

# Algorithm Engineer (All Levels including Senior and Principle)

## Job Summary

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Novocomms Limited (“NVC”) –Birmingham (Potentially London)

**NVC is looking for a number of full-time Algorithm Engineer (both Microwave and mmWave experts are welcome) (Ref: 2024AE01)** who will have a strong background in mathematics, computational electromagnetics, programming, and RF systems. This role involves developing and optimizing algorithms and enhancing the beam control capabilities of our antenna array systems.

**All levels of experience are welcome, from junior to principle.**

## Duties & Responsibilities

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- Develop and implement mathematical models and algorithms to solve complex problems in antenna array design.
- Perform detailed mathematical analyse to optimize antenna system design and performance.
- Integrate algorithms into hardware and software platforms.
- Design, develop, and implement beamforming algorithms for antenna arrays.
- Optimize beam control and scanning techniques to enhance performance and efficiency.
- Conduct computational electromagnetic simulations to analyse and improve antenna array performance.
- Collaborate with the antenna teams to integrate the designed algorithms into antenna modelling.
- Collaborate with cross-functional teams to integrate beamforming solutions into wireless terminal systems.
- Perform detailed mathematical analyses to support the design and optimization of beamforming strategies.
- Write and maintain software for beamforming algorithm implementation and testing.
- Troubleshoot and resolve issues related to beamforming and antenna array performance.
- Stay current with advancements in wireless communication technology and incorporate new techniques into development processes.
- Complete technical reports for internal and external purposes.
- Support clients with requirements definition, project definition, and project planning.
- Collaborate with RF engineers and programming engineers from product concept to production.

## Essential Knowledge & Skills:

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- You should have at least Master (PhD preferred) degrees, in Electrical Engineering, Applied Mathematics, Physics, or related fields, with an emphasis in microwave or mmWave antenna arrays.
- Strong practical and theoretical mathematical background, especially in linear algebra, calculus, and differential equations, and understanding of electromagnetics and antenna/antenna array theory.
- Proficiency in electromagnetic solvers such as CST EM Studio and HFSS.
- Proficiency in MATLAB and Python, C/C++.
- Knowledge of beamforming techniques and RF systems.
- Solid understanding of beamforming algorithms and electromagnetic optimization.

- Knowledge of Tx/Rx modules and beamformers.
- Strong problem-solving abilities.
- Substantial ability to effectively present ideas in a team.

## Essential Attributes:

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- Excellent written and oral communication skills
- Excellent interpersonal skills
- Exceptionally self-motivated and directed
- Ability to prioritize, schedule, and execute activities to efficiently accomplish tasks
- Ability to multitask and manage more than one project at the time

**Salary:** Exceptional compensation package (£45k - £120k per annum depends on experience), including competitive salary, share options, pension and bonus.

**Location:** NVC has its current R&D headquarters in Birmingham; NVC is also considering opening an office in Reading.

**Closing Date:** 31/08/2024; **Number of Positions:** 3; **Experience** – 5 year minimum

To apply for this position please send your CV with a covering letter explaining how do you meet selection the criteria to: [HRUK@novocomms.com](mailto:HRUK@novocomms.com) You will only hear from us if you have been shortlisted.

## About the Company

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Novocomms Limited (NVC) was established with the primary goal of introducing cutting-edge technology originating from British academia, specifically in antenna design. The dedicated team at NVC has successfully designed, developed, and patented groundbreaking antenna technology. NVC's commitment to advancement goes beyond conceptualization, as the team is actively engaged in developing mmWave communication CPE, mobile satellite communication terminals, and other fully functional terminal products. Leveraging our advanced antenna technologies, NVC aims to contribute significantly to the evolution of communication devices. The market impact of this scalable technology is underscored by numerous patent applications, reflecting NVC's dedication to pioneering advancements in the field.