

Cooperative RF emitter geolocation

Research in adaptive sensing and autonomous sensor systems

FLAGSHIP TECHNOLOGY

Geometry-adaptive DQN localization system

A Deep Q-Network research system combines cooperative RF emitter localization with adaptive sensor positioning. The technical foundation includes published algorithm analysis, simulation studies, and EXata digital-twin evaluation.

CONNECTED CAPABILITIES

RF geolocation: time-difference-of-arrival (TDOA), LOCA estimation, and distributed sensor geometry.

Autonomous tasking: learning-based sensor positioning and cooperative sensing decisions.

Environmental modeling: propagation, multipath, fading, and sensor timing and position errors.

Systems engineering: architecture, integration planning, and test strategy.

TECHNICAL LEADERSHIP

CTO background includes two decades in defense engineering, a Ph.D. in Electrical Engineering, and master's degrees in Systems Engineering and Physics. Experience spans RF sensing, systems architecture, integration, and testing.

EVIDENCE AND DEVELOPMENT STATUS

Research prototype evaluated in modeled scenarios. Hardware integration and field evaluation are future development steps. Academic publications document the research foundation and their original authorship and affiliations.

Selected evidence: [2026 IEEE Aerospace DQN localization paper](#) | [Full selected publication list](#)

COLLABORATION

Government research opportunities, laboratory evaluation, and technology development teaming in cooperative RF sensing and autonomous systems.