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| Full Name (English):   | Chenglong Li  |  |  |
| Affiliated Institution and Title (English):  | National University of Defense Technology<br>Asst. Prof. Chenglong Li |   |  |
| <b>Biography</b><br>(Please provide in paragraph form within 500 words.)   |   |   |  |
| Chenglong Li received the Ph.D. degree in electrical engineering from Ghent University, Ghent, Belgium, in 2022. From 2018 to 2022, he was a Research Assistant with the Department of Information Technology, Ghent University-imec, Ghent. He is currently an Assistant Professor with the College of Electronic Science and Technology, National University of Defense Technology, Changsha, China, and also with National Key Laboratory for Positioning Navigation and Timing Technology, Changsha, China. His current research interests include positioning and navigation, wireless sensing, wireless channel modeling, and mobile computing. Dr. Li was a recipient of the International Union of Radio Science (URSI) Young Scientist Award and European Microwave Association (EuMA) Student Grant and Chinese Government Award for Outstanding Self-Financed Students Abroad.  |   |   |  |
| <b>Speech Title (English):</b>   |   |   |  |
| Soft Localization via Unsupervised Multi-Task Joint Learning   |   |   |  |
| <b>Speech Abstract</b><br>(Please provide in paragraph form within 500 words.)   |   |   |  |
| Achieving reliable, high-precision positioning in complex and obstructed environments like urban canyons is severely hindered by non-line-of-sight (NLoS) propagation and multipath effects, which introduce significant errors in location-related parameter estimation from channel response. While deep learning methods offer promising solutions by extracting features from channel data for NLoS identification and errors compensation, they face major limitations. These include a heavy reliance on large, accurately labeled datasets for training, and poor generalization to new environments with differing channel characteristics. Techniques like meta-learning and transfer learning can reduce data dependency and improve adaptation, yet they often still require retraining for new scenarios. Domain adaptation (DA) aims to learn models directly transferable to unseen domains, showing potential. However, available DA solutions frequently depend on explicit domain labels as prior knowledge, lack robust uncertainty quantification, and have not fully leveraged multi-task learning frameworks. In this talk, an end-to-end and data-efficient learning-based localization method will be introduced, which enhances cross-scenario generalization under unsupervised or limited-sample conditions. |   |   |  |