Tender

TENDER FOR THE SUPPLY OF OPTICALLY PUMPED MAGNETOMETERS AND ACCESSORIES FOR MAGNETOENCEPHALOGRAPHY - UNIVERSITY OF BIRMINGHAM

THE UNIVERSITY OF BIRMINGHAM

F02: Contract notice
Notice identifier: 2022/S 000-012392
Procurement identifier (OCID): ocds-h6vhtk-033706
Published 12 May 2022, 2:42pm

Section I: Contracting authority

I.1) Name and addresses

THE UNIVERSITY OF BIRMINGHAM

University of Birmingham

BIRMINGHAM

B152TT

Contact

Kseniya Samsonik

Email

k.samsonik@bham.ac.uk

Country

United Kingdom

Region code

UKG31 - Birmingham

Internet address(es)

Main address

https://www.birmingham.ac.uk/index.aspx

I.3) Communication

The procurement documents are available for unrestricted and full direct access, free of charge, at

www.in-tendhost.co.uk/universityofbirmingham

Additional information can be obtained from the above-mentioned address

Tenders or requests to participate must be submitted electronically via

www.in-tendhost.co.uk/universityofbirmingham

I.4) Type of the contracting authority

Body governed by public law

I.5) Main activity

Education

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

TENDER FOR THE SUPPLY OF OPTICALLY PUMPED MAGNETOMETERS AND ACCESSORIES FOR MAGNETOENCEPHALOGRAPHY - UNIVERSITY OF BIRMINGHAM

Reference number

SC10696/22

II.1.2) Main CPV code

- 35125110 - Biometric sensors

II.1.3) Type of contract

Supplies

II.1.4) Short description

The University of Birmingham invites tenders for supply of

- At least 65 optically pumped magnetometer (OPM) sensors and associated electronics to be used for magnetoencephalography (MEG)

- An adjustable helmet or a set of helmets to arrange the sensors around the head of adults and children

- A MEG-compatible chair for patient and helmet(s) support

These items will be part of facilities for brain imaging at the Centre for Human Brain Health. The items will be combined in order to detect neuronal dynamics as well as localize neuronal signals in the brain.

II.1.5) Estimated total value

Value excluding VAT: £405,000

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.2) Additional CPV code(s)

- 35125100 - Sensors
- 45223820 - Prefabricated units and components

II.2.3) Place of performance

NUTS codes

- UKG31 - Birmingham

Main site or place of performance

Delivery Location is

Centre for Human Brain Health

University of Birmingham

B15 2SA

Birmingham, UK

II.2.4) Description of the procurement

The University of Birmingham invites tenders for supply of

- At least 65 optically pumped magnetometer (OPM) sensors and associated electronics to be used for magnetoencephalography (MEG)

- An adjustable helmet or a set of helmets to arrange the sensors around the head of adults and children

- A MEG-compatible chair for patient and helmet(s) support

These items will be part of facilities for brain imaging at the Centre for Human Brain Health. The items will be combined in order to detect neuronal dynamics as well as localize neuronal signals in the brain.

Details specified below.

We require the OPM sensors to have sensitivity below 15 fT/sqrt(Hz). The sensors will be used in the newly developed OPM lab at CHBH. The lab is in the proximity of elevators.

Therefore, we require that the sensors have operating range of at least ± 100nT and the dynamic range of at least ± 10nT with good linear response in that range. Regarding the bandwidth, we require that the system can record oscillatory brain activity (3-100Hz); ideally 1-100 Hz.

The helmet(s) accommodating the OPM sensors should allow sensors placement within millimetres form the subject's scalp. Participants for OPM-MEG research will be of all ages. Therefore, it will be required that the sensor array can be adjusted easily between different head sizes. The helmet(s) should allow the array of sensors to conform rapidly to the subject's head. We require that the helmet(s) is able to accommodate at least 60 sensors.

To obtain precise source localisation, we require that the sensors in the array have well defined placement and the position of each sensor can be established with 1mm precision. We require that the information on each sensor's placement can be automatically stored in the data output file for each measurement.

The system should also include a chair or a bed that has supports to fix the helmet in a desired position. The chair should be able to sit adults as well as children. The chair should be compatible with ultralow magnetic field environment requirements, be sturdy and comfortable.

We require all the items to be safe to operate on human subjects. The recording sessions are expected to last 1-2h, during which wearing the helmet should be comfortable for the subject. We require that sensors to not overheat during this time.

We request the electronics of the sensors to be fully integrated, simple, ready to use and easy to scale up. It should allow us to drive the sensor, retrieve data and interface the sensors with computers. The Data Acquisition unit/OPM controllers should have additional analogue and digital inputs and outputs. Additional head-position indicator (HPI) coils with a driver will be a benefit. Additional benefit will be if the format of the output files (raw and meta data) is compatible with conventional MEG devices and ability to import the files directly into MNE Python based software.

Overall budget for this item is up to £405,000.00 excluding VAT.

II.2.5) Award criteria

Price is not the only award criterion and all criteria are stated only in the procurement documents

II.2.6) Estimated value

Value excluding VAT: £405,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

23 June 2022

End date

20 December 2022

This contract is subject to renewal

No

II.2.10) Information about variants

Variants will be accepted: No

II.2.11) Information about options

Options: No

Section IV. Procedure

IV.1) Description

IV.1.1) Type of procedure

Open procedure

IV.1.8) Information about the Government Procurement Agreement (GPA)

The procurement is covered by the Government Procurement Agreement: Yes

IV.2) Administrative information

IV.2.2) Time limit for receipt of tenders or requests to participate

Date

13 June 2022

Local time

12:00pm

IV.2.4) Languages in which tenders or requests to participate may be submitted

English

IV.2.7) Conditions for opening of tenders

Date

13 June 2022

Local time

12:01pm

Section VI. Complementary information

VI.1) Information about recurrence

This is a recurrent procurement: No

VI.4) Procedures for review

VI.4.1) Review body

The University of Birmingham

University of Birmingham

Birmingham

B152TT

Country

United Kingdom