

IEEE AP-S Distinguished Lecture Series in Italy

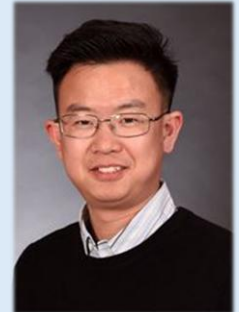
Date: August 15-28, 2026

Venue: University of Glasgow (Glasgow, UK), Queen Mary University of London (London, UK), Loughborough University (Loughborough, UK), University of Birmingham (Birmingham, UK), University of Leicester (Leicester, UK), and University of Liverpool (Liverpool, UK)

Prof. Bing ZHANG

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Prof. Bing ZHANG, IEEE Antennas and Propagation Society (AP-S) Distinguished Lecturer (DL), visited the University of Glasgow, Queen Mary University of London, Loughborough University, University of Birmingham, University of Leicester, and University of Liverpool, which is supported by the IEEE AP-S DL program.

This August, the IEEE AP-S DL Workshop program provided a unique platform to engage the vibrant electromagnetic research community at the University of Glasgow, Queen Mary University of London, Loughborough University, University of Birmingham, University of Leicester, and University of Liverpool. Organized and coordinated by Prof. Qammer Abbasi (University of Glasgow; Chair of the IEEE UK Antenna and Propagation and Microwave Theory and Technology Society; on August 17, 2026), Prof. Xiaodong Chen (Queen Mary University of London; on August 19, 2026), Prof. William Whittow (Loughborough University; on August 20, 2026), Prof. Yi Wang (University of Birmingham; the 19th United Conference on Millimetre Waves & Terahertz Technologies, UCMMT2026; on August 24, 2026), Prof. Muhammad Zubair (University of Leicester; on August 25, 2026), and Prof. Yi Huang (University of Liverpool; on August 27, 2026), the invited IEEE AP-S DL, Prof. Bing ZHANG from Sichuan University, visited the abovementioned universities and attended the UCMMT2026 hosted by the University of Birmingham from August 15, 2026, to August 28, 2026, and delivered a series of IEEE AP-S DL talks. Before these events, announcements were widely disseminated through the official IEEE UK Section communication channels, social media (e.g., LinkedIn), and international research networks, ensuring a broad reach across the UK's electromagnetics community. Given the collaborative nature of these research hubs, the lectures were organized in a hybrid format, allowing for both on-site attendance and virtual participation among regional and international IEEE members.

Besides the series of IEEE AP-S DL talks during Prof. Zhang's visit in UK, he also attended the UCMMT2026, a prestigious international conference hosted by the University of Birmingham. During his visit, he shared his works on 3D printed antennas and interacted with local scholars at each university and with international researchers at the UCMMT2026. The positive and constructive interactions inspired original research and also explored the potential for mutual collaboration.

Prof. Bing Zhang's DL talk was entitled "Exploring the Potential of 3D Printing Technologies for Antenna Design and Fabrication - Challenges and Opportunities." In the first part of his talk, he shared the thoughts of "novelty" from the aspects of theories, applications, materials, and processes. Then he introduced the chronicle of 3D printing technology, which was invented in 1980. In terms of materials, the 3D printing technology can be categorized as dielectric and metallic 3D printing. Prof. Zhang briefed on the advantages and disadvantages of dielectric and metallic 3D printing technologies, especially for microwave device fabrication. He introduced examples of dielectric and metallic 3D printed microwave devices, showing that both categories are facing problems of surface roughness (SR) and dimensional tolerance (DT). The

consequence of not well-controlled SR gives rise to increased surface impedance, and hence, the insertion loss of the microwave device increases. The deteriorated DT leads to a shifted functional frequency of the microwave device. Methods to solve the two problems are introduced, which manage to put SR and DT under desirable control. Then Prof. Zhang introduces a series of 3D printed microwave devices carried out in his group, including an ME dipole array for airborne application which has the self-cooling function taking the advantage of 3D printing technology to fabrication complex structures, a dielectric and metallic hybrid 3D printed lens antenna with tapered feeder aperture for water body monitoring, a hybrid PCB and 3D printing fabricated OAM metalens which features an extra degree of freedom of phase modulation by 3D printing, a 3D printed vehicle's headlight with scanning beam for C-V2X application which ingeniously integrated two antennas in the vehicle's headlight, a metallic 3D printed broadband antenna designed by the dimension-expanded superformula which covers the 800 MHz – 18 GHz spectrum with only a 9.5-gram antenna weight, and a metallic 3D printed coaxial filter designed by PCMT with gradient profile. The lectures concluded with an active Q&A and discussion with students, researchers, and conference attendees.

In summary, Professor Zhang's DL visit to 6 universities in 10 working days was highly fruitful, fostering a high-level scientific dialogue between the IEEE AP-S and the broader electromagnetic research community.



Picture : A collection of photos from Prof. Zhang's visit to 6 universities in UK: (a)DL talk at University of Glasgow, (b) photo with Prof. Qammar Abbasi and Prof. Masood Ur Rehman at University of Glasgow,(c) DL talk at Queen Mary University of London, (d) photo with Prof. Xiaodong Chen and Prof. Jin Zhang at Queen Mary University of London,(e) DL talk at Loughborough University,(f) photo with Prof. William Whittow and Prof. Aakash Bansal at Loughborough University,(g) DL talk at UCMMT2026 (Birmingham University), (h) DL talk at University of Leicester, (i) photo with faculties of University of Leicester, and (j) DL talk invited Prof. Yi Huang at University of Liverpool.