Ganimidi Veerendra Nath

Personal Information

Ganimidi Veerendra Nath, NIT Rourkela, Odisha
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- A highly motivated and enthusiastic professional seeking a challenging role in a creative environment.
- A skilled designer with expertise in antenna array design, particularly on Sub-6 GHz frequency band applications.
- A cooperative individual with a good track record of building relationships with others during many team projects.

Profile Summary

Ph. D. from NIT Rourkela on **Development of Synthesis Methods for Thinning Antenna Arrays in Sub-6 GHz Band Applications.**

- Experienced in designing **thinned antenna arrays** for Sub-6 GHz band applications, emphasizing enhancements in performance metrics such as **peak sidelobe level reduction**.
- Experience in developing **innovative antenna array synthesis techniques** by integrating **signal processing algorithms** to achieve desired radiation pattern parameters.
- Skilled in **optimizing antennas** for specific frequency bands to enhance performance and efficiency.
- Proficient in utilizing industry-standard simulation tools including **CST Microwave Studio, Ansys HFSS, ADS, and MATLAB** for antenna and array analysis, design, and optimization.
- Experienced in testing and validating antenna and array designs using **anechoic chambers and RF test equipment**.

Skills

- **Programming Languages :** MATLAB.
- **Technical software :** CST Microwave Studio, Ansys HFSS, ADS.
- **Office softwares :** Microsoft Office, LaTeX.

Employment History

Research Scholar @ NIT Rourkela ***Sep 2020 - Present***
Development of Synthesis Methods for Thinning Antenna Arrays in Sub-6 GHz Band Applications. Responsibilities included antenna design, antenna array design, developing synthesis methods, conducting MATLAB simulations, electromagnetic (EM) simulation, hardware design, testing, and publishing results.

Assistant Professor @ KL University, Vijayawada ***July 2017 - Aug 2020***
Taught lectures on microwave engineering, digital system design, and optical communication. Also provided student counseling and project guidance in antenna design.

Academic Projects

- **Optimization of Concentric Circular Antenna Arrays Using Hybrid Approach : Almost Difference Sets and Discrete Fourier Transform.**
- **Synthesis of Thinned Planar Antenna Arrays : Hybrid Approach with Almost Difference Sets and Weighted Total Least Squares Method.**
- **Peak Sidelobe Reduction in Planar Antenna Arrays : Hybrid Discrete Fourier Transform-Based Difference Set Method.**
- **Design of a 3.5 GHz Multi-Beam Planar Antenna Array for 5G Communication.**
- **Development of Wide-Band Balanced Antipodal Vivaldi Antenna for Radar Applications.**

Reviewer Activities

- Reviewer for **IET Microwaves, Antennas & Propagation - Wiley**.
- Reviewer for **American Journal of Electrical and Computer Engineering**.
- Technical program committee member and Reviewer for **"IEEE- The International Conference on Hydraulic Engineering Calculation and Simulation Technology (HECST 2025)", June 6-7, 2025, Shanghai, China**.

Journals/ Conferences

- B.S. deepak, **Ganimidi Veerendra Nath**, and K. R. Subhashini, "Microstrip to Waveguide Transition Integrated Konark Wheel Microstrip Antenna for 94 GHz mm-Wave Radar Application", **IEEE Transactions on Antennas and Propagation (under review)**.
- G. L. P. Ashok, **Ganimidi Veerendra Nath** and B. C. Neelapu, "UWB Antenna for Microwave Imaging and Communication Applications," **2nd IEEE International Conference on Microwave, Antenna and Communication, 4 - 6 October 2024, Dehradun, India (Accepted)**.
- **Ganimidi Veerendra Nath**, G. L. P. Ashok, and K. R. Subhashini, "Fourier-enhanced DS Method for Optimized Thinning of Linear Antenna Arrays," **IEEE International Symposium on Phased Array Systems and Technology, 15 - 18 October 2024, Boston, USA (Accepted)**.
- **Ganimidi Veerendra Nath** and K. R. Subhashini, "Hybridization of Almost Difference Sets and DFT Technique for Concentric Circular Antenna Array Thinning," **AEU - International Journal of Electronics and Communications (2024)** : p.155311. DOI : https ://doi.org/10.1016/j.aeue.2024.155311.
- G. L. P. Ashok, **Ganimidi Veerendra Nath**, and B. C. Neelapu, "Graphene-enhanced decagonal patch antenna for terahertz frequency operation in breast cancer detection," **Applied Optics**, vol. 63, pp. 3609-3618 (2024). DOI : https ://doi.org/10.1364/AO.518504.
- **Ganimidi Veerendra Nath**, G. Ram, and K. R. Subhashini, "Thinned Planar Antenna Array Synthesis Using a Hybrid Approach Combining Almost Difference Sets and Weighted Total Least Squares Method," **AEU - International Journal of Electronics and Communications**, vol. 172, p. 154 943, 2023. DOI : https ://doi.org/10.1016/j.aeue.2023.154943.
- G. L. P. Ashok, **Ganimidi Veerendra Nath**, and B. C. Neelapu, "Compact Decagonal Shaped UWB Antenna for Breast Cancer Detection," **IETE Journal of Research (Minor Revisions Submitted)**, 2023.
- **Ganimidi Veerendra Nath** and K. R. Subhashini, "A Hybrid Discrete Fourier Transform-Based Difference Set Approach for Reduction in Peak Sidelobe Level of Planar Antenna Array," **International Journal of RF and Microwave Computer-Aided Engineering**, vol. 32, no. 11, 2022. DOI : https ://doi.org/10.1002/mmce.23381.
- **Ganimidi Veerendra Nath**, B. S. Deepak, and K. R. Subhashini, "Design of 4-Element Slot Loaded Patch Antenna Array for 5G Devices," in **2022 IEEE Wireless Antenna and Microwave Symposium (WAMS)**, 2022, pp. 1-4. DOI : 10.1109/WAMS54719.2022.9848391.
- G. L. P. Ashok, **Ganimidi Veerendra Nath**, and B. C. Neelapu, "Inset-Fed Slotted Patch Antenna Array for Microwave Imaging Applications," in **2022 IEEE Wireless Antenna and Microwave Symposium (WAMS)**, 2022, pp. 1-4. DOI : 10.1109/WAMS54719.2022.9847726.

Education

Ph.D in Electrical Engineering, September 2024 (Expected) — 8.64/10
NIT Rourkela, Odisha.

M.tech in Communication Engineering and Signal Processing, Dec 2016 — 9/10
Velagapudi Ramakrishna Siddhartha Engineering College, Vijayawada, AP.

B.Tech in Electronics and Communication Engineering, May 2014 — 77.79/100
St.Ann's College of Engineering & Technology, Chirala, AP.

Intermediate education (AP state board), May 2010 — 91.5/100
Sri Chaitanya Junior College, Vijayawada, AP.

SSC (AP state board), May 2008 — 74/100
St. Paul's High School, Bapatla, AP.

Achievements

- Qualified in the **GATE exam** in the year of 2014.
- Certified LabVIEW Associate Developer (CLAD).

Extra-Curricular

Student Branch Chair, IEEE Rourkela Sub-Section — ***Sept 2020 - Present***

Personal details

Date of birth : May 20, 1992
Strengths : Adaptability, Logical and analytical thinking
Languages : Telugu, English, Hindi
Marital status : unMarried
Nationality : Indian.