Bio-Data

1.Name in full : Dr Anjali Chatterjee

2. Date of Birth : 19 - 11- 1962

3. Present Grade : Senior Principal Scientist / Gr IV (5)

4. Date of joining CMERI : 14 – 10 –1991.

5. Category : Gen.

6. Address : B-2, Faraday Sarani, Non company Hsg. City Centre, Durgapur -- 713216

7. Contact Number : 9434720494

8 Area of Specialization : Electronics and Automation .

9.Educational Qualifications :
(From graduation onwards)

Degree	Year of passing	University	Subject	Class
BE (Electrical	1985	NIT, Surat.	Electrical Engineering	!st Class (with Dist)
MTech	2009	NIT, Durgapur	Electrical engineering	1st Class
PhD	2014	NIT, Durgapur	Electrical Engineering	

10. Employment details :

Company	Post	Duration
Gujarat Electricity Board, Bharuch	Trainee Engineer	1985 to 1988
Development Consultant Pvt Ltd, Mumbai	Senior Design Engineer	1988 to 1991
Central Mechanical Engineering Institute, Durgapur	Senior Principal Scientist	1991 to till date

11. Details of R&D projects carried out :

Journal ---

1) A.Chatterjee and P.Bhattacharjee, *"Automatic Fruit Sorting and Grading machine".* International Journal for the Fruit Processing and Juice Producing, Sept/Oct 2007, pp 282-285.

1. Designed the Lighting, Grounding and Cabling layout in switchyard for the Rajasthan Atomic Power plant (235 MW). Selection of various equipment viz., transformers, switchgear, circuit breakers etc for the switchyard.

2.Involved in the development of Computerized auto punching machine for Jacquard cards for the weavers in handloom sector. The project evolved design and automation of the machine by pneumatic systems and motor controllers.

3. Designed and Developed Medical Instruments for i) Cutting and Coagulation in Laparoscopic surgery. ii) Carbon dioxide Insufflations before the surgery.

4. Involved in the design of the automation for Jute bag stitching m/c.

5. Designed and developed Automatic Fruit Sorting and Grading machine. The machine was developed for washing, sorting, grading and packaging of Apples.

6. Developed a portable Energy efficient White LED Lamp which could be charged by using it as an exercise pedal.

7. Designed and developed Semi automatic ethnic food machineries which carried out the homogenous mixing of the ingredients by Sigma mixture, preparation of dough by an extruder, automatic cutting of the extruded bar to size and lastly packaging of the small bars. The aim of the project was to popularize ethnic Indian food having high nutrition value. It could also be used as substitution for the mid day meal in the schools.

8. Designed and fabricated gas sensor from the nano particles of Zinc oxide. The gas sensor was used for the life prediction. Novelty of the work is that it could detect a number of hydrocarbon gases by using single sensor at different temperature.

12..List of papers published :

Journal ---

1) A.Chatterjee and P.Bhattacharjee, *"Automatic Fruit Sorting and Grading machine".* International Journal for the Fruit Processing and Juice Producing, Sept/Oct 2007, pp 282-285.

2) A.Chatterjee and N.K.Roy, " *Applying Grey Theory prediction model on the DGA data of the transformer oil and using it for fault diagnosis"*. Published in World Scientific and Engineering Academy and Society (WSEAS) transactions on Power Systems. Issue 2, volume 4, February, 2009.
3) A. Chatterjee and N.K.Roy, "*Health monitoring of power transformers by Dissolved Gas Analysis using Regression method and study the effect of filtration on oil".* Journal of World Academy of Science, Engineering and Technology, vol 35, November 2009, pp. 37- 42.

4)A. Chatterjee, P. Bhattacharjee and N. K. Roy, "*Mathematical model for predicting the state of health of transformers and service methodology for enhancing their life*." International Journal of Electrical Power and Energy Systems (Elsevier), vol 43, Issue 1, December 2012, pp. 1487-1494.

5) A.Chatterjee, P.Bhattacharjee, N.K.Roy and P.Kumbhakar, "*Usage of nanotechnology based gas sensor for health assessment and maintenance of transformers by DGA method*". International Journal of Electrical Power and Energy Systems (Elsevier), vol 45, Issue 1, Febuary 2013, pp. 137-141.

6) A. Chatterjee, R. Sarkar, N.K.Roy and P. Kumbhakar, "*Online monitoring of transformers using gas sensor fabricated by nanotechnology*". International Transactions on Electrical Energy Systems, vol 23, Issue 6, September 2013, pp.867-875.

7)P.Bhattacharjee and A.chatterjee, *Computer Aided Design and Automated System for card generation for a Jacquard loom used in the production of Baluchari Saree.* Published in 'The Institute of Engineers (India)' in Feb, 2003. It bagged the Certificate of Merit for 2002-03.

Conference

1) A.Chatterjee, S.Mahata and N.K.Roy, "*Mathematical model for service methodology to enhance the life of a faulty transformer"*, published in the proceedings of IEEE conference of Electrical and Computer Engineering 2011 (CCECE 2011), pp. 126-129.

2) A. Chatterjee, P. Bhattacharjee, P.kumbakar and N. K. Roy, "*Manganese doped Zinc Oxide thin film Hydrogen gas sensor at reduced operating temperature"*, proceedings of IEEE conference of 4th International Workshop on Advances in Sensors and Interface (IWASI),2011. Appear in IEEE Xplore CCECE 2011, June 28-29, pp. 148-152.

1. 3) A. Chatterjee, P. Bhattacharjee and N. K. Roy, "*On line monitoring of power transformer by using Gas Sensors manufactured from Nanoparticles",* proceedings 46th International Universities' Power Engineering Conference (UPEC2011), VDE- VERLAG , pp. 1-4.

4) A. Chatterjee and N.K. Roy, "*Comparative study of the results obtained from DGA of transformer oil with the help of different models of Grey theory and their application in fault diagnosis",* proceedings of 8th International Conference on Advanced Applications of Electrical Engineering, held at Houston, USA, April 30th to May 2nd, 2009, pp. 128-134.

5) A.Chatterjee and N.K. Roy, "*Health monitoring of power transformers by DGA using Regression method"*, published in the proceedings of International Conference on Power System Engineering (ICPSE-2009) held in Bali ,Nov 25-27, 2009, pp. 312

6)A. Chatterjee, R.Sarkar and P. Kumbhakar, "*Variation in Sensitivity of thin film of zinc oxide by changing the dopant concentration",* published in the proceedings of International Conference on Nanoscience and Technology, held at Hyderabad, Jan 20-23, 2012, pp. 239.

7) P.Bhattacharjee and A.Chatterjee, *Instrument for Cutting and Coagulation in Laproscopic Surgery*. Published in TIMA - 2001 (Trends in Industrial Measurements and Automation)
8) *Computer Aided Design and Automated System for card generation for a Jacquard loom used in the production of Baluchari Saree.*Published in TIMA - 2001 (Trends in Industrial Measurements and Automation)

13. Patents filed : "An orientation unit for fruit sorting and grading machine".
Patent filing no. 510NF2004.
Foreign Patent : NF no. 0510NF2004/WO (WIPO, Geneva
NF no. 0510NF2004/US (USA)

14. Deputation / Assignment abroad :

1) Attended the 8th WSEAS International Conference on Application of Electrical Engineering (AEE' 09) which was held in the University of Houston, USA on 30th April-2nd May, 2009. Presented the paper on "Comparative study of the results obtained from DGA of transformer oil with the help of different models of Grey theory and their application in fault diagnosis".

2) Attended the 46th International Universities' Power Engineering Conference held in Soest, Germany, 5.–8. September 2011 and presented a paper on "Online monitoring of transformer by using gas sensor fabricated from nano particles.

3) Attended the NSF Workshop on Nano and Micro Manufacturing was held at Dearborn, Michigan (USA) during May 22-23, 2013 and presented a paper on

"Application of Nanotechnology for fabricating Nano-sensor of superior quality".

15. Membership of Professional Institution : Member of Computer Society of India. (Durgapur Chapter)