Sensor Array Signal Processing

Design of optimal algorithms for signal detection, and estimation of the parameters of signals obtained from sensor arrays and time series with a range of applications, including radar, sonar, GNSS (Global Navigation Satellite System), communications, nuclear magnetic resonance spectroscopy, and power systems.

Competitive advantage

- Expertise in the design of optimal sensor arrays and beamforming strategies
- Internationally recognised leadership in the development of fast and powerful algorithms for the extraction of information from noisy signals
- Theoretical and practical experience in various applications of signal processing

Impact

- Better, more reliable communications, sensing and imaging

Successful applications

- Maritime radar target detection
- High-altitude synthetic aperture radar
- Novel nuclear magnetic resonance (NMR) software
- Power systems parameter estimation
- Sparse array design for radar
- Radar for health applications

Capabilities and facilities

- Radar systems laboratory comprising a network of array and Multiple Input and Multiple Output (MIMO) radars
- Power systems laboratory for complete simulation of real power systems
- State-of-the-art Nuclear Magnetic Resonance facilities

Our partners

- Defence Science and Technology
- Mestrelab
- Data61

More Information

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