

[Lee Wen-Hao John] **Geometric programming for optimizing SAR waveform parameters**

One of the key building blocks to realize the potential of cognitive SAR is the automatic, near real-time design and evaluation of waveform parameters (e.g. PRF,  $T_p$ ) in order to adapt to varied and dynamic situations. In certain formulations, this optimization problem is non-convex, however, through geometric programming (GP), the problem can be reformulated in a convex form. In this paper, we propose an approach to find waveform parameters, optimizing for the best possible system sensitivity.