# RESEARCH STUDENTSHIP OR BURSARY

Research studentships are offered to students wishing to undertake a PhD programme. All studentships are highly competitive and you should ensure (and demonstrate) that there is a good match between your own qualifications and interests and those being sought for the particular studentship.

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| Research Centre where studentship will be held | Computer Science Research Centre, Faculty of Natural Sciences, Keele University. |
| Studentship reference | FNS GS 2017-18 |
| Web link to any further information (e.g. Research Institute) | Computer Science Research Centre - https://www.keele.ac.uk/scm/research/compsci/<br>Faculty Research Office - http://www.keele.ac.uk/fnsro/ |
| Research topic or field - title | Data-driven design of biological systems – Computational synthetic biology |
| Research topic or field – full description (or attach document) | Synthetic biology has emerged as an engineering field lately, with the aim of designing novel biological systems. Small biological components can be used together to create devices and systems. Due to biological constraints and molecular interactions between biological components, this process is challenging. Designing complex applications requires automation.<br><br>This project involves the development of formal data and model-driven design methodologies for biological systems. We will investigate the process of mapping biological circuit specifications into DNA bases that encode desired systems. Different techniques involving Semantic Web technologies, machine learning, data integration and mining, or mathematical models will be explored. Biological datasets from model organisms such as *Bacillus subtilis* and *Escherichia coli* will be utilised.<br><br>Keele University is renowned for its exciting approach to higher education and research, beautiful campus, strong community spirit and excellent student life. The University has the UK's largest campus with 617 acres of landscaped parkland, fields, woodlands and lakes. Keele University runs its own day nursery for infants from 3 months to 5 years and is committed to equality and diversity. Information for prospective postgraduate researchers can be found here: http://www.keele.ac.uk/pgresearch/ |
| Available from (date) | Available now |

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| Funding support available – Fees, stipend, duration | Open to fully self-funded students only.<br>Please note that self-funded applicants must provide funding for both tuition fees and living expenses for the 3 year duration of the research. There is a future possibility of competitive scholarship awards for outstanding applicants (1st class honours), however, none are currently available.<br>For information regarding University tuition fees please see http://www.keele.ac.uk/pgresearch/feesandfinance/ |
| Source of funding | No funding available.<br>Opportunity for self-funded applications only. |
| Eligibility criteria | Eligibility Criteria: Applications are welcomed from computer science, natural sciences, biological sciences, engineering or mathematics graduates with (or anticipating) at least a 2.1 honours degree or equivalent.<br><br>Applicants are required to have good computing skills and an interest in computational biology. Applicants with computing background should be ready to learn more about programming biological systems. Applicants with non-computing background should be willing to learn about data and model-based analysis approaches, and writing computer programmes. They should be self-motivated and have the ability to work both independently and as part of a team.<br><br>The opportunities are open to UK/EU students and overseas students. The collaborative and presentation aspects of the research require very good English language and communication skills. Overseas applicants would therefore require an English IELTS (or equivalent) of 6.0 overall with no less than 5.5 in any subtest. |
| Terms and conditions of studentship | As per the University Code of Practice |
| Number of studentships available | N/A |
| Application details | Go to http://www.keele.ac.uk/pgresearch/studentships/ and click on the "Apply online here" button in this studentship. |
| Closing date for applications | Applications accepted all year round |
| Contact for further information and to whom applications will be sent | Informal enquiries about the project should be made to the Project Lead, Dr Goksel Misirli (g.misirli@keele.ac.uk), and should include a CV and a detailed expression of interest which includes an account of eligibility and funding and a summary of relevant interests, skills and experience. Full applications to be submitted at:<br>http://www.keele.ac.uk/pgresearch/studentships/ |

**Candidate profile**

| | Essential | Desirable |
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| **Qualifications, Experience and Skills** | Eligibility Criteria: Applications are welcomed from computer science, natural sciences, biological sciences, engineering or mathematics graduates with (or anticipating) at least a 2.1 honours degree or equivalent.<br><br>Applicants are required to have good computing skills and an interest in computational biology. Applicants with computing background should be ready to learn more about programming biological systems. Applicants with non-computing background should be willing to learn about data and model-based analysis approaches, and writing computer programmes. They should be self-motivated and have the ability to work both independently and as part of a team.<br><br>The opportunities are open to UK/EU students and overseas students. The collaborative and presentation aspects of the research require very good English language and communication skills. Overseas applicants would therefore require an English IELTS (or equivalent) of 6.0 overall with no less than 5.5 in any subtest. | |
| **Attitude and Personality** | Applicants should be enthusiastic and self-motivated and have the ability to work both independently and as part of a team. | |