

# **MEMORANDUM OF UNDERSTANDING**

**BETWEEN**

**CENTRAL SCIENTIFIC INSTRUMENTS ORGANISATION,  
CHANDIGARH - 160 030**



**AND**

**PUNJAB ENGINEERING COLLEGE  
(DEEMED UNIVERSITY)  
CHANDIGARH - 160012**



**August 1, 2008**

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This Memorandum of Understanding (MoU) is entered into on the 1<sup>st</sup> day of August, 2008

BY and BETWEEN

**Punjab Engineering College (Deemed University), Chandigarh** (hereinafter referred to as "PEC") represented by the Director, having its office at Punjab Engineering College, Chandigarh: 160012

AND

**Central Scientific Instruments Organisation, Chandigarh** (hereinafter referred to as "CSIO"), a constituent laboratory of Council of Scientific & Industrial Research (CSIR) represented by the Director having its office at Sector-30, Chandigarh: 160 030

To promote Academic and Research Co-operation between the two institutes.

## 1. Objectives

- CSIO and PEC will undertake joint research work in the areas of mutual interest.
- The concerned scientists of CSIO and corresponding faculty members of PEC will formulate Research projects and HRD plans for joint work with due approval of both the participating institutions.
- Impart training to staff, students and technical personnel within the areas of co-operation.
- Joint Sponsored and Consultancy Projects could be undertaken, with both long term and short term goals, keeping in view the interests and philosophies of the respective institutions.

## 2. Exchange / Deputation of Staff

Both CSIO and PEC jointly agree:

- To exchange staff through deputation on full-time/part-time basis for a limited period and up to one year at a time for the purpose of implementation of joint tasks within the areas of co-operation.
- Staff Members on such deputation shall be deemed to be on duty with the parent organization for the said period.

- That the faculty/staff and research fellows registered for Ph.D. degree may visit other institution for a short period in connection with their research work. They shall be deemed to be on duty with the parent organization for the said period.
- That the technical personnel deputed for training shall be deemed to be on duty with the parent organization for the period of training.
- That the faculty/staff will be encouraged to deliver lectures/invited talks at the other institution. The TA/DA and the honorarium for the lectures shall be borne by the host institution.

### **3. Joint Conferences / Workshops / Courses**

Both CSIO and PEC agree:

- To hold/conduct, whenever feasible, joint workshops, conferences, training courses within the areas of co-operation.
- That the host institution shall provide accommodation to the participating members from the visiting institutes wherever feasible at special minimum rates applicable to research and academic institution.

### **4. Sharing of Facilities**

- The two institutes agree to share their respective important R&D facilities in order to promote academic and research interactions in the areas of co-operation to intensify the high priority area programmes of science and technology.
- The two institutes agree to exchange software, other materials and components developed in house in the areas of co-operation, if advisable within the framed rules governing the two institutes.
- Access to laboratory, library and other supporting facilities for jointly supervised M. Tech., Ph.D. students (In the areas of mutual interests) and a limited number of already registered Ph.D. students generally stationed at PEC and CSIO will be provided by both Institutes.

### **5. Project Work of Students**

In each semester, 10-15 selected students of M.Sc., B.Tech. and M.Tech. in the respective areas of specialization of PEC will be allowed for project work at CSIO. The students will work in the areas of mutually agreeable divisions by both the

institutes: (Details are given in item No.7).

## 6. Ph.D Registration

- CSIO will be recognized as research center of PEC in mutually agreed area programmes.
- Upto 5 staff members or research fellows of CSIO at any given time may be registered for the Ph.D. Programme at PEC.
- There shall be provision for joint supervision with appropriate staff of CSIO and PEC in conformity with the rules and norms for Ph.D. research guidelines at PEC.

## 7. Areas of Co-operation

The areas of co-operation will be defined and modified from time to time by the coordination Committee set up for the purpose.

The identified areas of co-operation along with nodal point at PEC are as under:

<b>Areas of Co-operation</b>	<b>Nodal Point at CSIO</b>	<b>Nodal Point at PEC</b>
Machines & Structural Health Monitoring	DU-1 DU-4	Department of Civil Engineering  Department of Electrical Engineering
Virtual Instrumentation Image Processing Soft Computing Technology	DU-1 DU-2	Department of Computer Science & Engineering  Department of Electronics & Electrical Communications Engineering
Material Science Metallurgy Nanotechnology	DU-6	Department of Metallurgical Engineering
Aerospace Instrumentation	DU-3 DU-4	Department of Aeronautical Engineering
HRD	DU-7	All Concerned Departments

Director, CSIO or his nominee shall be the coordinator from CSIO for each identified area of co-operation. The Director, CSIO may nominate more than one coordinator.

The coordinator from PEC for each identified area of co-operation shall be the Head of the Department at PEC.

## **8. Co-ordination Committee**

The following will constitute the Coordination Committee to monitor and review the collaborative programme between the two institutions:

- a) Director, PEC or his nominee
- b) Director, CSIO or his nominee(s)
- c) Coordinators from PEC & CSIO

The Coordination Committee shall:

- Review the progress of the identified programs (at least once in a year)
- Consider the new R&D proposals for joint collaboration and implementation on case to case basis including IPR and financial arrangement
- Consider the addition/deletion of areas of co-operation between the two institutions during review
- Consider the continuance of the MoU.

## **9. Publications and Patents**

- All publications in the programmes of co-operation will be co-authored by the concerned staff / Research fellow of CSIO and the faculty of PEC.
- CSIO/CSIR & PEC will be joint holders of the **Intellectual Property Right (IPR) / Patents** flowing out of joint work.

## **10. Non Disclosures**

In case of joint research and consultancy projects taken up by CSIO and PEC, no party will disclose any part of investigation to media in any form without mutual consent.

## 11. Validity & Period

- This MoU shall be valid for a period of Five years from the date of signing.
- At the end of validity period of the MoU, a fresh MoU with similar/ modified terms may be considered for signing.

In witness whereof the undersigned, duly authorized, have signed this Memorandum of Understanding at Chandigarh on the 1<sup>st</sup> day of August, 2008.

The MoU has been executed in two originals; one retained by CSIO and the other by PEC.

  
(Pawan Kapur) 01.8.2008  
**Director**

Central Scientific Instruments Organisation (CSIO),  
Chandigarh

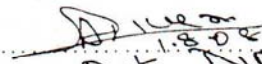
  
(Manoj Datta)  
**Director**

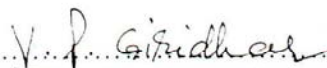
Punjab Engineering College (PEC),  
Chandigarh

निदेशक  
Director  
केन्द्रीय वैज्ञानिक उपकरण संगठन  
Central Scientific Instruments Organisation  
सेक्टर 30, चण्डीगढ़-160 030  
Sector 30, Chandigarh-160 030


Director,  
Punjab Engineering College  
Seal


Witness:

1.   
B.K. Dhillon  
Head, A.U.  
C.S.I.O.  
Chandigarh

2.   
V.P. Girdhar  
Head, BDG, 1/8/08  
C.S.I.O., Chandigarh

Witness:

1.   
Dr. Anurag Singh  
Secy, RPTD, PEC, Chandigarh

2.   
J.D. Sharma  
o/I. Collaboration, PEC