<table>
<thead>
<tr>
<th>Project title</th>
<th>Predicting the implications of changes in migration phenology for the conservation of Atlantic salmon</th>
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<tbody>
<tr>
<td>Project supervisor(s) and contact details</td>
<td>Professor Robert Britton, <a href="mailto:rbritton@bournemouth.ac.uk">rbritton@bournemouth.ac.uk</a></td>
</tr>
</tbody>
</table>
| Marketing Summary | Please provide a marketing paragraph (500 words max in total as external websites have word-count limits)  
We are recruiting a high calibre PhD researcher to work on a three year fully funded studentship investigating changes in the migrations of Atlantic salmon in relation to factors including climate change, with an emphasis on how changes in smolt migrations are impacting survival to spawning adults.  
The Atlantic salmon is an ecological and economically important species whose populations are generally in decline across its range. Increasingly, evidence suggests that when the salmon migrate to sea as smolts, their condition (e.g. body size) and timing of seaward migration - their ‘migration phenology’ - strongly influence their marine growth and survival. However, due to environmental changes (e.g. warming from climate change), smolt migrations now occur earlier and average smolt body lengths are decreasing. These changes might thus be adversely impacting sea growth and survival, and so the long-term sustainability of populations.  
The research will therefore test hypotheses relating to the causes of the contemporary population declines in anadromous salmonids, especially Atlantic salmon, with a focus on changes in their migration phenology. Testing will be completed using modelling approaches, with models initially developed using a long-term dataset on the River Frome, Dorset, before exploring the utility of these models on other salmon rivers in Britain and Northern France. Research objectives (O) are to: (O1) quantify general impacts of smolt condition (including length, weight and condition) on marine survival (e.g. age- and stage-specific survival); (O2) test the importance of smolt condition on marine survival versus alternative factors; (O3) explore the mechanisms driving impacts of smolt condition on marine survival; and (O4) use results of (O1) to (O3) to generalise findings to other populations and species, and identify potential management mitigation tools.  
Field data collected in the studentship will add to long-term salmon data on the Frome, during which juvenile fish have been measured and tagged. Data from fixed tag recording stations and recapture
events then provide individual smolt migration data and their complete life histories (i.e. immature juvenile to adult spawner). These are the data that will be used to develop the population models to test the relationships between migration phenology, marine growth and survival, and adult run size.

The studentship provides a range of training and research opportunities, and will involve working for extended periods at the FBA River Lab (https://www.fba.org.uk/the-river-laboratory), a field station in rural Dorset. Applicants are expected to have some experience of migratory fish ecology and statistical modelling techniques.

PhD partners are the Game and Wildlife Conservation Trust, with Stephen Gregory (https://www.gwct.org.uk/research/staff/fisheries/sgregory/) being on the supervisory panel, plus their partners in the SAMARCH European Inter-regional project (http://samarch.org/).

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<tr>
<th>Closing date for applications</th>
<th>Please provide a closing date. (As a guide adverts should be live for a minimum of 2 weeks and maximum 6-8 weeks). In the event we may need to change this date, the Doctoral College will notify you immediately</th>
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<td>11th March 2018</td>
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<tr>
<th>Any external funding logos</th>
<th>Please attach in high resolution version any external funding logo, hyperlinks, etc to be used for marketing purposes</th>
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<tbody>
<tr>
<td>MATCHED FUNDERS ONLY</td>
<td>Logo attached: Yes ☑ No ☑</td>
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<th>Project details</th>
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| Unit of Assessment (UoA)    | 14                                                                                                                                 |

| Eligibility Criteria        | The PhD Studentships are open to UK, EU and International students. Candidates for a PhD Studentship should demonstrate outstanding qualities and be motivated to complete a PhD in 4 years and must demonstrate: |
| (Please provide additional qualifications which may be relevant for your project) | • outstanding academic potential as measured by either a 1st class honours degree or a Master's degree with distinction or equivalent Grade Point Average (GPA) |
|                             | • an IELTS (Academic) score of 6.5 minimum (with a minimum 6.0 in each component) for candidates for whom English is not their first language |
|                             | In addition to satisfying minimum entry criteria, BU will look closely at the qualities, skills and background of each candidate and what they can bring to their chosen research project in order to ensure successful completion. |
|                             | Additional Eligibility Criteria:                                                                                                    |
|                             | It is desirable for candidates to have experience of the ecology of migratory fish and statistical modelling techniques            |
We will advertise your Studentship on Jobs.ac.uk and Findaphd.com

Below are available keywords for FindaPhD.com. These are the only available options. Please check keywords to accurately describe your Project (up to 10 can be selected).

You are not restricted to this list for Job.ac.uk and you can include additional key words:

<table>
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<tr>
<th>Salmon</th>
<th>Climate change</th>
<th>Phenology</th>
<th>Modelling</th>
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BU PhD Studentship Competition
Marketing Briefing Form
2018
Biological & Medical Sciences

☐ Agricultural Sciences
☐ Biochemistry
☐ Biophysics
☐ Biotechnology
☐ Botany/Plant Science
☐ Cancer/Oncology
☐ Cell Biology/Development
☐ Dentistry
☐ Ecology & Conservation
☐ Endocrinology
☐ Evolution
☐ Food Science/Nutrition
☐ Genetics
☐ Immunology
☐ Marine Biology
☐ Medical/Biomedical Physics
☐ Medical/Clinical Science
☐ Microbiology
☐ Molecular Biology
☐ Neuroscience/Neurology
☐ Obstetrics, Gynaecology & Reproduction
☐ Parasitology
☐ Pathology
☐ Pharmacology/Toxicology
☐ Physiology & Sports Science
☐ Psychology & Psychiatry
☐ Public Health & Epidemiology
☐ Structural Biology
☐ Veterinary Medicine
☐ Virology
☐ Zoology/Animal Science

Maths & Computing

☐ Applied Mathematics
☐ Bioinformatics
☐ Computational Chemistry
☐ Computer Science & IT
☐ Data Analysis
☐ Information Science
☐ Mathematics
☐ Operational Research
☐ Software Engineering
☐ Statistics

Humanities

☐ American Studies
☐ Anthropology
☐ Archaeology
☐ Architecture & the Built Environment
☐ Asian Studies

Chemical Sciences

☐ Agricultural Chemistry
☐ Analytical Chemistry
☐ Biochemistry
☐ Chemical Engineering
☐ Chemical Toxicology
☐ Computational Chemistry
☐ Food Chemistry
☐ Geochemistry
☐ Inorganic Chemistry
☐ Macromolecular Chemistry
☐ Materials Science
☐ Organic Chemistry
☐ Pharmaceutical Chemistry
☐ Physical Chemistry
☐ Synthetic Chemistry

Physical Sciences

☐ Applied Physics
☐ Astrophysics
☐ Atmospheric Physics
☐ Atomic Physics
☐ Biophysics
☐ Condensed Matter Physics
☐ Fluid Dynamics

 BU PhD Studentship Competition
 Marketing Briefing Form
 2018
| Geophysics | Economics |
| Low-temperature Physics | Tourism & Hospitality |
| Materials Science | Law |
| Medical/Biomedical Physics | Law |
| Metrology | Arts |
| Nuclear Physics | Architecture & the Built Environment |
| Optical Physics | Art & Design |
| Particle Physics | Classics & Ancient History |
| Plasma Physics | Drama, Dance & Performing Arts |
| Radiation | English |
| Semiconductors | History |
| Theoretical Physics | Music |

**Social Science & Health**
- American Studies
- Anthropology
- Architecture & the Built Environment
- Asian Studies
- Development Studies
- Economics
- Education
- European Studies
- Gender & Sexuality
- Geography
- Health Sciences
- History
- Middle East & African Studies
- Modern Languages & Linguistics
- Nursing, Midwifery & Allied Health Professions
- Philosophy
- Public Health & Epidemiology
- Social Work, Social Policy & Administration
- Sociology
- Sports, Recreation & Leisure Studies
- Town & Country Planning

**Business & Finance**
- Accounting & Finance
- Business & Management

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