## 13th International Workshop on Finite Elements for Microwave Engineering

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he 13th International Workshop on Finite Elements for Microwave Engineering (FEM2016) was held 16–18 May 2016 in Florence, Italy. It was co-organized by the Politecnico di Torino under Cochair Roberto D. Graglia and the University of Florence under Cochair Giuseppe Pelosi. This biannual workshop returned to it origins after traveling the world for 26 years, growing and maturing.

Digital Object Identifier 10.1109/MAP.2016.2594003 Date of publication: 5 October 2016 It began as a national workshop organized by the University of Florence in San Miniato, Pisa, in 1992. Many foreign speakers were invited to attend, the most notable of which was Prof. Peter P. Silvester. On that occasion, a fruitful collaboration began between Prof. Pelosi and his group at the University of Florence and Prof. Silvester and his group at McGill University in Canada. This alliance was concretized by the decision to organize a second, truly international symposium in 1994 in Siena, Italy. Since that time, the FEM has matured to be a highly focused, biannual event that provides an ideal place for researchers in the finite-element area. It is now an itinerating workshop that takes place in many countries (Figure 1).

The 2016 conference featured 70 papers, divided into 12 technical sessions, plus two keynote speeches by Prof. Jon P. Webb of McGill University and Prof. John L. Volakis of The Ohio State University in Columbus. At the end of their lectures, the invited speakers were given a sterling silver fiorino, a perfect and licensed reproduction of

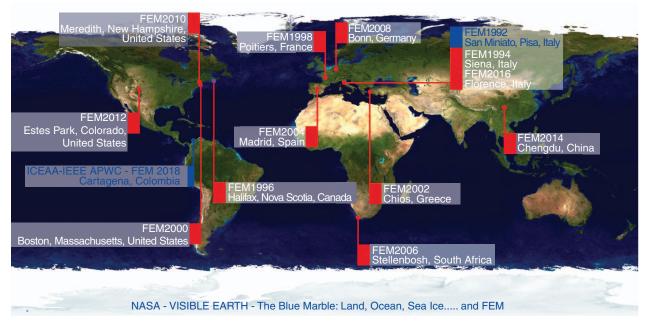
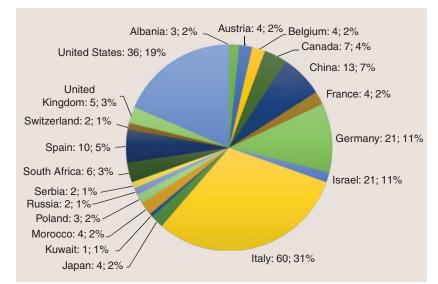
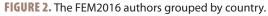


FIGURE 1. The past FEM locations and the proposed location for FEM2018. (Image courtesy of NASA.)







**FIGURE 3.** Prof. Roberto D. Graglia, past president of the IEEE Antennas and Propagation Society, welcomes all participants to the opening session held in the Aula Magna Rectorate of the University of Florence.



**FIGURE 4.** Prof. Jon P. Webb gives his keynote speech in the Aula Magna Rectorate of the University of Florence.



**FIGURE 5.** FEM2016 attendees dine in the Mirror Room at Palazzo Borghese, one of the preeminent neoclassical palaces in Florence.

the original fiorino coin, which was the currency in Florence from the 13th to 19th centuries and one of Europe's main currencies. The coin was either 24-karat gold or sterling silver and weighed 3.54 g, and it is still minted one by one by hand and hammer. The University of Florence has decided that a fiorino will be bestowed as an award, according to the rules to be defined, at FEM2018, which will be held in conjunction with the 2018 International Conference on Electromagnetics in Advanced Applications–IEEE Antennas and Propagation Society Topical Conference on Antennas and Propagation in Wireless Communications in Cartagena, Colombia (Figure 1).

From a technical point of view, the 70 papers were written by 194 authors who came from 20 countries and four continents (Figure 2). Nine of the 12 sessions were special sessions:

- "Multi-Physics FEM Techniques in the Simulation of Semiconductor Devices," organized by G. Ghione
- "Advanced FEM and Hybrid Techniques I and II," organized by B. Notaros and J. Zapata
- "Optimization Techniques and Parameter Space Sweep," organized by R. Dyczij-Edlinger
- "FEM in Italy I and II," organized by A. Toscano and A. Laudani
- "Acceleration/Preconditioning Techniques for Large Problems," organized by A. Boag and B. Shanker
- "Integral Equation/BEM Methods," organized by A. Boag and B. Shanker
- "Parallel Computation on Multi- and Many-Core Computers," organized by A.E. Yılmaz.

The three regular sessions were "FEM Applications," "Domain Decomposition and Non-Linear FEM," and "FEM Theory."

Because FEM2016 was a special conference, its proceedings are available as a book (which also contains memorabilia covering the previous workshops) and as an open-access PDF document from Firenze University Press at http://www.fupress.com/catalogo/international-workshop-on-finite-elements-for-micro-wave-engineering/3127.

Figures 3–5 show some events of FEM2016, both technical and social. The chairs and I thank all of the attendees, speakers, and session organizers for contributing to its success, and we invite all of you to Cartagena in 2018.