



**NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA – 769 008, ORISSA**

(Form to be used for purchases above Rs.1.0 lakh; to be sent to at least six firms)

Advertised/Open Tender Enquiry

Department: Industrial Design

Enquiry No: NITR/PW/ID/2017/L/1751

Date: 18.12.2017

Important Dates

To

| Event | Date | Time |
|--------------------------------------|-------------|-------------|
| Pre-bid Conference | NA | NA |
| Last Date of submission of quotation | 08-01-2018 | 3:30 PM |
| Quotation Opening date | 08-01-2018 | 4:00 PM |

Dear Sir,

We intend to purchase the commodities specified below and invite quotations in accordance with the terms and conditions detailed in the bid document. If you are interested, kindly send your offer with prices and complete terms within the time mentioned above.

Please send your quotation to:

Head,
Department of INDUSTRIAL DESIGN
Attn.: Prof. Md. Rajik Khan
NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA – 769 008, ORISSA

Yours sincerely,

Name: - Prof. M. R. Khan
PIC- Ergonomics Simulation Lab

Encl:

- (1)
- (2)

Schedule of requirement, specifications, dates etc.
Bid document containing detail terms and conditions.

1. Schedule of requirements

| Sl. No. | Description of Goods/Service | Quantity |
|---------|--|----------|
| 1 | Real-time biomechanics data acquisition, visualization and biomechanical analysis solution | 1 Unit |

2. Specifications and allied Technical Details

For detailed specification See Annexure 1
* Submit list of users along with the quotation.

3. Format of Quotation (tick appropriate box)

It is a single bid; please give all technical specifications and price bid in one envelope.

OR

It is a two-part bid with separate techno-commercial and price bids. Please see item 1.11 of instructions for method of bidding.

4. The bid envelope should be super-scribed with

Bid for **Real-time biomechanics data acquisition, visualization and biomechanical analysis solution** vide Enquiry No. NITR/PW/ID/2017/L/1751 Dated 18.12.2017 due on 08/01/2018

5. Quotations should be valid for a period of **60 days** from the closing date of the bid.

6. Some important dates:

- i. Pre-bid Conference: Date: NA Time: NA
- ii. Last date for receipt of quotation: Date: 08.01.2018 Time: 3:30 PM
- iii. Opening of techno-commercial and financial bid: Date: 08.01.2018 Time: 4:00 PM

7. Warranty of minimum 1 year must be provided.

8(a) If the price quoted in foreign value, the prize should be CIF up to Kolkata airport.

8(b) GST: GST should be charge according to applicable rates (if applicable).

9. Bid Security: Not Applicable.

10. Performance Security: Not Applicable.

11. Please go through the enclosed "bid document" carefully for other bidding instructions.

12(a) Please send your quotations by Registered/Speed Post or Courier Service to:

| |
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| Head, INDUSTRIAL DESIGN Department Attention: Prof. M.R.Khan National Institute of Technology, Rourkela – 769 008 |
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OR (b) drop the quotation in the Tender Box kept in the office of the Department during the normal working hours of the Institute. Please do not hand over the quotation to any person by hand.

13. For technical details, you may contact

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| Prof. M.R.Khan Assistant Professor & Head, Department of Industrial Design National Institute of Technology, Rourkela – 769 008 Phone: 0661 – 2462853 E-mail: khanmr@nitrkl.ac.in |
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**NATIONAL INSTITUTE OF TECHNOLOGY
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BID DOCUMENT

1. Instructions to the bidders

- 1.1 Sealed bids are invited on behalf of the Director, National Institute of Technology (NIT), Rourkela – 769 008, Orissa, from the intending bidders for supply of the goods/stores/equipments for the Institute as detailed in the enquiry letter.
- 1.2 The bidders should quote their offer/rates in clear terms without ambiguity.
- 1.3 The rates should be quoted both in figures and words and legibly written without any over-writings. In case of any correction, the same must be attested by the bidder with full signature. However, no over-writing is permissible. Manufacturer's price-list, where applicable, should be submitted along with the bid.
- 1.4 In case of any discrepancy between the rates in figures and that in words, the rate in words will be accepted as correct.
- 1.5 The last date for receipt of the bid is marked in the enquiry. In case the above date is declared a holiday for NIT, Rourkela, and the bids will be received up to the appointed time on the next working day.
- 1.6 The bids may be sent by registered or speed post or by courier service, so as to reach the concerned department before the last date of receipt, or alternatively, be dropped in the tender box kept at the Department office. The name of the Department is mentioned in the Enquiry.
- 1.7 The bidder may modify his bids before the last date appointed for receipt of the bids by sending an amendment to the bid. No bid shall be modified after the deadline for receipt of the bids.
- 1.8 If a prospective bidder requires any clarification in regard to the bidding documents, he may make a request the concerned officer or faculty member at least 15 days before the deadline for receipt of bids.
- 1.9 Bids received after the deadline of receipt indicated in para 1.5 above, shall not be taken in to consideration.

- 1.10 Each bidder shall submit only one bid. A bidder, who submits more than one bid, shall be disqualified and considered non-responsive.
- 1.11 (In respect of high value plant, machinery etc. of a complex and technical nature). The bids may be submitted in two parts, viz., technical bid and financial bid. The above two bids may be sealed by the bidder in separate cover duly super-scribed and both these sealed covers are to be put in a bigger cover which should also be sealed any duly super-scribed. The bidding format is specified in the quotation enquiry.
- 1.12 The cover containing the bid must be sealed and super-scribed "Bid for **Real-time biomechanics data acquisition, visualization and biomechanical analysis solution** vide No **NITR/PW/ID/2017/L/1751 dated 18.12.2017**" as given under item 4 of the enquiry.
- 1.13 The bids shall be opened in the Departmental office at the date and time given on the top of the document. The bidders may send their authorized representatives to attend the bid opening, if they so desire. In the event of the above bid opening date being declared holiday for the NIT, Rourkela, and the bids will be opened at the appointed time and place on the next working day.
- 1.14 The bidder has to sign in full at all pages of the bidding document.

2. Conditions of the bid

- 2.1 The rates quoted should preferably be net, inclusive of all taxes and duties, packing, forwarding, freight, Insurance and all other incidental charges. In case these charges are quoted extra in addition to the quoted rates, the amount thereof or ad valorem rate must be specified. Packing, forwarding, freight etc., when quotes separately are reimbursable at actual. If external agencies are employed, their receipts must be enclosed with the invoice.
- 2.2 Duties and Taxes are to be quoted separately. Ad valorem rates thereof should be clearly indicated with reference to the relevant Acts and Rules.
It may be noted that the Institute is exempt from paying Excise Duty vide Government Notification No. 10/97 dated 01.03.1997 [Registration No.: TU/V/RG-CD(227)/2011, dated 10.10.2011. The Institute is not authorized to issue C or D forms. GST may be charged at applicable rates.
- 2.3 The goods are required to be delivered at the indenting Department of NIT, Rourkela, and must be dispatched within 30 days from the date of placement of the supply of order

under the risk and arrangement of the bidder and offers with delivery beyond the above period shall be treated as unresponsive. In case the delivery time is higher, the same must be mentioned clearly in the quotation.

- 2.4 The bid should remain valid for a period of **60** days from the date of opening. In case your offer has a different validity period that should be clearly mentioned in the quotation.
- 2.5 Conditional discount, if any, offered by the bidder shall not be considered at the time of evaluation.
- 2.6 The goods offered should strictly conform to the specification and technical details mentioned in **Annexure 1**.
- 2.7 The Institute may like to conduct pre-dispatch inspection of goods, where applicable.
- 2.8 Period of guarantee/warranty, where applicable, should be specified in the bid.
- 2.9 If the successful bidder, on receipt of the supply order, fails to execute the order within the stipulated period, in full or part, it will be open to the Director, NIT Rourkela to recover liquidated damage from the firm at the rate of 1 percent of the value of undelivered goods per month or part thereof, subject to a maximum of 5 percent of the value of undelivered goods. Alternatively, it will also be opened to the Director, to arrange procurement of the required goods from any other source at the risk and expenses of the bidder.
- 2.10 The successful bidder may be required to execute a contract, where applicable.
- 2.11 The bidder has to furnish up to date Income Tax Clearance Certificate along with the bid.
- 2.12 Payment (*100 percent*) will be made by Account Payee Cheque/Bank Draft, within 30 days from the date of receipt of the goods in good condition or receipt of the bill, commissioning of the equipment, where applicable, whichever is later/latest.
- 2.13 In case of Advance payment, the payment will be made on either in Foreign Demand Draft or Wire Transfer only. The proforma invoice copy need to be sent for advance payment.
- 2.14 In the event of any dispute arising out of the bid or from the resultant contract, the decision of the Director, NIT, Rourkela shall be final.
- 2.15 The bid document/resultant contract will be interpreted under Indian Laws.

Annexure-I

Technical Specification for, “Real-time biomechanics data acquisition, visualization and biomechanical analysis solution”

- Software for Acquisition, Visualization, and Biomechanical modeling and Analysis
- Laptop with 16 GB RAM, Windows 10, 1080p HD Widescreen auto focus webcam with Luggable Case
- Software plug-in for real-time data collection from Electromagnetic Kinematic 3D Motion Tracker sensors and Wireless EMG probes, digitally.
- Software should provide the ability to collect real-time data from Electromagnetic Kinematic 3D Motion Tracker standalone or synchronously with other data sources.
- Integration, testing and configuring of Electromagnetic Kinematic 3D Motion Tracker system and Wireless EMG probes synchronously.
- Capability to upgrade the system to add other data sources such as Force Plates, VR Hardwares like Haptics devices, HMD, Projectors, EEG System, Instrumented Treadmill in future by simply adding the hardware and required software plug-in to collect data synchronously.
- Handheld Event Marker for use with Kinematic Tracker as “OK” button through setup dialog windows; event marker; recording trigger; and third-party synch pulse
- Quick release cuffs to mount Kinematic sensors on body segments of participant.
- Ready integration with 6DOF Electromagnetic 3D Motion Tracker for real-time as well as off-line modeling and analysis.
- **16 Sensor Wireless EMG System** consisting of wireless EMG probes and remote system unit with charging sockets for Sensors with real-time integration into Biomechanical Base System above as well as for standalone EMG data Acquisition and analysis on a separate PC.
- Parallel Bar EMG Sensors Selectable Bandwidth Options: 10-850 Hz or 20-450 Hz, Selectable Dynamic Range Options: 11 mv or 22 mV
- Both Analog and Digital Output options.
- Typical operating range of 40 m
- Hardware triggering options to synchronize with 3rd Party devices
- Inter sensor delay- 0 ms in digital mode, fixed 48 ms in Analog mode.
- Baseline Noise $\leq 2.5 \mu\text{V}(\text{r.m.s.}, \text{r.t.i.}) \leq 3.0 \mu\text{V}(\text{r.m.s.}, \text{r.t.i})$
- CMRR $\leq -80 \text{ dB}$
- Power Consumption ($<$)0.130 W
- Effective Radiated Power 9 mW
- RF Protocol Proprietary
- Full-charge Operation Time ($>$)6 hours (typical)
- Recharge Time 2.5 hours
- Auto Shut-down timer 300 seconds
- Temperature Range 5 – 40 degrees Celsius

Annexure-I continued.

- Sensor Input Range 11 mV (r.t.i.) 22 mV (r.t.i)
- Stand Alone Real-Time EMG Acquisition and Analysis software with comprehensive set of capabilities including:
 - a) Real-time filters, support for multiple data acquisition cards, User-friendly interfaces for user-friendly experiment design, a library of Ready-to-use tasks and real-time signal quality assessment.
 - b) Live Signal Exploration for freezing data on the screen without Stopping data collection, and performs quick analysis of signal amplitude and frequency.
 - c) Integrated database to manage data with subjects, workflows, and data files in a relational database. Filtering and grouping features allows intelligent searching of data across experiments to build up data sets for comparative studies, or for tracking subject progress.
 - d) Should have scripting capability and a library of ready-to-use calculations for signal processing and calculations.
 - e) User-friendly graphical interface, quick view tools and batch processing capabilities make post-processing of EMG, biomechanical sensors signals simple and efficient.
 - f) Should allow seamless integration with video files and external data files via Import/Export features. It supports frame-by-frame video playback option for inspecting the EMG activity collected in synchronization with 3rd party video capturing system.
- 3 Remote Analysis licenses
- Onsite training session
- 03 Year of Maintenance, Subscription, and Support program
- Proprietary certificate need to be provided
- Preference brand: Motion monitor & Delsys trigno EMG system

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