

2008-08-01

# Genetic algorithm optimization for multiband patch antenna design

Michael, Kisangiri

IEEE

---

<https://doi.org/10.1109/EUCAP.2006.4584592>

*Provided with love from The Nelson Mandela African Institution of Science and Technology*

# Genetic algorithm optimization for multiband patch antenna design

Kisangiri Michael, Andrzej A. Kucharski

DOI: 10.1109/EUCAP.2006.4584592

## Abstract:

A combined method of moment (MoM)/genetic algorithm (GA) numerical procedure for achieving multiband-frequency characteristics in patch antenna design is demonstrated in this paper. Method of moment (MoM) solution used in simulation relies on RWG (Rao-Wilton-Glisson) edge element. MoM application analyses rectangular patches fed by a coaxial probe and suspended over a ground plane. GA optimization manipulates the impedance matrix of a mother structure in order to detect the optimal patch shape matching the required multiband properties.