## Human-Like Computing

EPSRC Network+
Human-Like Computing

Imperial College London

EPSRC
Engineering and Physical Sciences
Research Council

http://hlc.doc.ic.ac.uk/

## YEAR 3 CALL FOR PROPOSALS FOR INNOVATE UK ENDORSEMENTS 2020

Closing date:
19th May 2020

Funded by the Engineering and Physical Sciences Research Council (EPSRC)

### SUMMARY

The EPSRC Network+ on Human-Like Computing is inviting proposals for Innovate UK endorsements.The Committee will review applications for endorsements of projects to be submitted by HLC members to Innovate UK. If successful, endorsements will be provided in the form of a Letter of Support from the HLC network. For further details, please contact Dr Ali Anjomshoaa (E: ali.anjomshoaa@ktn-uk.org).

### BACKGROUND

Human-Like Computing (HLC) research aims to endow machines with human-like perceptual, reasoning and learning abilities which support collaboration and communication with human beings. Such abilities should support computers in interpreting the aims and intentions of humans based on learning and accumulated background knowledge.

The development of computer systems which exhibit truly human-like computing and co-operative properties requires sustained inter-disciplinary collaboration between disparate and largely disconnected research communities within AI and Psychology. The proposed Network is needed in order to forge a new UK-based scientific community involving collaboration between leading groups in these disciplines. The Network builds on the successful interactions of leading AI and Psychology groups represented at the EPSRC work- shop on Human-Like Computing meeting (Bristol, 17-18 February 2016) and the EPSRC funded Machine Intelligence 20 workshop on Human-Like Computing (Cumberland Lodge,  23-25 October 2016).Machine Intelligence 21 workshop on Human-Like Computing took take place at Cumberland Lodge from 30th June to 3 July 2019.

### THIS CALL

Key objectives for the HLC area were identified by the community during the MI20 HLC meeting (October, 2016). We aim to order these community-generated objectives into a series of Roadmap Themes which relate to key topics associated with the development of HLC from **Foundational Components of HLC** (Years 1+2), **Scaling-up HLC systems** (Year 3) to **Applications of HLC** (Years 4+5).

| Year | Phase | Topic 1 | Topic 2 |
|------|-------|---------|---------|
| Y1 | Foundational (1) | Comprehensibility | Representation Change |
| Y2 | Foundational (2) | Small data learning | Memory and forgetting |
| Y3 | Scaling-up | Bridging high and low-level | Verbal and non-verbal |
| Y4 | Applications (1) | Intelligent tutoring | Programming assistance |
| Y5 | Applications (2) | Social agents | Scientific assistance |

The topics above will be used by the Management and Grants Committee as a guide to preferred areas for funding of submitted industrial engagement funding and travel grants projects in successive years of the network. Although all submissions will be encouraged in the indicated areas, the committee will also support strong applications in other areas of HLC research.

The submission should contain a cover letter, a copy of the Case for Support and the Budget summary for an Innovate UK application.

## ELIGIBILITY AND CONDITIONS

Applicants must be based in institutions eligible to apply for EPSRC funding.

Your submission title on EasyChair should include "Proposal for X: ...", where X is either for Network membership or for an Innovate UK endorsement. You will not need to first apply for membership before applying for an endorsement.

Please note that when you apply for an endorsement then everybody named in the application, will automatically be added to the HLC Network membership list. If you don't wish to be added to the HLC Network membership list, please email Bridget Gundry on bridget.gundry@imperial.ac.uk to opt out.

The investigators of the proposal in this call are expected to become core members and play an active role in Human-Like Computing Network+.

## APPLICATION AND SELECTION

All submissions are via EasyChair (**https://easychair.org/conferences/?conf=hlc2020**) and should be submitted by 19th May 2020. In the box for "Keywords", please include HLC topics which are most relevant to your proposal. Proposals will be assessed by a panel of analysis, testing, and verification experts from academia, industry and government, who will judge the proposals on quality, viability and significance.

Enquiries regarding the academic scope and objectives of this call should be directed to Dr Alireza Tamaddoni-Nezhad, Technical Director. Enquiries regarding the application process should be addressed to Bridget Gundry, Administrator.

## KEY DATES:

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| CALL PUBLISHED | 19th March 2020 |
| PROPOSALS SUBMITTED | 19th May 2020 initially and then on an on-going basis |
| RESULT ANNOUNCEMENT | By 8th July 2020 |
| RESEARCH PERIOD | 1st December 2020 – 31st May 2021 initially and then on an on-going basis |