



## Job Description - Senior Antenna Designer

**Job Position:** A new opportunity has arisen for a Senior Antenna Designer in our antenna team at Arralis where we are currently developing several key Ka-Band, flat, phased array antennas for satellite and commercial aerospace. The engineering group within Arralis comprises of 18 engineers, split into smaller teams, which undertake the detailed design and development of millimetre wave systems and components for satellite, CAV and 5G applications. This role is for the development of high performance, beam scanning antenna arrays at frequencies up to 40GHz. By working closely with our multidisciplinary millimetre-wave teams, the successful candidate will provide prototype designs of flat beam steering phased arrays. Candidates should be self-motivated, able to take the initiative in technical activities, be an effective team leader and have efficient time management skills. They will have a detailed understanding of the fundamentals of antenna design including phased arrays, beam forming networks, circularly polarised elements and sub-arrays, and concepts such as radiation patterns, gain, axial ratio, impedance matching, s-parameters and a knowledge of basic communication systems. Furthermore, candidates must feel confident in pursuing challenging goals with innovative technical solutions and be confident to advocate 'trade-offs' during the design process.

**About Arralis:** Arralis is a rapidly scaling technology company, providing world leading expertise in RF, micro and millimetre-wave technology. With a head office in Limerick, Ireland, Arralis also has subsidiaries in Belfast and Manchester, UK. Arralis excels in Monolithic Microwave Integrated Circuits (MMICs), packaged component modules, proprietary antenna technology and integrated radar and communications front-end platforms. Its core focus is in E, Ka and W band where it is the world leader at the highly desirable attenuation window of 94GHz, which allows the development of very high resolution radar; applications of which include autonomous automotive, helicopter landing, satcomms and massive data rate wireless communications. Arralis products, which are the ultimate in precision and innovation, are used in both global and space environments where accuracy and reliability are critical. Arralis works with some of the world's largest aerospace, automotive, defence and communications companies.

**Location:** Limerick / Belfast / Manchester

**Terms:** Permanent, full time.

**Salary:** Competitive.

### Responsibilities:

- The development of individual antennas and antenna arrays for a variety of projects such as circularly polarised beam steering antennas, mm-wave radar, mm-wave communications and GNSS.
- The development of supporting passive RF circuitry such as feed and bias networks, filters and transitions.
- Participation in technical design & company roadmap reviews to help evaluate the viability and functionality of new antenna products in development.
- Will perform s-parameter measurements of antennas and feed structures, and antenna radiation patterns, and will have knowledge of laboratory equipment such as PNA/VNA, anechoic chamber, etc.

### Address

Arralis Ltd.  
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T. +353 61 748 264  
info@arralis.com  
www.arralis.com

### Registered Address

Arralis Ltd.  
Deloitte & Touche House,  
Charlotte's Quay,  
Limerick,  
Ireland.

### Company Directors

Gillian Yeung (Canadian)  
Eamonn Boland

- Will be required to mentor less experienced antenna design engineers.

**Essential Criteria:**

- Must be educated with a degree in mathematics, electronic engineering or physics.
- Must have experience in designing circularly polarised antennas, phased arrays, and beam forming networks.
- Must have experience with a number of different antenna topologies including dielectric based and waveguide based antennas.
- Must be able to model and simulate antenna structures using 3D Electromagnetic Simulation software such as CST Microwave Studio or equivalent industry standard program.
- Experience carrying out antenna testing in an anechoic chamber (far-field and/or near-field).
- Ability to write clear, informative reports and presentations to internal and external customers.
- Excellent numerate problem-solving skills and an aptitude for lateral thinking.

**Desirable Criteria:**

- Experience in designing antennas for mass production.
- Knowledge of other tools such as Matlab would be beneficial.
- Understanding of analogue circuit design.

The role may require travel to other locations within the UK for periodic engineering and programme meetings. This role offers the opportunity to be part of a successful group, working at the forefront of technology, developing new and innovative antenna design solutions which stem from complex radar and satellite system requirements.

Arralis has design locations in Limerick, Belfast and Manchester. We offer an attractive salary, non-contributory pension scheme and employee share option scheme (after a qualifying period).

If you have the above experience and wish to apply for this role, please forward your CV and Cover Letter to [info@arralis.com](mailto:info@arralis.com)

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