



Conference Report

The IMWS-AMP 2022 Postconference Report

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The 2022 IEEE Microwave Theory and Technology Society (MTT-S) International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications (IMWS-AMP 2022) was successfully held in Guangzhou, China, from 13 to 14 December 2022. IMWS-AMP is an annual international academic forum in the field of electromagnetics and microwave technology that has been successfully held many times around the world (see Figure 1). The conference was initiated and successfully held in Suzhou, China, in 2015. Since then, several editions have been held successfully,



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including in Chengdu, China, in 2016; Pavia, Italy, in 2017; Michigan, USA, in 2018; Bochum, Germany, in 2019;

and Chongqing, China, in 2021. This workshop not only provides an international academic exchange platform for scholars and engineers in the field of microwave technology but also a good opportunity for young scholars and students to show their innovative achievements.

IMWS-AMP 2022 was organized by South China University of Technology, cosponsored by Shenzhen Key Laboratory of Electromagnetic Information of South University of Science and

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Figure 1. The introduction slide for IMWS-AMP 2022.

Technology and Guangzhou Alumni Association of University of Electronic Science and Technology of China, and funded and technically sponsored by the MTT-S and the IEEE Guangzhou Antennas/Microwaves Branch. Prof. Quan Xue, dean of the School of Electronics and Information/School of Microelectronics of South China University of Technology, served as the general chair of the conference, and Prof. Wenquan Che, School of Electronics and Information, served as chair of the Technical Program Committee (TPC). Several other professors performed as cochairs of other committees of the conference. Due to

the continuous impact of the COVID-19 pandemic, only a small-size on-site opening ceremony was organized at the campus, while all the other attendees participated in the workshop activities virtually. A large number of online attendees, up to 525, took part in the opening ceremony of IMWS-AMP 2022, which was recorded (see Figure 2).

As the general chair of IMWS-AMP 2022, Xue delivered a welcome speech at the opening ceremony, expressing a warm welcome to experts and scholars from around the world and hoping to promote cooperation and exchanges between researchers and research institutions through the

academic conference. Prof. Rashaunda Henderson, president of the MTT-S in 2022, delivered a speech on behalf of the MTT-S to all the attendees. Che, on behalf of the TPC, introduced information regarding the technical issues of the conference. Later, three famous experts in the microwave field delivered the keynote speeches (see Figure 3). Prof. Raafat Mansour from the University of Waterloo, Canada, introduced microwave and millimeter-wave (mm-wave) devices based on phase-change materials and their applications in future communication systems. Prof. Kai Kang from the University of Electronic Science



Figure 2. The opening ceremony of IMWS-AMP 2022.

and Technology of China introduced the development history, status, and latest research results of mm-wave integrated circuits and phased-array systems. Prof. Ming Yu from Southern University of Science and Technology

presented the latest theoretical progress in the design and synthesis of microwave devices. The topics involved in IMWS-AMP 2022 included microwave and terahertz circuits and devices, antennas

and circuits based on new materials and processes, microwave/mm-wave chips, microwave circuits and systems, advanced RF packaging technology, advanced materials and processes, and other frontier research directions



Figure 3. The keynote speakers of IMWS-AMP 2022.



Figure 4. The oral and poster sessions of IMWS-AMP 2022.



Figure 5. The closing and award ceremonies of IMWS-AMP 2022.

in the electromagnetics field. The conference received contributions from 12 countries and regions, including the United Kingdom; the United States; Canada; Singapore; Australia; Japan; Hong Kong/Macao, SAR, China; and mainland China. A total of 552 papers (the largest number of papers in the nine-year history of IMWS-AMP) were accepted for presentations and for possible publication in *IEEE Xplore* (excluding the abstract papers). The conference had 42 sessions, including 296 oral reports, 10 poster sessions, and 256 poster reports (see Figure 4). The conference held a student paper contest and selected six Best Student Paper

Awards and six Honorable Mention Awards (see Figure 5). In addition, sponsored by the IEEE MTT-S Education Committee, the Ph.D. Student Initiative Program was launched at IMWS-AMP 2022. Forty-five early-stage Ph.D. students from more than 20 universities in China were selected to participate in the program. They were allowed to participate at all the conference events without paying the registration fee and also had opportunities to meet senior professors in panel discussions. Meanwhile, a Women in Microwaves special session was also organized alongside IMWS-AMP 2022, with more than 60 attendees joining this event.

IMWS-AMP 2022 received strong support from Huawei Technology, Huizhou Gaoshengda Technology, and Jiangsu Jiangjia Electronics.

IMWS-AMP 2023 will be hosted from 13 to 15 November 2023 in Chengdu, China, and is organized by the University of Electronic Science and Technology of China. The general chair for IMWS-AMP 2023 is Prof. Yu Jian Cheng.

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