



自动化·智慧讲堂 (2022年第6期)

2022年7月7日 10:00-11:00

报告人: 汪懿德, 教授, 法国南特大学

报告题目: Array signal processing for DOA finding

主持人: 葛泉波, 南京信息工程大学

报告地点: 学科三号楼N301会议室

(腾讯会议: 351-213-005)

#### Presentation

The signal communication team (SYSCOM) of the laboratory IETR (Institut d'Électronique et des Technologies du numéRique), an important French national research laboratory in Radar and telecommunications, has rich experience in the application of signal processing in the Radar and telecommunication systems. This presentation will present some current research work and their future orientations in the following fields

- 1) Array signal processing for estimation of the directions of arrival of incoming signals with an array of sensors;
- 2) GPR (Ground Penetrating Radar) signal processing for non-destructive detection in order to monitor the quality of civil engineering structure such as the road, the bridge;
- 3) Power amplifier linearization techniques

This presentation will begin by briefly introducing the Nantes city, the Nantes University, Polytech Nantes and presenting the more than 15 years' collaboration between the Nantes University and several universities of China. The main topics of research in Polytech Nantes will also be briefly addressed. Then, we will focus on the presentation of the IETR laboratory and three closely related research topics of the digital communication team of IETR. The first one is about the array signal processing for localizing emitting sources. The second one is the application of modern spectral analysis tools in the non-destructive detection in order to monitor the quality of civil engineering structure such as the road, the bridge and the last one concerns the power amplifier linearization.

#### Presentation of speaker

Yide WANG received the B.S. degree in electrical engineering from Beijing University of Post and Telecommunication (BUPT), Beijing, China, in 1985; the M.S. and the Ph.D. degrees in signal processing and telecommunications from the University of Rennes 1, France, in 1986 and 1989, respectively. He is currently a full-time Professor at Polytech Nantes (Ecole Polytechnique de l'université de Nantes) and was the director of Research in Polytech Nantes from 2012 to 2016. He is also in charge of the collaborations between Polytech Nantes and Chinese universities since 2004. He was nominated as Shanghai 'famous overseas professor' in 2014-2015, and Shanghai '1000 talent project' from 2015 to 2018. His research interests include array signal processing, spectral analysis, and mobile wireless communication systems, signal processing for faults detection and localization. He is author or co author of 9 chapters in 7 scientific books, more than 100 scientific journal papers (25 in IEEE transactions), and more than 100 international conferences. He has supervised 30 PhD students and 40 master students. He has also coordinated or participated in 18 National or European or international collaborative research programs. He is participating in a big industrial and academic French scientific project (Apogee, involving 3 industrials and 5 universities) on the power amplifier linearization since 2017 (the duration of the project is three years). He has also worked on a Sino-French joint scientific project (CAI Yuanpei) from 2017 to 2019. Since 2020, he begins a French ANR project in ground penetrating radar (GPR) applied for civil engineering by high resolution spectral analysis techniques.

