Guyon (Senior Quant in Bloomberg) and Andrea Pallavicini (Head of equity, FX and commodities in IMI Banking), which talked about major issues in the financial sector. Next, a round table was held on "Current hot topics in financial industry". In it, in addition to Bruno Dupire (Bloomberg), María R. Nogueiras (Head of Collateral Risk Analytics at HSBC London), Lech Grzelac (Senior Quant of Rabobank), Peter Forsyth (professor with extensive experience in collaboration with the sector) financial and insurance) and Kees Oosterlee (professor and researcher at CWI), who chaired the round table. The lively debate raised issues about applications of new mathematical, numerical and computational techniques in the financial and insurance sector, along with aspects related to the use of deep learning, artificial intelligence, blockchain or big data, as well as new financial aspects related to regulation, the valuation adjustments for counterparty risk (XVA) or the replacement of the LIBOR.

Also to be noticed is the presence of a relevant number of young researchers, 19 of them opted for the Journal of Computational Finance award for the best work presented by them during the congress (see http://iccf2019.udc.es/index.php/jcf-young-researcher-award). The prize was awarded to the works presented by Anastasia Borovnik (from CWI, Amsterdam and ESR of the EID Wakeupcall) and by Beatriz Salvador (from University of Coruña).

Two special volumes of articles related to conference presentations will be published in the Journal of Computational Finance and International Journal of Computer Methods. The submitted papers will follow the usual peer review process of these journals.

This edition of Coruña is part of the activities of the EID ABC-EU-XVA and gives continuity to the ICCF series, that held in Greenwich (2015) and Lisbon (2017), emerging as an initiative within the ITN Strike network developed between 2013 and 2016. On this occasion, ICCF2019 is also a satellite congress of the world congress of applied and industrial mathematics ICIAM2019 (see https://iciam2019.org/), which was held in Valencia from July 15 to 19.



Photos of the Python course in A Coruña















