

## CURRICULUM VITAE

**Name:** AZZA Fathalla Mostafa BARAKAT /د/ عزة فتح الله مصطفى بركات

**Present Job:** Professor of Production Engineering, Vice Dean for education and students Affairs, Faculty of Engineering Helwan, Helwan University.

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### EDUCATIONAL QUALIFICATIONS

- ◀ B. Sc. Degree from Production Engineering Department, Faculty of Engineering & Technology, Helwan University, May 1979 with general grade "**Very Good with honor degree**"
- ◀ M. Sc. Degree from Production Engineering Department, Faculty of Engineering & Technology, Helwan University, 1984. The thesis entitled "**New Trends of Project Management in Industry** "
- ◀ Ph. D. Degree from Mechanical Engineering Department, Imperial College of Science and Technology, University of London, 1989. The thesis entitled "**Part Programming and Process Planning within Computer Aided Manufacturing**"
- ◀ DIC Diploma of Imperial College, University of London, 1989
- ◀ Visiting Prof. at Michigan University (January 1992-August 1992)

### TEACHING ACTIVITIES

#### Under Graduate Courses

- Computer Aided Manufacturing (NC part programming)
- Material Handling Equipment
- Maintenance management and technology
- Technical report writing
- Project planning and control
- Principles of metal cutting
- Operation Researches
- Statistics and quality control
- Engineering economy

## Post Graduate Courses

- ✓ Advanced Manufacturing Technology
- ✓ Advanced CAM system
- ✓ Seminar and Technical Report writing
- ✓ Reverse Engineering
- ✓ Project Management

## Computer skills

- Microsoft Word
  - Harvard graphics
  - Power point
  - Primavera (project management software)
  - Maint Scape (maintenance software)
  - Different packages for CAM software (Mastercam, Delcam, Esprit, pro engineer ....)
- ***Member in EGAC Technical Advisory Committees for revision of assessment activities***
- ***Supervision on 15 M. Sc. and 3 Ph. D thesis in the fields of advanced Manufacturing and production engineering***

## LIST OF ALL PUBLISHED PAPERS

1. El-Ghobary, H.H, and Barakat, A. F.; " **Project Management- Computer Based Resource Allocation and Performance Evaluation (RAPE)**", International Symposium, Project Planning & Implementation in Developing Countries, Cairo, Feb. 20-23, 1984, pp345-358
2. Barakat A. F. and Besant C. B.; "**Automated Part Programming System**", Al- Azhar Engineering First Conference, Dec. 9-12, 1989, pp301-317
3. Mongy, M. A., Rashed, F. A., Barakat, A. F. and Morsy, Y. Y., " **Capital Goods Manufacturing and Quality Control** " Engng. Res. Bull., University of Helwan, Vol.1, Jan.1994 pp87-98
4. Dawood, O. M. and Barakat A. F.," **Optimization of Machining Conditions on Numerically Controlled Machines** " Engng. Res Bull., University of Helwan, Vol.3, July 1993, pp162-175
5. El-Wakad M. T. and Barakat A. F., " **Measurement of Cutting Force in Turning using Simple Dynamometer** ", Engng. Res. Bull., University of Helwan, Vol.3, May 1994 pp 117-130.

6. Dawood, O. M. and Barakat A. F., " **Machining Conditions for Maximum Profit on Numerically Controlled Machines** ", Engng. Res. Jour., University of Helwan, Vol. 5, October 1994, pp188-201
7. Barakat, A. F., " **A Proposed Modification of CNC Milling workshop to a Flexible Manufacturing Milling Cell (FMC)** ", Engng. Res. Jour., University of Helwan, Vol. 6, December 1994, pp177-189.
8. Tantawy, A. A., Barakat, A. F. and Ahmed, H. H.," **Development of Coding and Knowledge base structure for Turning Machinability** ", Engng. Res. Jour., University of Helwan, Vol. 6, December 1994, pp190-206.
9. Barakat, A. F., " **Economical Evaluation for Parallel and Sequential Turning Processes** ", Engng. Res. Jour., University of Helwan, Vol. 1, January, 1995, pp274-288.
10. Moussa, A.. M., Barakat, A. F., and Hassan, I. I. ,"**Computerized Determination of Optimum Cutting Variables for CNC Milling**", Engng. Res. Jour., University of Helwan, Vol. 5, June, 1995, pp1-10.
11. Barakat A., F. and Dutta D., "**Evaluation and Derivation of Process Plans in Turning**", The Int. J. of Adv. Manuf. Tech., Vol 11 No. 2 , Feb/Mar 1996.
12. Barakat, Azza F., "**Development of Computer Aided Inspection (CAI) System with CMM for Complicated Products**" , First conference in Research and Development in Egyptian Industry, Faculty of engineering, Cairo University, 2-3 March 1997.
13. Barakat, Azza F., "**Investigation of Error Produced in RE via CMM and CNC**", Engng. Res. Jour., University of Helwan, Vol. 251, November 1997
14. Moussa, A..M., Barakat, A. F., and Hassan, I. I. ,"**Development of Constrained Optimization Analysis and Strategies for Multipass Milling Operation**", Engng. Res. Jour., University of Helwan, Vol. 50, November 1996, pp103-120.
15. Barakat, A., "**Digitizing: A Rapid Programming Method for CNC Machine Tool Prototyping**", 7<sup>th</sup> Cairo University International Conference on Mechanical Design & Production, Cairo –Egypt, Feb. 15-17, 2000, pp235-242
16. Barakat, A. and Mahrouss, A., "**An Integrated CAD/CAM system for Automatic Generation of NC Part Program**", Engng. Res. Jour., Helwan University, Faculty of Engng, Mataria, Cairo, Vol. 67, Feb 2000, pp53-65
17. Barakat, A., Mahrouss, A., Mouses, A., "**Postprocessor Generation for CNC Sheet Metal Machines**", 7<sup>th</sup> International Conference on Production Engineering Design and Control- PEDAC'2001, Alex. – Egypt, Feb. 13-15, 2001

18. Abu-Gabal, M., Barakat, A., El-Adawy, M. and Hegazy, A., "**Mechatronic Approach for PC Emulation of CNC units**", 6<sup>th</sup> International Conference on Production Engineering and Design for Development- PEDD 6, Feb. 2002, pp 213-225
19. Barakat, A. and El-Atriby, S., "**Proposed Solution for Incompatibility Problem of CAD/CAM package to CNC machine**", 6<sup>th</sup> International Conference on Production Engineering and Design for Development - PEDD 6, Feb. 2002, pp 299-310
20. Abu-Gabal, M., Barakat, A., El-Adawy, M. and Hegazy, A., "**Mechatronic Approach for PC Emulation of CNC units, Part II: Software Design and System Implementation**", MEATIP3, Assuit, Dec 24-26, 2002 Egypt
21. El-Atriby, S., Barakat, A., Etman, M. I. and Hegazy, A., "**Machining Analysis for Free Form Surfaces using Neural Network Technique**", The 7<sup>th</sup> IEEE International Conference on Intelligent Systems, INES, 4-6 March 2003, pp 521-527
22. El-Atriby, S., Barakat, A., Etman, M. I. and Hegazy, A., "**Free Form Surface Approximation using Hybrid Neural Network System**", 8<sup>th</sup> International Conference on Production Engineering Design and Control - PEDAC, Alex., December 2004, pp1-14
23. Barakat, A. and Abu-Gabal, M., "**Design of an Open Architecture CNC System Using USB Communication Technique**", 8<sup>th</sup> International Conference on Production Engineering Design and Control- PEDAC, Alex. December 2004
24. Abdeltif, L. A., Etman, M. I., Barakat, A. and Hussein, H. M. A., "**Computer Aided design in Sheet Metal Blanking Dies**", Fourth Assiut University Int. Conf. on Mech. Eng. Advanced Tech. for Indus. Prod., MEATIP4, Assiut, December 2006, pp252-261
25. Abdel Monem, A. Barakat, A. and Etman, M. I., "**CAD/CAPP/CAM Integration for Sheet Metal Working**", Bulletin of Tabbin Institute for Metallurgical Studies, International No. 1110-2519, Vol. 90, July 2007, pp67-78
26. Hamoud, M., El-Wahab, A.I., Barakat, A. and Khalid, M., "**A Simple Algorithm to Orient and Slice the CAD Model for Rebuilding using Rapid Prototyping**", 9<sup>th</sup> Cairo university International Conference on Mechanical Design & Production (MDP-9), Cairo, January 2008, pp61-70, Cairo, January 2008, pp298-312
27. Abdeltif, L. A., Etman, M. I., Barakat, A. and Hussein, H. M. A., "**An Approach to Construct New System in Sheet Metal Cutting Die Design**", 9<sup>th</sup> Cairo university International Conference on Mechanical Design & Production (MDP-9), Cairo, January 2008, pp61-70

28. Barakat Azza, "**Surface Roughness Prediction in Hard Turning using Feed Forward Neural Network**", Engineering Research Journal, Helwan University, Vol. 115, Feb. 2008, pp M107-M119
29. Barakat Azza, "**Simplification of CAD/CAM generation via Image Technique**", Engineering Research Journal, Helwan University Vol. 117, June 2008, pp M111-M123
30. Barakat Azza, "**Computer Aided Time and Cost Estimation for Sheet Metal Parts**", Engineering Research Journal, Helwan University, Vol. 118, August 2008, pp M1-M16
31. Hussein, H. M. A., Barakat, A. F., Latif, L. A. A. and Wang, J. F., "**An approach to developing an intelligent System for Sheet Metal Cutting Dies**", The 9<sup>th</sup> International Conference on Technology of Plasticity, Korea, September 2008, pp 2336-2341
32. Hamoud, M., El-Wahab, A.I. and Barakat, A., "**Optimization of CAD Model orientation for rebuilding using Rapid Prototyping**" El-Azhar Engineering Tenth International Conference, December 2008, pp133-151
33. Koura, M. , Moussa, A., Barakat, A. and Mahrous, A., " **Flank wear estimation using back propagation neural network modeling in hard turning** ", El-Azhar Engineering Tenth International Conference, December 2008, pp 123-131
34. El-Atriby, S., Barakat, A. and Hegazy, A., "**Simple Imaging Technique for 3D Complicated Objects**", El-Azhar Engineering 11<sup>th</sup> International Conference, December 2010, pp 418-428
35. El-Atriby, S., Barakat, A. and Hegazy, A., "**3D Modelling of Dental Parts using Simple Imaging Techniques**", To be published in Bulletin of Tabbin Institute for Metallurgical Studies