# Ravi Shankar .S

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## Educational Status

Bachelor of Technology [Hons.] - IIT Kharagpur (Dept of Metallurgical and Materials Engineering)
Currently in Senior year
Completed 10$^{th}$ standard from Niraj Public School, Hyderabad,
Completed 12$^{th}$ Standard from S.R.M Junior college Hyderabad,

Under graduation:
CGPA: 7.32/10 (At the end of six semesters).

Higher Secondary:
Board of Intermediate Education (Andhra Pradesh,India)
Aggregate: 90.9% Maths: 98% Science: 92.92%

10th Standard:
Indian Certificate of Secondary Education.
Aggregate: 82.5% Maths: 83.00% Science: 94%

## Course Work (Relevant to field of interest)

- Introduction to Materials Science. (Introduction to Physical Metallurgy.)
- Materials Processing.
- Deformation Behavior of Materials.
- Electronic Materials .
- Phase Transformations.
- Material Characterization
- X Ray Diffraction and Electron Microscopy.
- Computer Applications in Metallurgical Processes.(current)

## Projects

1.) "**Fabrication, Testing and Development of Nanocrystalline Spincoated $SnO_2$ Detection Layers in Gradient Gas Sensor Microarrays",** under Prof. Horst Hahn, and Dr. Joachim Goschnick, at the

Institute of Nanotechnology and Institute for Instrumental Analysis, Research Center Karlsruhe, Germany. (2005-till date)

2.) **'Development and Characterization of Hydroxyapatite based Bio-composite for Biomedical Applications'**, under prof. Indranil Manna, Department of Metallurgical and Materials Engineering IIT Kharagpur. (2004-till date).

3.) **'Synthesis and Characterization of polymer based nano-composites for functional applications'**, under Prof. Indranil Manna, Department of Metallurgical and Materials Engineering IIT Kharagpur. (2004-till date).

4.) " **A new evolutionary approach to rigid domain optimization problems with an application to stealth technology**" under Prof. S. K. Barai, Department of Civil Engineering, IIT Kharagpur - term project for "Soft Computing Tools in Engineering Applications" (July - November, 2004).

5.) **'Tribological Testing of Laser Glazed AISI1080 Rail Steel**', under Dr. Shrikant V. Joshi, Head Surface Engineering Division, Advanced Research Center for Powder Metallurgy and New Materials (ARC-I), Hyderabad. (May -July 2004)

6.) '**Production of Nano-Crystalline Materials using Electro deposition techniques**', under prof. Indranil Manna, Department of Metallurgical and Materials Engineering IIT Kharagpur. (2003-2004)

## Presentations and Term Papers.

1.)'**Synthesis and characterization of Nano-Crystalline Materials using Electro deposition techniques**' in COMPOSIT 2004 a departmental conference held by the Department of Metallurgical and Materials Engineering, IIT Kharagpur.

2.) Delivered a lecture and submitted a term paper on the '**Science and Engineering of Carbon Fibers**' as a part of the course "Introduction to Material Science" during autumn 2003.

3.) Term Paper on "**A fuzzy logic approach to modeling the mechanical behaviour of functionally graded materials"** for the course "Soft Computing Tools in Engineering.

4.) Term Paper on "**Application of Artificial Neural Networks in Polymer materials science**" for the course "Soft Computing Tools in Engineering.

5.) Term Paper on **"Application of Genetic Algorithms for optimal design of composite materials"** for the course "Soft Computing Tools in Engineering.

6.) Term Paper on "**Pearlitic Transformation**" for the course Phase Transformation and Heat treatment.

7.) Poster on "**Nanostructure Enhanced Electronic Nose Microsystem"** to be presented in the European Nanotechnology Conference "FRONTIERS", September 18-21 2005. ( Results of the work done in the Institute of Nanotechnology, Forchungzentrum Karlsruhe, May –July 2005.

8.)" **A new evolutionary approach to rigid domain optimization problems with an application to stealth technology**″ under Prof. S. K. Barai, Department of Civil Engineering, IIT Kharagpur - term project for "Soft Computing Tools in Engineering Applications" (July - November, 2004). Paper accepted at the Second World Congress on Lateral Computing, December 16-18, 2005, Bangalore, India.

## Skills

- **Operating Systems:** Windows (95, 98, 2000 and XP), Linux
- **Programming languages:** C, C++ and Matlab.
- **Software Packages:** MS-Office, Star Office, Origin, Auto-CAD.
- **Characterization Techniques:** SEM, TEM, XRD, AFM and all the other basic characterization methods (Hardness, Metallography, Optical Microscopy etc.)
- **Materials Processing Techniques:** Basic knowledge in Powder Metallurgical sintering techniques including Spark Plasma Sintering (SPS) and Laser aided Glazing (Project done), welding and drilling techniques using $CO_2$ and Nd: YAG lasers.
- **Testing Techniques:** Experience in Tribological Testing (Project done) and basic knowledge in all the primary testing techniques (Hardness, Tensile and Compressive testing.)
- **Advanced Processing Techniques:** Ball milling, Electrodeposition and Spin Coating

## Extra Curricular Activities

1.) Part of Symposium organization team of "**COMPOSIT 2004"**, conducted by Department of Metallurgical and Materials Engineering, IIT Kharagpur.

2.) Am a part of the Basketball team at IIT Kharagpur.

3) Was a volunteer of the Organizational team for accommodation team for our cultural fest "**Spring fest 2003**".

4.) Played Cricket for my coaching club at under 16 level (Hyderabad District Cricket Association).

5.) Was a member of the **National Sports Organization** for the past one year (2003-2004).

6.) Was an active **National Service Scheme** volunteer for one year (2002-2003).

7.) Was a head of the organizational team for the cultural event, **Hard Talk** for our cultural fest, **"Spring fest 2005".**

8.) Was the organizational head for the Technical Paper contest and webteam of our annual departmental conference **"COMPOSIT 2005"**, conducted by Department of Metallurgical and Materials Engineering, IIT Kharagpur.