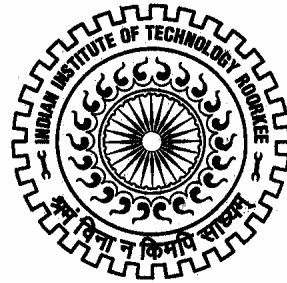


**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

**(INDIA)**

**ACTIVITIES IN IP AND TECHNOLOGY TRANSFER**



**Dr. P. K. Ghosh**

**Prof. & Coordinator IPR Cell**

**Indian Institute of Technology Roorkee**

**(INDIA)**

# Indian Institute of Technology Roorkee

## A Heritage Institution



- **First Technical Institution of the Country**
- **Established as Roorkee College - 1847**
- **Renamed Thomason College of Civil Engineering - 1854**
- **Thomason College of Engineering - 1947**
- **Converted to University of Roorkee - 1949**
- **Converted to IIT Roorkee - 2001**

# A Heritage Building



**Roorkee College: 1847**



**Thomason College of Civil Engg: 1854**



**The Present Administrative Building**



**IIT ROORKEE**



# Academic Departments (18)

1. Architecture & Planning
2. Bio-technology
3. Chemical Engineering
4. Chemistry
5. Civil Engineering
6. Earth Sciences
7. Earthquake Engineering
8. Electrical Engineering
9. Electronics & Computer Engineering
10. Humanities & Social Sciences
11. Hydrology
12. Paper Technology
13. Management Studies
14. Mathematics
15. Mechanical & Industrial Engineering
16. Metallurgical & Materials Engineering
17. Physics
18. Water Resources Development and Management

# Other Centres / Units



- **Academic Centre**

- Alternate Hydro Energy Centre

- **Centre of Excellence**

- Transportation Systems
- Nano Technology
- Disaster Mitigation & Management

- **Other Service Centres/ Units**

- Institute Instrumentation Centre
- Institute Computer Centre
- Information Superhighway Centre
- Continuing Education Centre
- Educational Technology Cell
- Quality Improvement Programme
- Central Library
- Intellectual Property Management & Technology Transfer (Proposal under active consideration)



# Courses of Study

- **UNDERGRADUATE PROGRAMMES**  
**B.Tech. / B. Arch.** **11**
- **POSTGRADUATE PROGRAMMES** **53**
- **DUAL DEGREE PROGRAMMES** **05**
- **FIVE YEAR INTEGRATED M.TECH COURSES** **03**
- **FIVE YEAR INTEGRATED M.Sc. COURSES** **03**
- **RESEARCH PROGRAMMES**  
**Ph.D. programmes available in all Academic  
Departments / Centres**

**First Institution to start Postgraduate Programmes in Engineering in 1953.**



# New Programmes

## Dual Degree Programmes (5 year)

***B.Tech.***

**Electrical Engineering  
Process Engineering**

***M.Tech.***

**Power electronics  
Business Management**

### ***Five year Integrated M.Tech Courses***

***Geological Technology  
Geophysical Technology***

### ***Five Year Integrated M.Sc. Courses***

**Applied Mathematics  
Chemistry  
Physics**



# Student Strength (2007-08)

<b>B.Tech/B.Arch./IDD</b>	<b>2220</b>
<b>PG Degree</b>	<b>1356</b>
<b>Research Scholars</b>	<b>765</b>
<b>Total</b>	<b>4341</b>

**(Overseas students 52)**





# Faculty

## Faculty Strength

<b>Faculty</b>	<b>367+19*</b> <b>(386)</b>
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**\*Emeritus Fellows, Re-employed  
Retired Faculty**

<b>Scientist/Other in Position</b>	<b>19</b>
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# Training of Foreign Students



- LARGE NUMBER OF FOREIGN STUDENTS [Session 2007-08]**

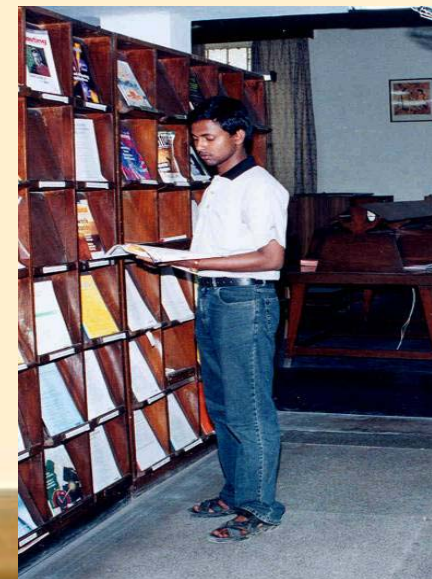
<b>On rolls</b>	<b>B.Tech.</b>	<b>M.Tech.</b>	<b>Ph.D.</b>	<b>Total</b>
<b>Number</b>	<b>-</b>	<b>33</b>	<b>02</b>	<b>35</b>

**Afghanistan, Bhutan, Ethopia, Indonesia, Iraq, Nepal, Nigeria, Rwanda, Sri Lanka, Sudan, Uzbekistan, Vietnam, Yemen**



# Institute Library

<b>PRINT JOURNALS</b>	<b>900+</b>
<b>ELECTRONIC JOURNALS</b>	<b>10,000+</b>
<b>e-BOOKS</b>	<b>18,000+</b>
<b>Bound Jl. Volumes</b>	<b>50,000</b>
<b>Books</b>	<b>2,75,000</b>
<b>Archival Collection</b>	<b>12,000</b>



# Primary Future Directions in Education, Research and Institute-Industry Interaction



- **VLSI & Embedded Systems**
- **Mobile computing & Network Security**
- **Biotechnology**
- **Nanotechnology**
- **Distributed Power Generation & Power Quality**
- **Disaster Mitigation & Management**
- **Waste Management**
- **Waste-to-Energy Conversion**
- **Small Hydro Power**
- **Transport Systems**



# Recent Contributions of IITR to National / Regional Development Projects

- **Infrastructural Development of Uttarakhand**
- **Pro-Poor IT Initiatives and e-Governance**  
(UTTARA project)
- **Disaster Mitigation and Management**
- **Construction and Performance evaluation of Small Hydro Power Stations**
- **Pradhan Mantri Gram Sadak Yojna**



# Recent Contributions of IITR to National / Regional Development Projects

- **Master plans for Village Electrification**
- **Tehri dam project**
- **Cattle dung based 1 MW Power Plant**
- **Flood routing and flood forecasting, and watershed management**
- **Survey using remote sensing, Geographic Information System (GIS) and Global Positioning System (GPS)**

# Research & Consultancy in the Institute At a Glance (2007-08)



## Research Papers

Journals	750
Conference /Symposia	618
Total	1368

## Sponsored Projects (New)

Consultancy Projects	574
Research Projects	67

# IP Management in the Institution



Managed through the IPR Cell under the stipulated guidelines in its IPR Policy document.

- ➔ To create an environment to foster growth of intellectually capable, innovative and entrepreneurial professionals.
- ➔ To keep pace with the fast growth of industry and national economy, the activities of IPR Cell especially cover
  - Creating awareness on IPR
  - Developing human resource for IP management
  - Facilitating IP generation and management.
  - Catering to the requirements of IPR service for the institute and outside community

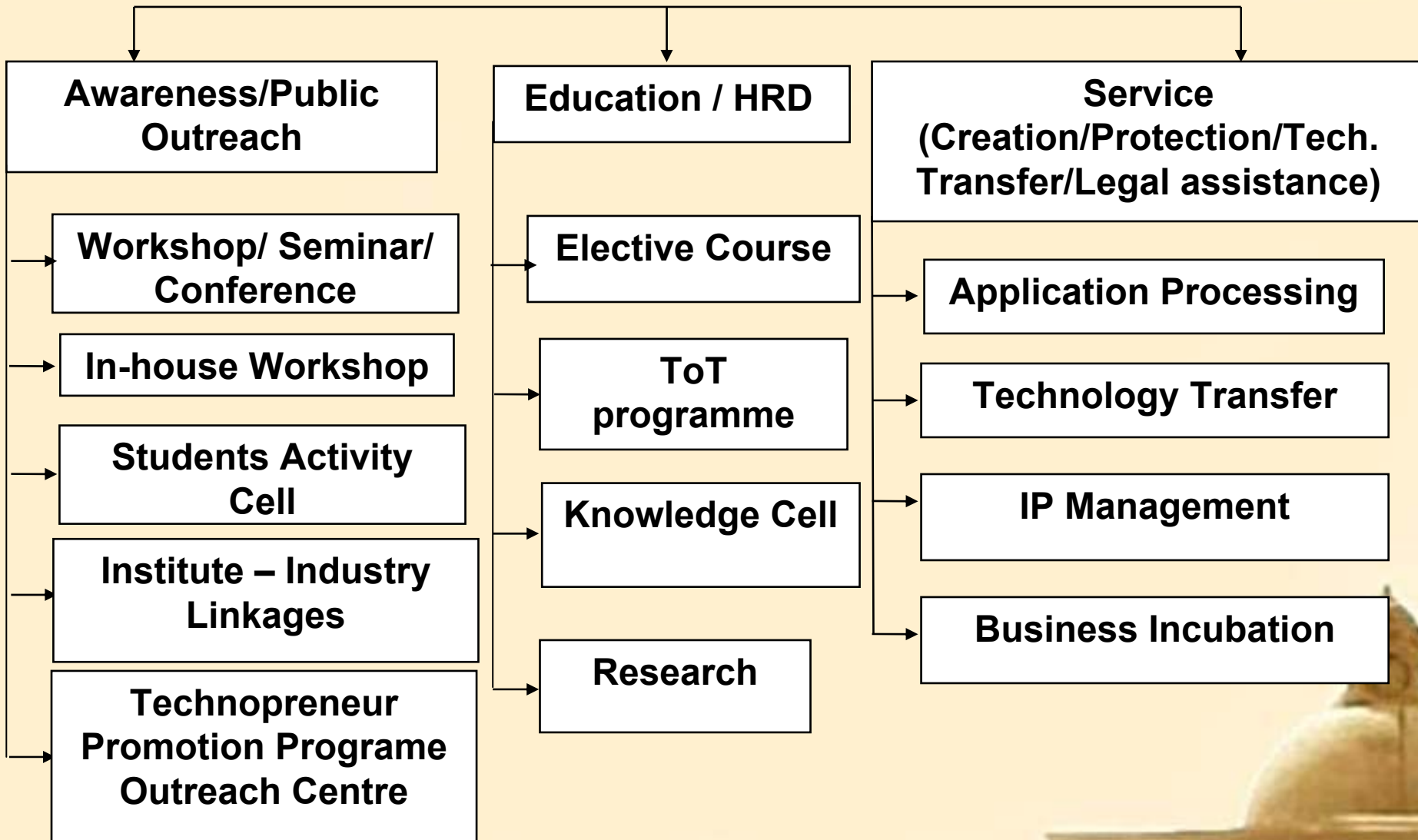




# Objectives

- ➔ To provide an environment for academic excellence
  - Through dedicated academic programs on IPR for the undergraduate and postgraduate students
  - Through regular IPR counseling programme for the research scholars
- ➔ To provide a platform to identify innovation and research on contemporary issues for creation of IPRs.
- ➔ To promote and establish collaborative frameworks for industry-institute partnerships on a national and international scale to initiate research and development of commercial potential.
- ➔ To facilitate, encourage, promote and safeguard Intellectual property.

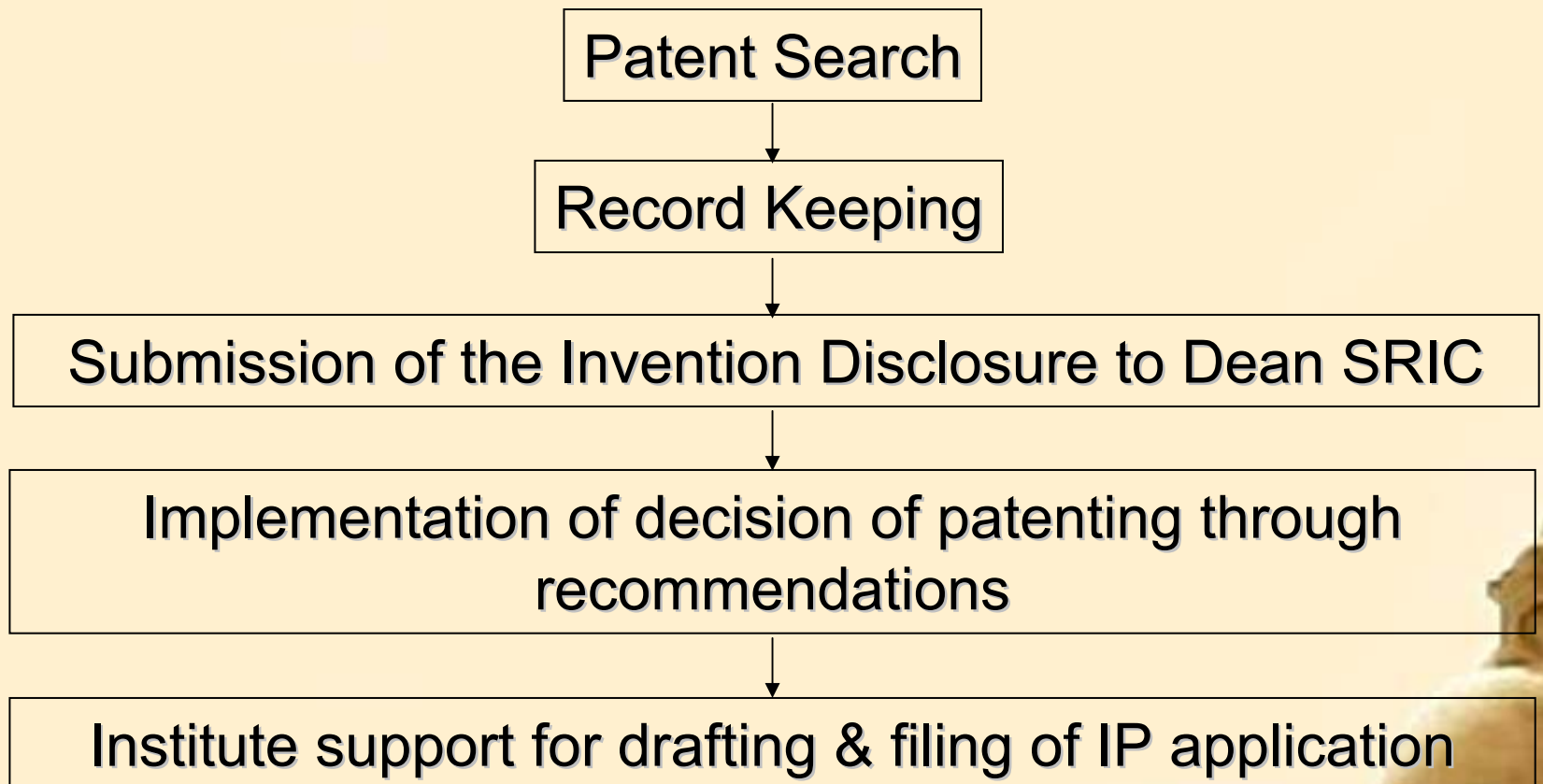
# Activities in IPR Cell



# IP Creation



## BASIC FEATURES OF IP CREATION PROCESS IN STEPS





# Recently Processed disclosures & Patent Filing



- 21 Disclosures have been submitted from the development under various research project of the Institute.
- 18 Patent Applications have been filed.



# Functioning

- ➔ An Institute Intellectual Property Committee (IIPC) is responsible to administer all decisive issues related to IP policy and such other relevant matters. The IIPC comprise of
  - Dean SRIC (Sponsored Research and Industrial Consultancy) as Chairman
  - Coordinator, IPR Cell, and
  - Three additional members nominated by the Chairman of the Senate
- ➔ An employee is required to observe the Institute's policy and decisions on Intellectual Property Rights as may be decided by the IIPC.
- ➔ The Dean (SRIC) is responsible for the implementation of all the recommendations and decisions through IIPC.



# Inhouse Training / Awareness Programme



- The IPR Cell runs a short term training programme for the fresh research scholars joining the institute in each semester.
- Train the research scholars (1) to organize research work through patent search, (2) record keeping of research work (3) submission of disclosure for patent filing.
- IPR Cell meets the principal investigators (PIs) and scholars of various ongoing research projects of the institute Explore the possibility to organize their work towards creation of IP.
- It works for confidence building, counseling and analyzing the merits of project work towards creation of IPR.

# Technopreneur Promotion Activity



- A Technopreneur Promotion programme (TePP) Outreach Centre (TUC) has been established at IIT Roorkee by the Technology Information Forecasting and Assessment Council (TIFAC), Department of Scientific and Industrial Research, (DSIR), Govt. of India.
- TePP Outreach Centre of IIT Roorkee has processed several projects for funding under TePP scheme.
- Two projects selected for Micro Technopreneureship Support (TS).
- Three major projects are also selected for Phase-I TePP Project Fund (TPF) out of which one TPF project is in collaboration with our institute.



# IP Management Course



A 2yrs Master's Programme in IP Management (IPM) has been proposed to run from the next academic year in our institute



# Initiatives



- Technology Incubation and Entrepreneurship Development Activity (TIEDA) Centre has been proposed to start functioning shortly.
- Faculty Entrepreneurship Policy has been proposed to start functioning shortly
- Business Incubation Policy for Micro Small & Medium Entrepreneurs (MSMEs) has been proposed to start functioning shortly



**THANK YOU**

EMILY'S LIST