Senior FPGA Engineer

Role summary for potential applicants

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| Advertised Job Title**:** | Senior FPGA Engineer |
| Reference Number**:** | 30469 |
| Classification**:** | CSOF6 |
| Salary Range: | AU$106,285 to AU$124,546 plus up to 15.4% superannuation |
| Location**:** | Marsfield, Sydney, NSW |
| Tenure: | Specified term of 3 years |
| Relocation assistance**:** | * Will be provided to the successful candidate if required. |
| Applications are open to: | * Australian/New Zealand Citizens and Permanent Residents only * *For Specified Term positions, we will accept applications from Temporary Residents with working rights for the full length of the term, who do not require sponsorship.* |
| Functional area: | * Research Projects |
| % Client Focus – Internal: | * 70% |
| % Client Focus – External: | * 30% |
| Reports to the: | * Team Leader |
| Number of direct reports: | * 0 |

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| **Role Overview:** |
| * Join Data61 – Australia’s digital and data innovation group * Work with a diverse and enthusiastic team to deliver innovation into industry * Use your technical skills to solve challenging problems   Data61 is the largest data innovation group in Australia. Bringing together CSIRO’s Productivity team and National ICT Australia (NICTA), we are unrivalled in our intellectual capital and our network with the global technology marketplace. The combined group will bring together approximately 600 research staff working in digital technologies to create benefit for Australia. Data61 will continue to develop Australia’s future leaders with its strong 300+ PhD student program in collaboration with our best universities across Australia.  The Senior FPGA Engineer will join a team in the Cyber Physical Systems program developing world leading high performance wireless tracking and communication systems across a range of industry segments, with potential projects including developing cost effective wireless communications for rural communities, and improving worker safety. The role involves working closely and collaboratively with researchers, hardware developers, other programmers and commercial customers to deliver robust and reliable system.  The Senior FPGA Engineer will have a deep understanding of hardware and algorithms to design the firmware architecture and adapt algorithms for efficient implementation, and to develop commercial quality FPGA firmware. The algorithms include advanced communication systems (such as massive MIMO) and cooperative position location with hard real-time constraints. The hardware will typically be a software defined radio, and contain FPGAs and embedded processors.  The position requires an enthusiastic person with a broad range of skills who is highly motivated to ensure successful product delivery. |

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| **Duties and Key Result Areas:** |
| * Designing firmware architecture and adapting algorithms to implement advanced wireless systems on custom hardware. * Developing system models, typically in Matlab, to evaluate system performance prior to detailed system design. * Responsibility for implementation of commercial quality code delivered to customer requirements. This may involve leading small software development teams. * Interaction with customers to develop requirements and ensure acceptance tests successfully completed * Demonstrate professional software engineering practice. * Modelling and reinforcing behaviour and leadership consistent with Data61 strategy and culture. * Develop, maintain and enhance productive working relationships with key stakeholders. * Communicate effectively and respectfully in the interests of; good business practice, collaboration and enhancement of CSIRO’s reputation. * Lead small projects and assist with elements of larger projects including the negotiation of resource requirements. * Adhere to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals. * Other duties as directed. |

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| **Selection Criteria:** |
| *Under CSIRO policy only those who meet all essential criteria can be appointed*  ***Pre-Requisite:***  A degree and or equivalent experience in a relevant discipline area, such as engineering or computer science.  **Essential Criteria:**   * An established period of experience developing FPGA code to commercial standard that is tightly integrated with hardware. * Demonstrated experience developing firmware architecture and code for systems implementing sophisticated wireless or signal processing algorithms on a software defined radio. * Deep understanding of wireless hardware. * Proven ability to work well in teams and manage key relations internally and externally. Outstanding communication skills with technical and non-technical audiences. * **Excellent written and oral communication skills, evidenced by high-level reporting, presentation and negotiation abilities, and the capacity to identify and influence critical stakeholders to gain support for contentious proposals/ideas.** * Ability to manage periods of change, uncertainty and conflict.   **Desirable Criteria:**   * Demonstrated background in Signal Processing or Wireless Systems. * Experience in use and programming of Xilinx Zynq processor or similar.   Data61 is a values based organisation. Our leaders will be expected to demonstrate the following values:  **Hierarchy**: Country, Company, Team, Individual  **Openness**: Open debate, collaboration, full commitment  **Learning**: Calculated risks, institutionalise learning, fast cadence  **Impact**: Tackle hard problems, create the future, focus on outcomes  **Stewardship**: Lead, make each function and co. stronger over time |

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| **Other Information:** |
| **How to Apply**  Please apply for this position online at [www.csiro.au/careers](http://www.csiro.au/careers). You will need to upload your cover letter and resume/CV as one document, expressing your interest in the role and broadly addressing your suitability. Please provide sufficient relevant information to enable the selection panel to assess your suitability. Should your application proceeds to the next step, you may be asked to provide additional information.  If you experience difficulties applying online call 1300 984 220 and someone will be able to assist you. Outside business hours please email: [careers.online@csiro.au](mailto:careers.online@csiro.au)  **Referees**:  If you do not already have the names and contact details of two previous supervisors or academic/ professional referees included in your resume/CV please add these before uploading your CV.  **Contact:** If after reading the selection documentation you require further information please contact: Keith Bengston via email: [Keith.Bengston@csiro.au](mailto:Keith.Bengston@csiro.au) or phone: +61 2 9372 4424  Please do not email your application directly to Dr Keith Bengston. Applications received via this method will not be considered.  **About CSIRO**  Australia is founding its future on science and innovation. Its national science agency, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is a powerhouse of ideas, technologies and skills for building prosperity, growth, health and sustainability. It serves governments, industries, business and communities across the nation.  Find out more! [www.csiro.au](http://www.csiro.au).  **Data61** is the largest data innovation group in Australia. Bringing together our Digital Productivity team and National ICT Australia (NICTA), we are unrivalled in our intellectual capital and our network with the global technology marketplace.  Find out more! <http://www.csiro.au/en/Research/D61> |