

NOTE This is the first phase of our new website – let us know if you have [feedback](#) or would like to [help us test new developments](#).

Hardware for efficient computing

Opportunity status:	Open
Funders:	Engineering and Physical Sciences Research Council (EPSRC)
Funding type:	Grant
Total fund:	£3,000,000
Publication date:	21 October 2020
Opening date:	15 May 2020
Closing date:	23 July 2020 16:00 UK time

Last updated: 21 October 2020

A total of £3 million of funding is available to support 4-6 projects (18–36 months) under this call.

It is recognised that “conventional” digital computing systems based on the Von Neumann architecture are restricted by a data transfer bottle neck. This limits further increases in computing efficiency, which could prevent computing systems from meeting demand requirements from increasingly complex problems and increased global energy demand. Coupling this with a reduction in return on investments in Moore’s law and an increase in global demand for computational capacity, there is a need to develop new hardware solutions beyond the Von Neumann architecture to achieve greater computer efficiency.

EPSRC recognises the importance of fundamental research and development into these novel hardware systems and are launching this call to ensure that the UK continues to have an excellent base of electronics and hardware research in this important area.

Projects submitted to this call may comprise of (but are not limited to):

- novel microelectronics designs
- non-Von Neumann designs
- programmable hardware

- analogue computing
- novel microelectronic device technologies
- neuromorphic systems
- memristors
- bio-inspired devices
- in-material computing
- novel computer architectures
- parallel computing
- unconventional computing.

The need for software tools that enable the use of novel hardware is recognised and welcomed under this call, however the focus of submitted proposals must be on the hardware being developed and/or its design.

EPSRC are not looking to fund projects which focus specifically on:

- quantum devices
- energy harvesting devices
- projects in which the novelty lies outside of the hardware (for example, a novel sensor on existing hardware).

Webinar

On 9 June 2020 EPSRC ran a webinar to provide information and answer questions about the scope of this call.

Hardware for efficient computing webinar: part 1

Hardware for efficient computing webinar: part 2

Contact

For further information, advice or queries regarding the webinar or application procedure please contact:

- ICT theme: ict.theme@epsrc.ukri.org
- James Coombs Obrien: james.coombsobrien@epsrc.ukri.org (phone calls can be arranged via email)
- Jessica Bonham: jessica.bonham@epsrc.ukri.org (phone calls can be arranged via email).

Supporting documents

- [Call guidance \(PDF, 203KB\)](#)
- [Equality impact assessment \(PDF, 204KB\)](#)

