INVITATION FOR TENDER FOR SUPPLY OF EQUIPMENT

Sealed tender offers are invited in two separate sealed covers (Technical and Commercial offers) from eligible manufacturers/suppliers or their direct Indian agents for the supply of the following equipment.

**Motorized Inverted Advanced Research Microscope for Transmitted Light Brightfield, Differential Interference Contrast (DIC) & Reflected Light Fluorescence with high sensitive monochrome cool CCD digital camera and advanced Image Processing & Analysis Workstation**

Please send offers, ALONG WITH DESCRIPTIVE CATALOGUE/ BROCHURE. The validity of the bid should be at least four months (120 days) or more from the date of the opening of this tender. Please ensure that your quotation reaches not later than **25.05.2015 at 15:00 hrs** at the following address:

Dr. Ritwik Kumar Layek  
Assistant Professor, Department of Electronics and Electrical Communication Engineering,  
Indian Institute of Technology Kharagpur,  
Pin-721 302, West Bengal, India

Earnest money of **Rs. 30,000/-** is to be deposited in the form of Account payee Demand Draft in favour of IIT Kharagpur, payable at Kharagpur, India. Any bid which is not accompanied with an EMD shall be summarily rejected. Earnest money deposited will be forfeited if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender. No interest will be paid on the earnest money of the unsuccessful bidders.

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<tr>
<th>Tender Reference</th>
<th>IIT/SRIC/CSE/WBC/2015-2016/EQ/1, Dated: 27.04.2015</th>
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<tr>
<td>Price of Tender Document</td>
<td><strong>NIL</strong></td>
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<tr>
<td>Last Date and Time for submitting the tender document</td>
<td><strong>25.05.2015, 15:00 Hrs (Indian time)</strong></td>
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<tr>
<td>Time and Date of Opening of Bids</td>
<td><strong>25.05.2015, 16:00 Hrs (Indian time)</strong></td>
</tr>
</tbody>
</table>
| Place of Opening tender offers | Department of Computer Science & Engineering,  
Indian Institute of Technology Kharagpur – 721 302, West Bengal, India |
| Address of Communication | As stated above                                         |
| Contact Telephone Numbers | +91- 3222 - 28 1992                                    |
| E-mail | ritwik@ece.iitkgp.ernet.in |
Detailed Specifications for Motorized Inverted Advanced Research Microscope for Transmitted Light Brightfield, Differential Interference Contrast (DIC) & Reflected Light Fluorescence with high sensitive monochrome cool CCD digital camera and advanced Image Processing & Analysis Workstation

- Advanced Research Microscope Stand with coded left Side Port (Side-port prism with 80% transmission to the left port); with Binocular Tube, 45° viewing angle, Siedentopf design, Field of view 25 mm or better, Variable interpupillary distance range 55mm to 75 mm
- Touch Screen, for intuitive control of all microscope functions, contrasting techniques including status display
- Motorized focus system with 12 mm travel range - Tactile Course / Fine motorized focus drive with 4 gears and 5 sensitivity levels with course / fine knob on each side of microscope
- Coded 6 -fold Nosepiece
- Contrasting technique: Transmitted Light: Brightfield, DIC & Reflected Light: Fluorescence
- Objectives: Universal (suitable for all contrasting techniques) objective set: all Fluorad grade or better: 10x/0.25 (Free working distance: 17.6 mm), 20x/0.40 CORR (Free working distance: 6.9 mm // Correction collar for use with Cover Glass of 0 - 2 mm thickness), 40x/0.60 CORR (Free working distance: 3.3 - 1.9 mm // Correction collar for use with Cover Glass of 0 - 2 mm thickness), 63x/1.30 OIL (Free working distance: 0.19 mm)
- Eyepiece pair 10x with 25 mm. or better field of view
- Coded Transmitted Light Illumination Arm with integrated manual field diaphragm (FD) with integrated tilting mechanism for specimens, integrated manual filter magazine for 2 replaceable filter positions - one position factory-equipment with a manual shutter with LED lamp house including for transmitted light 185 cm cable with TTL shutter
- Coded Condenser Base for free working distance: 28mm. should have a 7-position disk to accommodate light rings, IC prisms
- Coded 4-fold Differential Interference Contrast Objective-Prism-Turret with analyzer and required objective & condenser prisms for DIC
- Fluorescence turret, 6-fold, coded - 6-fold fluorescence turret operated from both sides. The active filter position is indicated in the front touch panel and in the software platform
- Alignment-free Metal Halide lamp based external light source with attenuator and fast shutter for fluorescence illumination, should be offered with suitable bulb with lifetime of bulb ~ 2000h & Liquid Light Guide
- Narrow band 2 nos. fluorescence filter cubes for GFP & Rhodamine
- Motorized 3-plate-stage. Travel range: 83mm x 127mm. Aluminum, extremely scratch-resistant, precisely plane-parallel for 160mm x 110mm inserts. Precisely plane-parallel and sensitive. Three point mounting.
- External control box to control motorized microscope components with 6 slots for control boards for external components (e.g. motor stages), with 3x i²C, 2x USB, 1x serial on the master module

**Digital Camera**

Digital high-speed, high-sensitivity cooled black/white camera with additional NIR mode and 3 pixel clocking rates (40MHz, 20 MHz, 1,6 MHz). Dynamic range ≥ 69 DB with a dark noise of 6 electrons. 1392 x 1040 pixel, 6,45 µm pixel size, and a full-well capacity of 18.000 e-. Partial scan (freely definable region of interest), various binning modes, and overlapping mode for high-speed imaging should be available. One-stage Peltier cooling (regulated) and a dark current less than 0,5 e-/p/s. 14 bit A/D converter with 12 bit and 8 bit digitization mode. Enhanced black balance and image averaging should be provided for crisp and brilliant fluorescence images. Firewire B interface (IEEE1394 b with 800 Mbit/s) is desired.

Max. frames per second (full frame): 21 fps (without any binning); 42 fps (with 2x2 binning); 77 fps (with 4x4 binning); 122 fps (with 8x8 binning)

**Software**

Conveniently packaged collection of modules, aimed at users with an automated microscope that wish to perform time-lapse and 3D experiments, on multiple channels. The package should include:

**Core** module- Control of one or more compatible cameras for image acquisition, full control of camera features exposure, gain, binning, gamma, region of interest, Hardware Configurator, enabling configuration of compatible microscopes Experimental setup and user interface, Workflow oriented user interface for ease
of use and ergonomics, Intuitive setup of experiment conditions for fast setup and acquisition. Full image viewer including annotations, image overlay, image gallery and image comparison, Review capability for all acquisition parameters, Project tree for data management save, rename, copy, delete, export as Tiff, JPEG, QuickTime, AVI, MPEG-4, WMV, ASCII, Access to project conditions for export as XML or applying to another experiment. Image Processing & Measurement

**Multi Channel Acquisition** - Multi Channel Acquisition Definition of up to 8 acquisition channels per experiment. Each acquisition channel can be defined with different contrasting techniques and with different acquisition parameters

**Time-Lapse** - Time-Lapse User interface for defining the duration and frequency of image capture. Includes Acquire Until Stop function and function to minimize the time interval. Automatic display of time series: image sliders for fast scrolling through large data sets

**X Z-Control and SW Autofocus** - Define focus positions and capture 3 dimensional data sets. Includes software autofocus

**Single Object Tracking** - module to follow single objects with the stage. features: centers single objects in the field of view before image acquisition // centering is a 2D-process in x and y direction // selects brightest and largest object by internal image analysis // user defined threshold level for object size// user defined adaptive intensity threshold level // special adaptive detection algorithms balance variations in brightness which might occur during scanning process over time // smaller objects or objects that touch the edge of the image can be excluded from the measurement // new xy positions are stored in the XML-header of OME-Tiff images individually // the tracking function can be assigned to individual or all scan fields as an attribute

**PC Workstation (to be supplied from local sources):** Branded (HP / Dell) PC workstation with Intel Core i7-4770 3.4GHz processor /8GB DDR3 RAM-1600Mhz/ 1TB 7200RPM SATA HDD/ DVDRW /win7 Pro 64 Bit/3-3-3/ 23” IPS Led Display, 1 GB Graphics

**Note:**

a) The microscope, digital camera & software should be from the same manufacturer to ensure system integrity and ease of after sales support

b) The firm should have Kolkata based service & application support
GENERAL TERMS & CONDITIONS

PLEASE SPECIFICALLY INDICATE THE FOLLOWING POINTS IN YOUR QUOTATIONS AND COMPLY THE TERMS AS MENTIONED HEREUNDER:-

1. TENDER ARE INVITED COMPLYING THE REQUIREMENT FOR TENDER AS DETAILED IN THE TENDER SPECIFICATION TO BE SUBMITTED IN THE COMPANY’S / FIRM’S LETTERHEAD NEATLY PRINTED / TYPED DULY SIGNED BY AUTHORIZED PERSON WITH THE SEAL OF THE BIDDERS. ALL ENVELOPS CONTAINING THE TENDER SHOULD BE PROPERLY SEALED. SEPARATE ENVELOPS SHOULD BE USED FOR TECHNICAL AND PRICE BID AND INDICATION TO THEIR EFFECT MAY PLEASE BE SUPERSCRIBED ON THE ENVELOP.

THE FOLLOWING DOCUMENTS ARE REQUIRED FROM THE INDIAN AGENTS OF FOREIGN FIRMS:

1.1 FOREIGN PRINCIPAL’S PROFORMA INVOICE INDICATING THE COMMISSION PAYABLE TO THE INDIAN AGENT AND NATURE OF AFTER SALES SERVICE TO BE RENDERED BY THE INDIAN AGENT.

1.2 COPY OF THE AGENCY AGREEMENT WITH THE FOREIGN PRINCIPAL INDICATING THE NATURE OF AFTER SALES SERVICES, PRECISE RELATIONSHIP BETWEEN THEM AND THEIR MUTUAL INTEREST IN THE BUSINESS.

1.3 PLEASE ENCLOSE THE DOCUMENT(S) RELATED TO THE ENLISTMENT OF THE INDIAN AGENT WITH DIRECTOR GENERAL OF SUPPLIES & DISPOSALS (DGS & R) UNDER THE COMPULSORY REGISTRATION SCHEME OF MINISTRY OF FINANCE.

2. TECHNICAL CATALOGUE/LEAFLET SHOULD BE ENCLOSED WITHOUT FAIL. PROVIDE COMPLIANCE STATEMENT WITH RESPECT TO THE TECHNICAL SPECIFICATIONS MENTIONED ABOVE.

3. PLEASE CONFIRM WHETHER YOU ARE AUTHORISED TO QUOTE ON BEHALF OF YOUR PRINCIPALS AND IF SO, PLEASE ENCLOSE A COPY OF SUCH AUTHORISATION WITH YOUR QUOTATION.

4. PRICE BIDS FOR FOREIGN FIRMS: PRICES ARE TO BE QUOTED ON ‘EX-WORKS’ DULY PACKED OR ON “FCA/FOB” INTERNATIONAL PORT” BASIS AND ALSO INCLUDING AGENCY COMMISSION PAYABLE TO YOUR INDIAN AGENTS, IF ANY SHOWING CLEARLY THE FOLLOWING BREAK UP:-

I) EX-WORKS PRICE
II) PACKING & FORWARDING
III) FREIGHT
IV) ANY OTHER RELEVANT EXPENSES.
V) TAXES PAYABLE BY THE INSTITUTE

INSURANCE WILL BE PAID BY OUR INSTITUTE SEPARATELY AND SHOULD NOT FORM PART OF THE QUOTED PRICE.

PRICE BIDS FOR INDIAN FIRMS: PRICES ARE TO BE QUOTED ON F.O.R., IIT KHALAGPUR, ON DOOR DELIVERY BASIS CLEARLY SHOWING THE BREAK UP.

5. PERIOD OF VALIDITY: BIDS SHALL REMAIN VALID FOR ACCEPTANCE FOR A PERIOD OF 120 DAYS FROM THE DATE OF OPENING.

6. INDIAN AGENTS ADDRESS AND PERCENTAGE OF AGENCY COMMISSION INCLUDED IN ABOVE F.O.B./EX-WORKS PRICE. (THIS WILL BE PAID TO THE INDIAN AGENTS IN INDIAN RUPEES ONLY AND NOT IN FE). PLEASE ENCLOSE COPY OF AGENCY AGREEMENT ENTERED INTO WITH YOUR PRINCIPALS INDICATING THE NATURE OF AFTER SALES
SERVICES OF INDIAN AGENTS, PRECISE RELATIONSHIP & MUTUAL INTEREST IN THE BUSINESS.


8. **SCOPE OF SUPPLY**: SHOULD INCLUDE FREE INSTALLATION AND COMMISSIONING

9. **PAYMENT TERMS** FOR FOREIGN FIRMS

   A) 100% PAYMENT THROUGH SIGHTDRAFT/FOREIGN DEMAND DRAFT/LC (EXCEPTIONAL CASES)/SWIFT TELE TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION.

   B) BANK CHARGES ON LC/SD (WITHIN INDIA APPLICANT ACCOUNT AND OUTSIDE INDIA TO BENEFICIARY ACCOUNT).

**PAYMENT TERMS** FOR INDIAN FIRMS

A) 100% PAYMENT THROUGH CROSSED ACCOUNT PAYEE CHEQUE / ELECTRONIC TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION.

B) ENSURE MENTIONING

   i) BANK DETAILS OF THE BENEFICIARY AND PAN NUMBER

   ii) FULL NAME AND ADDRESS OF THE BENEFICIARY ON WHOM ORDER HAS TO BE PLACED

10. WHETHER ANY EXPORT LICENCE IS REQUIRED FROM YOUR GOVERNMENT, IF SO, PLEASE CONFIRM WITH DETAILS.

11. COUNTRY OF ORIGIN OF THE GOODS IS TO BE MENTIONED.


13. **LIQUIDATED DAMAGES**: THE STORES SHOULD BE DELIVERED / DISPATCHED TO DESTINATION AND READY FOR OPERATION NOT LATER THAN THE DELIVERY DATE SPECIFIED. IF THE SUPPLIER FAILS TO DELIVER ANY OR ALL THE STORES OR PERFORM THE SERVICE BY THE SPECIFIED DATE, LIQUIDATED DAMAGES AT 1% PER MONTH OR PART THEREOF IN RESPECT OF THE VALUE OF STORES WILL BE DEDUCTED FROM THE CONTRACT PRICE SUBJECT TO A MAXIMUM OF 5%. ALTERNATIVELY, THE ORDER WILL BE CANCELLED AND THE UNDELIVERED STORES PURCHASED FROM ELSEWHERE AT THE RISK AND EXPENSE OF SUPPLIER.

14. **PATENT RIGHTS**: THE SUPPLIER SHALL INDEMNIFY THE PURCHASE AGAINST ALL THIRD PARTY CLAIMS OF INFRINGEMENT OF PATENT, TRADEMARK OR INDUSTRIAL DESIGN RIGHTS ARISING FROM USE OF THE GOODS OR ANY PART THEREOF IN INDIA.

15. ONLY THOSE BIDDERS WHO’S BIDS HAVE BEEN TECHNICALLY FOUND ACCEPTABLE WILL ONLY BE INVITED FOR PARTICIPATION IN THE PRICE BID.
16. THOSE BIDDERS WHO DO NOT RECEIVE ANY COMMUNICATION FOR PARTICIPATION IN PRICE BID OPENING MEETING MAY PRESUME THAT THEIR BID HAS NOT BEEN ACCEPTED BY THE INSTITUTE.

17. CONDITIONAL OFFER WILL NOT BE ACCEPTED.

18. LATE TENDERS I.E. TENDER RECEIVED AFTER THE DUE DATE AND TIME OF SUBMISSION AS MENTIONED ABOVE SHALL NOT BE ACCEPTED.

19. BIDDERS TO ENCLOSE THE FOLLOWING DOCUMENTS:-

A) CURRENT INCOME TAX AND SALES TAX CLEARANCE CERTIFICATES AND PAN NO.

C) BANKER’S SOLVENCY CERTIFICATE

C) SUMMARY OF AUDITED STATEMENT OF ACCOUNTS FOR THE LAST THREE YEARS TO BE ENCLOSED AND FINANCIAL HIGHLIGHTS AND THE KEY PERFORMANCE DURING THE LAST THREE QUARTERS TO BE ENCLOSED AS PER FORMAT:-

COMPANY’S KEY PERFORMANCE

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<th>DESCRIPTION</th>
<th>JAN. TO MARCH</th>
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D) CUSTOMER SATISFACTION CERTIFICATE FROM ONE SUCH ORGANIZATION IS TO BE ATTACHED WITH THE TECHNICAL BID AND PRICE BID.

E) NAME AND ADDRESS OF MINIMUM THREE CLIENTS TO WHOM SUCH EQUIPMENT HAVE BEEN SUPPLIED SHOULD BE MENTIONED.

20. WARRANTY / GUARANTEE: THIS COMPREHENSIVE WARRANTY / GUARANTEE SHALL REMAIN VALID FOR 12 MONTHS AFTER THE GOODS (OR ANY PORTION THEREOF AS THE CASE MAY BE) HAVE BEEN DELIVERED AND COMMISSIONED TO THE FINAL DESTINATION.

21. THE INSTITUTE DOES NOT BIND ITSELF TO OFFER ANY EXPLANATION TO THOSE BIDDERS WHO’S TECHNICAL BID HAS NOT BEEN FOUND ACCEPTABLE BY THE EVALUATION COMMITTEE OF THE INSTITUTE.

22. ALL TENDERS (UNLESS OTHERWISE SPECIFIED) ARE TO BE SUBMITTED / HANDED OVER TO DR. RITWIK KUMAR LAYEK, ELECTRONICS AND ELECTRICAL COMMUNICATION ENGINEERING, INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR - 721 302 AND ACKNOWLEDGEMENT TO BE OBTAINED.
IMPORTANT

1. IIT Kharagpur authority may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The Institute at its discretion may change the quantity / upgrade the criteria / drop any item or part thereof at any time before placing the Purchase Order.

2. Promptly make arrangements for repair and / or replacement of any damaged item (s) irrespective of settlement of claim.

3. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.

4. For any query pertaining to this bid document correspondence may be addressed to Dr. Ritwik Kumar Layek, at the address mentioned above.

LAST DATE FOR SUBMISSION OF SEALED BIDS: 25.05.2015

1) Please Note that the Institute remains closed during Saturdays & Sundays and all specified government holidays.

2) Fax, e-mail Tender will not be accepted.

3) The General Terms and Conditions as stated above relate to supply of stores / equipment /assets etc. and for specific service other terms and conditions of the Institute will apply.

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