

# Resume

## Dr. Amit Rai Dixit

B.Tech., M.Tech., PhD

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Senior Lecturer

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### I. Education

1. Ph.D., “Heuristic bases comprehensive design of Cellular Manufacturing System” from MNNIT, Allahabad, India, 2009.
2. Master of Technology (M.Tech.), Production Engineering, Motilal Nehru Regional Engineering College (presently MNNIT), Allahabad, India, First Class (Hons), *UP Technical University*, Lucknow 2002.
3. Bachelor of Technology (B.Tech.), *Mechanical Engineering*, B.I.E.T, Jhansi UP, India, First Class, *University of Bundelkhand*, 2000.

### II. Employment & Other Experience

#### *1. May 10, 2007 – till date\**

**Sr. Lecturer**, Department of Mechanical Engineering & Mining Machinery Engineering, Indian School of Mines University (ISMU), Dhanbad, India.

#### *2. September 11, 2002 – May 9, 2007*

**Lecturer**, *Industrial Production Engineering Department of Engineering Degree Division*, Institute of Engineering and Rural Technology (IERT), Allahabad, India.

#### *3. April 8, 2002 – September 10, 2002*

**Guest Lecturer**, Mechanical Engineering Department of A.I.E.T., Lucknow, India.

### III. Additional Qualification

- ❖ Two Week comprehensive training of CNC machines in MTAB, Chennai
- ❖ One week Training of Pro E software.
- ❖ Two day training of Autodesk Inventor
- ❖ Attended Short-term program under QIP on “**Micro-Machining**” organized by Indian Institute of Technology, Kanpur.
- ❖ Attended short-term program on “**Developments in Plastic Materials, Processing & Testing**” organized by Central Institute of Plastics Engineering & Technology.
- ❖ Attended Short-term program under QIP on “**Knowledge Management Practices**” organized by MNNIT, Allahabad.
- ❖ Attended workshop on “**Parallel & Distributed Computing (WPDC-2008)**” organized by CSED in ISMU, Dhanbad.

### IV. Hands on Experience

- ❖ **Heuristic based approach for comprehensive design of Cellular Manufacturing System. (PhD.):** The aim of this research is to present a comprehensive methodology for the integrated design of a cellular manufacturing system considering important production parameters/factors like operation sequence of parts, production volume/mix, machine capacity, processing and setup times, pallet size, cell size, batch size, machine cost, operating cost, non-productive machine cost, inter-cell material handling costs and machine workloads. Three important objectives have been considered that include the minimization of inter-cell movement, workload variation and overloading of machines in the system. Functionally identical machines have also been given due consideration, for sharing excess workload on specific machine types. Furthermore, analysis has also been made for dynamic and random production requirements.
- ❖ **Cellular system design using Genetic Algorithm in Cellular Manufacturing System. (M.Tech. Thesis):** The project deals with the development of a GA based heuristics to solve the machine-cell formation problem. The machine –cell formation is modeled as a bi-objective problem that guides the construction of feasible assignments of machines and parts to cell and provides the cost incurred. Software is coded in C to generate the optimum solution.
- ❖ **Implementation of TQM (Total Quality Management) in BHEL Jhansi and Work Study of Block & Washer. (B.Tech. Project):** This project deals with the thorough study of the factors effecting the performance of the organization and to apply the best possible method to reveal the satisfaction level of the employee of the organization. It also provides the areas of improvement as well as feedback from the employees.

## V. Courses Taught

- Manufacturing Science
- Operations Research
- Machine Design
- Computer Aided Manufacturing
- Thermodynamics
- Measurement and Metrology
- Engineering Mechanics
- Production technology
- Workshop Technology

## VI. Theses Supervised

1. Average Void Method to Design Machine Part Cell Formation for CMS.
2. Software to Generate Part Coding In Group Technology.
3. Mixed Facility Layout To Enhance The Flexibility In Production.
4. Novel Plant Layouts for Factories-Review, Evolution and Research Issues.
5. An Integrated Formulation of Manufacturing Cell, Designing & Implementation of Groups.
6. Software Model On Retrieval Type Process Planning
7. Moving Beyond Binary Incident Matrix in Design of Manufacturing Cell.
8. Study, Development and comparison of Manufacturing cell formation techniques.
9. Condition monitoring and remote logging of main mine ventilator fan from colliery substation.

## VII. Administrative Experience

1. Worked as one of the member of following **Administrative Committee** at ***IERT, Allahabad***:
  - (a) Proctorial Board
  - (b) Secretary, Extra-Curricular Activity Committee
2. Managed day-to-day academic & administrative activities of *Industrial Production Engineering Department* at ***IERT, Allahabad*** as ***Head of the Department***. The responsibilities were:
  - (a) Arranging guest faculty for the various courses
  - (b) Taking regular feedback from the students and discussing it with the faculty.
  - (c) Conducting ***Summer/Winter Classes***.

3. Appointed as an **Observer** and **Practical Examiner** for the examination of *Uttar Pradesh Technical University, Lucknow* from 2002 to 2007.
4. Appointed as a **Practical Examiner** in Bundelkhand University, Jhansi in 2006.
5. Appointed as a **Center Coordinator** for the *State Entrance Examination (UP-SEE 2005, 2006)* of *Uttar Pradesh Technical University, Lucknow*.
6. Appointed as an **Observer** for the *State Entrance Examination (UP-SEE 2004)* of *Uttar Pradesh Technical University, Lucknow*.

### VIII. Contribution Made To Laboratory Development Activities

Developed following labs as per Uttar Pradesh Technical University (UPTU) syllabus at IERT, Allahabad.

- ❖ Developed integrated CAD/CAM lab.
- ❖ Developed Mechanics of Machine Lab.
- ❖ Developed Heat & Mass transfer Lab.

### IX. Membership of Professional Bodies:

- ❖ Member of American Society of Mechanical Engineers (ASME).
- ❖ Member of International Association of Engineers (IAENG).
- ❖ Associate member of Institute of Engineers (IE India).

### X. Achievements and Awards

- ❖ Selected in All India Residential Scholarship awarded by Govt. of India.
- ❖ GATE qualified.
- ❖ Participated and won in various cultural and literary activities at the Institute level.
- ❖ Reviewer of *International Journal of Manufacturing Technology & Management (IJMTM)*, USA

## **XI. Personal Details**

Date of Birth : 02-01-1975  
Father's Name : Sri. H. V. Dixit  
Permanent Address : Asha Niwas, C-2281,  
Raja Ji puram, Lucknow-226017  
Uttar Pradesh, India  
Marital Status : Married  
Hobbies : Reading Books,  
Nationality : Indian