

Resume

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Educational Qualifications:

Sl. No.	University /Board	Year	Degree/ Certificate	Subject/ Specialisation	Division/Class/ % of Marks
1.	W.B.B.S.E	1994	Secondary	Ben/Eng/Science	77.7 (First Div)
2.	W.B.C.H.S.E	1996	Higher Secondary		64.9 (First Div)
3.	Jadavpur University	2001	B.E	Production Engg.	74.8 (First Class)
4.	B.E. College (D.E)	2003	M.E	Mechanical Engg.(spec in Production Engg)	79.3 (First Class)
5.	IIT Kharagpur	2010	Ph.D	Mechanical Engineering (Manufacturing)	

GATE score: 89.07 in 2001.

Teaching Experience:

Assistant Professor in Mechanical Engineering Department, KIIT University: 4 years, August, 2003 to July, 2007 (before Ph.D) 6 months, June, 2010 to till date (after Ph.D thesis submission)

Publications:

International Journals

1. **Pal, Kamal**, Bhattacharya, Sandip, and Pal, Surjya K., "Prediction of metal deposition from arc sound and weld temperature signatures in pulsed MIG welding". *International Journal of Advanced Manufacturing Technology*, Springer Verlag, 2009, [**Accepted**, **Vol.45 (11-12), pp.1113-1130**].
2. **Pal, Kamal**, and Pal, Surjya K., "Monitoring of weld penetration using arc acoustics in pulsed MIG welding", *Materials and Manufacturing Processes*, Taylor & Francis, 2009 [**Accepted, In press**].
3. **Pal, Kamal**, Bhattacharya, Sandip, and Pal, Surjya K., "Multisensor-based monitoring of weld deposition and plate distortion for various torch angles in pulsed MIG welding", *International Journal of Advanced Manufacturing Technology*, Springer Verlag, 2010, [**Accepted, Vol.50 (5-8), pp.543-556**].
4. **Pal, Kamal**, and Pal, Surjya K., "Sensor based characterization of weld quality and process stability monitoring in pulsed MIG welding", *International Journal of Mechatronics and Intelligent Manufacturing*, Nova Science Publishers, USA., 2009 [**Accepted, In press**].
5. **Pal, Kamal**, and Pal, Surjya K., "Soft Computing Methods Used for the Modeling and Optimization of Gas Metal Arc Welding: A Review", *International Journal of Manufacturing Research*, Inderscience Publications, 2009, [**Accepted, In press**].
6. **Pal, Kamal**, Bhattacharya, Sandip, and Pal, Surjya K., "Investigation on arc sound and metal transfer modes for on-line monitoring in pulsed gas metal arc welding", *Journal of Materials Processing Technology*, Elsevier Publications, 2010 [**Accepted, Vol. 210(10), pp.1397-1410**].
7. **Pal, Kamal**, and Pal, Surjya K., "Effect of pulse parameters on weld quality in pulsed gas metal arc welding: a review", *Journal of Materials Engineering and Performance*, Springer Verlag, 2010, [**Accepted, doi: 10.1007/s11665-010-9717-y**].
8. **Pal, Kamal**, and Pal, Surjya K., "Study of weld joint strength using sensor signals for various torch angles in pulsed MIG welding", *CIRP Journal of Manufacturing Science and Technology*, Elsevier Publications, 2010, [**Accepted, Vol. 3, pp. 55-65**].
9. **Pal, Kamal**, Bhattacharya, Sandip, and Pal, Surjya K., "Optimization of weld deposition efficiency in pulsed MIG welding using hybrid neuro based techniques", *International Journal of Computer Integrated Manufacturing*, Taylor & Francis, 2009 [**Accepted, In press**].
10. **Pal, Kamal**, and Pal, Surjya K., "Investigation of weld microstructure using sensor signals in pulsed MIG welding", *Metals and Materials International*, Springer Verlag, 2009, [**Under review**].

11. Bhattacharya, Sandip, **Pal, Kamal**, and Pal, Surjya K., “Multi-Sensor based prediction of metal deposition in pulsed gas metal arc welding using various soft computing models”, *Applied Soft Computing, Elsevier Publications*, 2009, [**Under review**].

International & National Conferences:

International Conferences

1. **Pal, Kamal**, and Pal, Surjya K., “Modeling and control of a gas metal arc welding process using soft computing tools and sensor signals: A review”, *International Conference Emerging Research and Advances in Mechanical Engineering (ERA 2009)*, Chennai [**Accepted, pp. 651-656**].
2. **Pal, Kamal**, and Pal, Surjya K., “Characterization of weld quality and process stability in pulsed MIG welding using sensor signals”, *International Conference on Advances in Mechanical Engineering (ICMAE 2009)*, S.V. National Institute of Technology, Surat – 395 007, Gujarat, India, [**Accepted, pp.1019-1023**].

National Conferences

3. **Pal, Kamal**, and Pal, Surjya K., “Artificial neural network based prediction of metal deposition in pulsed MIG welding using sensor signals” National Conference on Recent Advances in Manufacturing Technology and Management (RAMTM – 2010) 19th -20th February, 2010, Production Engineering Department, Jadavpur University, Kolkata-32 [**Accepted, pp.169-174**].

➤ Research work and areas of interest:

The research area for my Ph.D is “Multi-Sensor based Monitoring and Modeling of Pulsed GMAW Process” under *Prof. S. K. Pal*. The influence of torch angle on weld geometry, microstructure and strength investigated in detail. Wavelet analysis of sensor signals have been used to soft computing tools to model and optimize the weld quality.

My research interests are as follows:

- Manufacturing process development using intelligent advanced techniques.
- Tool condition monitoring using sensors.
- Motion and path control of Robots in manufacturing.
- Non-conventional machining process for advanced materials.

➤ List of courses taught in UG/PG level:

UG level: Manufacturing processes-I & II, Robotics, Strength of materials, Modern manufacturing technology (CAM part), Thermodynamics, Principles of industrial engineering [at KIIT University, Bhubaneswar,

Orissa, India before PhD & after PhD]
Metal forming Lab, Metrology Lab [at Mechanical Engg Dept., IIT
Kharagpur during PhD]

PG level: Advanced Manufacturing processes, Robotics
[at KIIT University, Bhubaneswar, Orissa, India before PhD & after PhD]

- Industrial Training:
 - **IISCO, Burnpur** (for one month)
 - **Ordnance factory, Dumdum** (for one month)
- Short-term courses attended:
 - **Robotics** in NITTR, Kolkata, 2006 (for one week)
 - **Non destructive testing** in IIT Kharagpur, 2009 (for one week)
- Conference attended/Seminar presented:
 - International Conference Emerging Research and Advances in Mechanical Engineering (**ERA 2009**), Chennai, India.
 - International Conference on Advances in Mechanical Engineering (**ICMAE 2009**), S.V. National Institute of Technology, Surat – 395 007, Gujarat, India.
 - National Conference Recent advances in manufacturing technology and management (**RAMTM-2010**), Production Engineering Department, Jadavpur University, Kolkata, West Bengal, India.

References:

1. **Dr. S. K. Pal** (Thesis supervisor)
Associate professor, Mechanical Engineering Department,
IIT Kharagpur.
skpal@mech.iitkgp.ernet.in
Contact no.09434701972
2. **Dr. S. R. Bhadra Chaudhuri** (Retd. Prof. BESU)
Professor and HOD (Department of Human Resource management)
Bengal Engineering and Science University. Contact no.09831043113