Call for Innovation Fellowships:
EPSRC Future Composites Manufacturing Research Hub

Call Type: Invitation for proposals

Closing Date: 31st May 2018 at 16:00

Related Themes: Manufacturing the Future

Summary
Applications are invited for up to **two postdoctoral Innovation Fellowships** funded by the EPSRC Future Composites Manufacturing Research Hub. Fellowships will be for a period of **up to two years** and are aimed at **early stage researchers** looking to take the first step towards an independent research career. Innovation Fellowships are open to **national and international researchers** and will be hosted by the most appropriate UK institutions to support the aims of the research. Fellows will benefit from access to facilities and expertise across existing Hub members.

Applicants are expected to develop a proposal at **TRL 1 to 3** to facilitate a fundamental step-change in **composites manufacturing** technology within the UK. The proposal should examine a subject area that is ambitious and high risk, identifying key challenges and research questions not currently being addressed. This can include the development of new manufacturing technologies, analytical studies to develop a fundamental understanding of state-of-the-art processes, or the development of process modelling and optimisation techniques. Proposals must focus on composites manufacturing, rather than the development of next-generation materials and address at least one of the five Hub priority areas

Whilst fellowships are for a fixed period of up to two years, the successful candidate will be expected to generate additional funding to extend this period and expand their research.

Background

The Future Composites Manufacturing Research Hub is a £10.3m investment by the EPSRC to engage academics from across the UK to deliver a step change in the manufacturing of polymer matrix composites. The Hub is led by the University of Nottingham and the University of Bristol and includes 8 other Spokes; Brunel University London, the University of Cambridge, Cranfield University, the University of Edinburgh, Imperial College London, the University of Glasgow, the University of Manchester and the University of Southampton.

The vision for the Hub is to enable Moore's law for composites - a doubling in production capability every two years for high performance polymer composites. The proposal should therefore support this vision and target one of the following research priority areas, which have been identified in collaboration with industry partners and the broader composites community:

1. High rate deposition and rapid processing technologies
2. Design for manufacture via validated simulation

3. Manufacturing for multifunctional composites and integrated structures
4. Inspection and in-process evaluation
5. Recycling and re-use

Proposals must be step-changing and disruptive in order to facilitate the aims of the Hub. Incremental developments on existing processes/technologies offering marginal improvements in productivity, cycle time, cost etc. will not be funded. Proposals should also focus on overcoming manufacturing related challenges, rather than material developments.

Details of other Hub funded projects can be found at www.cimcomp.ac.uk
For more information about EPSRC's portfolio and strategies, see:
https://www.epsrc.ac.uk/research/ourportfolio/

Eligibility:
Applicants must have a PhD in a relevant subject and a strong publication record. Experience in modelling, manufacturing and performance of polymer composites or technical textiles would be a distinct advantage. This call is open to all national and international researchers through a peer review process. Applicants are expected to hold a PhD by the start date of the fellowship or have equivalent research experience. There are no eligibility rules based on years of post-doctoral experience or whether the applicant holds a permanent academic position. Consideration will also be given to applicants who have taken a non-standard career path after their primary degree. Applications are also welcomed from candidates who wish to re-establish themselves after a career break or other period of absence from active research.

Funding available:
Funding will be provided to cover 80% of the full economic cost for each postdoctoral researcher (up to 2 positions available). Salaries will be set depending on experience and the chosen host organisation (typically £26,495 - £47,722). An annual research expenses grant will be provided, consisting of up to £3,000 for travel and £7,000 for project consumables per year.

Host institution:
The fellowship can be hosted at any UK-based university nominated by the applicant, providing the university is eligible to hold an EPSRC grant:
https://epsrc.ukri.org/funding/applicationprocess/fundingguide/eligibility/organisations/

The host institution does not need to be an existing member of the Future Composites Manufacturing Research Hub, but the applicant must justify their choice, for example in terms of the track record of the academic supervisor and the facilities and equipment available at the chosen institution. The Hub reserves the right to change the host institution if the applicant's choice is considered to be inappropriate for successfully delivering the programme of work.

Equipment:
Funding for purchasing new equipment is not permitted. However, access will be available to existing equipment at Hub and Spoke institutions, and charged at cost.

How to apply:
Applicants are required to specify a research project and provide a brief description of the proposed objectives and methodology, using the application form provided.

Applicants should send a detailed academic CV and a letter of support from the host institution, together with the completed application form to:
lee.harper@nottingham.ac.uk

Assessment Process:
Submissions will be reviewed by a panel of independent assessors and short-listed applicants will be invited for an interview. In order of importance, the evaluation criteria for applications will be:

1. Fit to the call. Does the proposal address a step-change in composites manufacturing technology? Does the proposal address at least one of the five priority areas?
2. Is the proposal likely to result in high quality research? Is the hypothesis plausible, is the approach credible and is the candidate appropriate for an early-career Innovation Fellowship?
3. How novel and timely is the proposed research?
4. Does the proposal present suitable levels of challenge and ambition? High risk, high-return studies are encouraged.
5. How well has the proposal been planned? Are the requested resources realistic and have they been fully justified? Have risks been identified and have they been appropriately mitigated?
6. Is there potential for expanding this research to generate follow-on funding, either at a similar fundamental level or at higher TRLs?
7. Is the proposal relevant to the interests of the industrial partners and other stakeholders?

Key Dates:

Activity	**Date**
Call launched	9th April 2018
Closing date for applications	31st May 2018
Evaluation of applications by	29th June 2018
Grants announced and feedback given by	6th July 2018

Contacts
For more details, please contact the Hub Manager, Dr Lee Harper (lee.harper@nottingham.ac.uk or 0115 9513823). Applicants are asked to consult their university's research office ahead of submitting a proposal to this call, in order to be clear of the requirements for meeting the deadlines set out above.