

User Interaction with ICT

Call type: Invitation for outlines

Closing date: 16:00 on 06 January 2015

Related themes: ICT, Digital economy

Summary

The EPSRC Information Communication Technology (ICT) Theme is inviting outline proposals which will look at opportunities for how humans will interact with ICT technology in the future. Proposals should address a future information infrastructure and environment which will involve areas such as wearable devices, autonomous systems and an internet of things.

Funds of up to £5 million are available, which is expected to support between four to six research projects, subject to the quality of the proposals received.

This call is being issued as part of the "Towards an Intelligent Information Infrastructure" cross-ICT priority. For more details, please see:
<http://www.epsrc.ac.uk/research/ourportfolio/themes/ict/introduction/ti3/>

The call is being run in parallel with the "Making Sense from Data" call, which is being issued simultaneously by the ICT Theme.

Background

In the future there will be new interface modalities developed for input and output of data, together with novel computing platforms, new sensors and devices. There will be a need for users to be able to interact via these novel platforms to extract, and gain meaning from the information. This call is an opportunity for proposals to be developed focussed on finding new ways to interact with ICT.

Helping humans interact with information via technology in the context of a deluge of available data is an increasing challenge. This is likely to continue to be the case in the future. Drivers for this initiative include the massive, ubiquitous increases in image data and in language data (spoken and written). Examples can be seen in social media and online videos.

This complex challenge will span many areas of the ICT portfolio including, but not limited to, Human Computer Interaction, Speech Technology, Natural Language Processing, Image and Vision Computing, Artificial Intelligence technologies and Pervasive and Ubiquitous Computing.

To facilitate the design of novel, viable approaches that enable user interactions with ICT, it will be necessary for Human Computer Interaction researchers to work together with other disciplines to demonstrate the validity of these approaches and techniques.

These aims align with the shaping strategies of the ICT Theme within EPSRC, and they address the cross-ICT priority of Towards an Intelligent Information Infrastructure (TI3). For further information, please see: <http://www.epsrc.ac.uk/research/ourportfolio/themes/ict/introduction/ti3/>

The aims also align with the Digital Economy priority area of IoT 2.0: Future Digital Ecosystem, where a systems approach to the structural infrastructure and underpinnings of the digital service economy will help inform how people live and interact in a world full of data; see: <http://www.rcuk.ac.uk/research/xrcprogrammes/digital/research/>

This call also references findings from the Report of the EPSRC Review of Human Computer Interaction Research in the UK from March 2012; see: <http://www.epsrc.ac.uk/newsevents/pubs/report-of-the-epsrc-review-of-human-computer-interaction-research-in-the-uk/>

A cross-disciplinary approach is important across Human Computer Interaction and other relevant research areas (both within and outside ICT). Proposals should address the cross-ICT priority of Working Together. For more details, see: <http://www.epsrc.ac.uk/research/ourportfolio/themes/ict/introduction/workingtogether/>

Funding available

Funding of up to £5 million is available through this call, and we expect to fund between four and six research proposals, subject to the quality of the proposals received.

The proposed research must be within the remit of EPSRC and the scope of this call. Proposals that are not will be rejected prior to peer review.

Applicants may apply to undertake any activity which can typically be sought through the standard research scheme including staff costs, travel and subsistence, visiting researchers, public engagement activities and equipment.

Scope of the call

Some of the areas and opportunities that the community has highlighted are outlined below; and we are inviting research proposals that are addressing these opportunities and new ideas

- **Extending interaction.** The development and evaluation of new techniques of interaction and use, including new modalities of input and output, and new sensors and devices.
- **Building.** The development and evaluation of platforms, architectures or component technologies that underpin the interaction between humans and ICT systems.
- **Understanding users.** Studies of different target groups and settings to inform the invention and design of new technologies.
- **Evaluation.** The use of experiments, studies, envisionment workshops and other forms of user engagement to understand or evaluate proposed designs or prototype technologies.

We ask that all applicants consider and capture aspects of responsible innovation in regard to data within the work packages. Moreover, applicants should address how anonymity can be safeguarded and how privacy can be preserved, where these issues are appropriate for the project.

Collaborations with industry or other users are not mandatory. However, such collaborations are strongly encouraged where greater impact can be achieved through such relationships. We also ask that applicants consider how they will engage with potential users of the research funded in the proposal. A strategy should be developed which covers:

- how and when potential users have been / will be identified;
- what form the engagement will take;
- what steps will be taken to ensure that outputs of the research are made available to potential users;

This strategy should be included within the Pathways to Impact section, and resources can be requested to support any associated activities.

Equipment

Where possible, researchers are asked to make use of existing facilities and equipment, including those hosted at other universities. If equipment is needed as part of the research proposal, applicants must follow EPSRC's rules for requesting equipment over £10,000 in value. Individual items of equipment up to the current OJEC (Official Journal of the European Communities) procurement threshold can be included on research proposals submitted through this call, but research organisations will be expected to make a contribution to the cost. All requests for single items of equipment above the current OJEC threshold will need to go through a separate process which will assess the strategic need for the equipment and how to ensure maximum usage. These proposals will be assessed through the separate Strategic Equipment peer review process.

For more information on equipment funding, please see:

<http://www.epsrc.ac.uk/research/ourportfolio/themes/researchinfrastructure/subthemes/equipment/>.

The current OJEC threshold can be found at:

<http://www.epsrc.ac.uk/research/facilities/equipment/process/>

Eligibility

For information on the eligibility of organisations and individuals to receive EPSRC funding, see the EPSRC Funding Guide:

<http://www.epsrc.ac.uk/funding/howtoapply/fundingguide/>

As this call is a targeted funding opportunity provided by EPSRC, higher education institutions, and some research council institutes and independent research organisations are eligible to apply. A list of eligible organisations to apply to EPSRC is provided at: <http://www.rcuk.ac.uk/funding/eligibilityforrcs/>

How to apply

Submitting application

You should prepare and submit your proposal using the Research Councils' Joint electronic Submission (Je-S) System (<https://je-s.rcuk.ac.uk/>).

When adding a new proposal, you should select:

Council 'EPSRC'

Document type 'Outline Proposal'

Scheme 'Outline'

On the Project Details page you should select the 'User Interaction with ICT' call.

Note that clicking 'submit document' on your proposal form in Je-S initially submits the proposal to your host organisation's administration, not to EPSRC. Please allow sufficient time for your organisation's submission process between submitting your proposal to them and the call closing date. EPSRC must receive your application by **16:00 on 6 January 2015**

Guidance on the types of support that may be sought and advice on the completion of the research proposal forms are given on the EPSRC website (<http://www.epsrc.ac.uk/funding/howtoapply/routes/>) which should be consulted when preparing all proposals.

Guidance on writing the outline application

Your outline proposal should consist of the Outline application form and Case for Support document.

- All proposals including multi-institutional bids must be submitted on one common Je-S proposal form by the lead organisation.

Outline application form - the summary section should contain an overview of the research proposed.

- All applicants must articulate how the proposed research contributes to the sub-challenges addressed and how it relates to them.
- The outline will need to give an indication of the total funds sought should a full proposal be invited.

Outline Case for Support – no more than four pages of A4, addressing the key assessment criteria and giving an indication of the resources being requested and any project partners. The minimum acceptable font is size 11, and the minimum margin in all directions is 2cm.

- Applicants should give an overview of the project, clearly articulating the novel research being tackled, including a description of the approach and methodology being used and the team involved.

If the attachments are uploaded as Word documents, please be aware that once the application has been submitted to the Council/Funder, all the attachments will be converted and held as an Adobe Acrobat file (PDF). Also please note, that

whilst we support a wide range, **we do not support all MS Word font types**. Therefore if an unsupported font type is used a different font type may be substituted which may result in changes to the layout of the document. For this reason we recommend that the documents are converted to PDF files before uploading.

Also, please note that on submission to council **all** non-PDF documents are converted to PDF, the use of non-standard fonts may result in errors or font conversion, which could affect the overall length of the document.

In addition, where non-standard fonts are present, and even though the converted PDF document may look unaffected in the Je-S System, when it is imported into the Research Councils Grants System some information may be removed. We therefore recommend that where a document contains any non-standard fonts (scientific notation, diagrams etc), the document is converted to PDF prior to attaching it to the proposal

For advice on writing proposals see:

<http://www.epsrc.ac.uk/funding/howtoapply/preparing/>

Full proposals

After short-listing the outline proposals, we will invite a number of applicants to prepare and submit full proposals. Multi-institutional projects should be submitted as a single proposal submitted by the lead organisation on behalf of all partners. Multiple forms will not be accepted, and will be returned without being peer reviewed.

The closing date for full proposals will be in mid June 2015. Invited applicants will be informed of the exact closing date following the outline panel meeting.

Full proposals will follow the submission guidance for standard EPSRC proposals. Documents that must be included are: Je-S proposal form, case for support, pathways to impact, justification of resources requested and a work plan.

CVs, statements of support from project partners, letters of support, technical assessments for the use of a major facility, and quotes for equipment should all be submitted only where appropriate.

Assessment

Assessment process

There are two stages in the assessment process:

1 - Outline Proposals

Postal peer review will not be used at this stage. A panel meeting will be held in March 2015 and this external peer review panel will short-list the outline proposals based on the information provided in the Je-S form and case for support. Selected applicants will be invited to submit full proposals.

2 - Full Proposals

The peer review process for standard mode proposals will be followed. Full proposals will initially be assessed by anonymous postal peer review against the

standard research criteria. Those proposals which receive sufficiently supportive reviews will be evaluated by a further external peer review panel. This panel meeting will be held in September 2015 where proposals will be prioritised for funding.

Assessment criteria (for both outline and full proposals)

The assessment criteria for the Outline stage are:

- Fit to the scope of the call "User Interaction with ICT"
- Quality of the research proposed
- Importance of the research proposed
- Appropriateness of the pathway to impact

In addition to the criteria above, full proposals will also be assessed against the following two criteria:

- Applicant(s) ability to deliver the research proposed
- Appropriateness of the resources and Management

Guidance

Guidance for reviewers

Postal peer reviewers will be directed to this call for proposals.

Information about the EPSRC peer review process and guidance for reviewers can be found at: <http://www.epsrc.ac.uk/funding/assessmentprocess/review/>

Key dates

| Activity | Date |
|------------------------------------|----------------------|
| Call opens in Je-S | 28 October 2014 |
| Closing date for outline proposals | 06 January 2015 |
| Short-listing panel | Mid March 2015 |
| Closing date for full proposals | Mid June 2015 |
| Assessment panel | Early September 2015 |

Contacts

For specific advice about this call please contact:

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Your research administration should be able to offer advice about costing your proposal and the Je-S system.

If there are any queries related to Je-S, please contact the Je-S helpdesk:
JeSHelp@rcuk.ac.uk or 01793 444164

Please allow enough time before the call closing date for your organisation's submission process.

Change log

| Name | Date | Version | Change |
|-----------|------------|---------|--------|
| Zoe Brown | 21/10/2014 | 1 | N/A |
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