

Foreword



Dear colleague,

We proudly present to you the Proceedings of **DATE 2015**. DATE combines the world's favorite electronic systems design and test conference with an international exhibition for electronic design, automation and test, ranging from advances on system-level hardware and software implementation to integrated circuit design and nano-technology manufacturing technologies.

DATE 2015 received eligible 915 paper submissions – an all-time high for DATE and a 3% increase over DATE 2014. Besides the large share (45%) of submissions coming from Europe, 24% of submissions are from North-America, 28% from Asia, and 3% from the rest of the world. This proves DATE's international character, its global reach and world-wide impact.

For the 18th successive year, DATE has prepared an exciting technical programme. With the help of the 309 members from its Technical Programme Committee who carried out 3675 reviews (more than four per submission), finally 206 papers (22%) were selected for regular presentation and 86 additional ones (9%) for interactive presentation this year.

The DATE 2015 conference was held at the Alpexpo Congress Center in Grenoble, France, offering once again a truly interesting programme lasting the whole week of March 9 to 13, 2015. The technical programme is divided in parallel tracks from four main areas: **D** – Design Methods and Tools, **A** – Application Design, **T** – Test and Robustness; and **E** – Embedded Systems Software. Finally, on Friday, 10 parallel workshops will highlight latest research on hot topics in electronic systems design, such as, 3D design automation, neurocomputing and optical interconnect systems.

This year two of the **plenary keynote speakers on Tuesday** were EU Commissioner Günther H. Oettinger to talk about European Microelectronics Strategy and Jean Marc Chery, Chief Operating Officer of STMicroelectronics.

In addition, the distinctive highlights of DATE 2015 were the two special days: **“Designing Electronics for the Internet of Things (IoT)”** on Wednesday, and **“Designing Electronics for Medical Applications”** on Thursday. A comprehensive overview regarding both themes were given, ranging from innovations and applications of latest technologies to analysis of upcoming electronic design automation (EDA) research challenges

On one hand, the IoT, also known as the “Internet of Anything” promises to realize the omnipresent network of tens of billions of communicating devices. These devices will enable new business models and revolutionize industrial production, logistics and social life, but they will also require dedicated hardware, ultra-low power robust devices and new design methodologies. These topics were covered by **three keynotes**. First, Wolfgang Wahlster (German Research Center for Artificial Intelligence, DE) addressed “Industrie 4.0: From the Internet of Things to Cyber-Physical Production Systems”. Then, Antun Domic (Synopsis, US) analyzed “The Rise of IoT, and the Role of EDA”. Finally, Hannes Schwaderer (Intel, DE) highlighted “Market driven challenges of IoT devices”.

On the other hand, providing universal and costly-effective healthcare to the complete human kind has become a major challenge in our modern society. Thus, an outstanding set of 4 special sessions featured the topic of “Game-changing innovation in health care”. They included 10 trend-setting invited papers, 8 of which came from key industrial players in the health care field. Furthermore, **one keynote** in the frame of the Special Day on Medical Electronics was given by Kristoffer Famm (GlaxoSmithKline, GB) talking about “Bioelectronic Medicines - Heralding in a New Therapeutic Approach”.

In addition, numerous **Interactive Presentations** were organized into five IP sessions during the conference. The accompanying **exhibition** offered a comprehensive overview of commercial design and verification tools including vendor seminars and industrial presentations in the Exhibition Theatre.

On behalf of the whole Organizing Committee, we thank you very much for attending and contributing to a successful DATE Conference 2015 in Grenoble!



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