

# **CURRICULUM VITAE**

**Gamal El-Din Mohamed Aly, Ph.D.**

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## **OBJECTIVE:**

To propagate, apply, and receive knowledge and experience in a way that would benefit society.

## **PERSONAL AND CONTACT DATA:**

**Date of Birth** : 25<sup>th</sup> November, 1944

**Nationality** : Egyptian

**Marital Status** : Married

## **Office:**

1. Department of Computer and Systems Engineering  
Faculty of Engineering, Ain Shams University,  
Abbasia, Cairo, Egypt.

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## **Residence:**

### Address:

Villa 123, Street #2, Hay 1, Zone 1, Tagamoa 5,  
New Cairo, Cairo, 11351, Egypt

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## **EDUCATION;**

### **1968-1972**

- Ph.D. Of Electrical Engineering, University of Calgary, Alberta, Canada.

### **1965-1968**

- M.Sc. in Electrical Engineering, Ain Shams University, Cairo, Egypt.

### **1960-1965**

- B.Sc. in Electrical Engineering, Cairo University, Giza, Egypt.

## **EMPLOYMENT HISTORY:**

### **2012-Now:**

- Chief information officer CIO, Ain Shams University, Cairo. Egypt.
- Emeritus Professor, Computer and Systems Engineering Dept. Faculty of Engineering, Ain Shams University. Cairo, Egypt.

### **2001- December 2011**

- Professor, Computer and Systems Engineering Dept. Faculty of Engineering, Ain Shams University, Cairo, Egypt.
  - Teaching post graduate and undergraduate courses.
  - Performed joint research projects with external agencies.
  - Updated undergraduate and postgraduate curricula.
- Chairman of SECC (Software Engineering Competence Center)
  - Establish Software Engineering Competence Center to promote and support the development of software industry in Egypt.
  - Improve software engineering practices to reach higher maturity levels.

### **2000- 2001**

- Professor, Chairman of Computer and Systems Engineering Dept. Faculty of Engineering, Ain Shams University, Cairo, Egypt.
  - Managed educational and research activities.
  - Performed joint research projects with external agencies.
  - Updated undergraduate and postgraduate curricula.
  - Conducted training programs to community.

### **1995- 2000**

- Professor, Chairman of Computer and Systems Engineering Dept. Faculty of Engineering, Ain Shams University, Cairo, Egypt.
- Director of the Egyptian University Network “EUN”, Supreme Council of Egyptian Universities.

### **1990-1995**

- Professor (on leave), Electrical Engineering Department, College of Engineering, King Saud University, Riyadh, Saudi Arabia.

### **1984-1990**

- Professor, Computer & systems Group, Department of Electronics & computer engineering, Faculty of Engineering, Ain Shams University, Cairo.

### **1979-1984**

- Associate professor, Computer & Control Group, Department of Electronics & Computer Engineering, Faculty of Engineering, Ain Shams University, Cairo, Egypt.
- On leave to Systems Engineering Department - University of King Fahd University of Petroleum and Minerals KFUPM - Dharhan - Saudi Arabia.

### **1973-1979**

- Assistant Professor, Electrical Engineering Department, Faculty of Engineering, Ain Shams University, Cairo, Egypt.

### **1972-1973**

- Post Doctorate Teaching Fellow, Electrical Engineering Department, University of Calgary, Alberta, Canada.

### **1968-1972**

- Research Assistant, University of Calgary, Alberta, Canada.

### **1965-1968**

- Teaching Assistant, Electrical Engineering Department, Faculty of Engineering, Ain Shams University; Cairo, Egypt.

## **EXPERIENCE:**

### **I- Graduate Teaching**

Simulation Techniques, Optimization, Estimation and Identification Techniques, Optimal Control, Large Scale Systems, Multivariable Control Systems, Computer Control Systems, Expert Systems, Fuzzy Logic and Control, Intelligent Control Systems.

### **II- Undergraduate teaching**

Circuit Theory, Control Components and Measurements, Instrumentation, Linear Control Theory, Modern Control, Numerical Methods, Theory of Continuous Systems, Introduction to Systems Engineering, Computer Control, Process Dynamics, Computer Organization, Systems Programming, Systems Simulation, Microprocessors, Microprocessor-based Instrumentation, Simulation of Engineering Systems, Discrete Systems Simulation.

### **III- Theses Supervision**

Supervised more than 25 Ph.D. theses and, more than 60 M.Sc. theses in the following subjects:

Multilevel Control, Control of Power Systems, Control of Industrial Processes, Variable Structure Systems, Modeling and Simulation Of Robots, Computational Methods, Digital Control Systems, Supervisory Computer Control of Steel Making, Natural Language Understanding Systems, Guidance Control, Multi Model Control, Two-Dimensional Control, Adaptive Control, Expert Systems, Intelligent Control, Intelligent Agents, Parallel Processing and Distributed Systems, Digital Signal Processing, Software Quality, Embedded Software.

### **IV- Senior Projects Supervision**

Supervised numerous projects in the following domains:

Digital Systems, Microprocessor-Based Systems, Modeling of Dynamics Systems, Computer Aided Design, Development of Software Packages of Various Information Systems, Development of an Educational Robot, Variable Structure Systems, Expert Power Systems, Fuzzy Logic Controllers, Internet Based Systems, Software Engineering.

### **V- Extra Curricula Activities**

- Member of a National Committee of Information & Communication Technology Project "ICTP" (2004-2012) to upgrade higher education and set the policies to enhance:
  - Inter universities information network,
  - E-Learning in the education process,
  - Digital Libraries,
  - Human resource development in the information and telecommunication technologies,
  - Management Information and Decision Support Systems.

- Chairman of a National Committee to develop a training plan to University staff members and administrators on Information and Communication Technologies (2004-2006).
- Project manager to Provide internet to university students "Student On line SOL " in cooperation with Nile On Line Company (1998-2001).
- Director of Information Technology Development (ITDP) Program (2001-2004), Ministry of Communications and Information Technology (MCIT):
  - Establish an IT industry development entity to play a pivotal role in the IT industry in Egypt.
  - Promote offshore development.
  - Consultant to the Minister of Communications and Information Technology.
- Chairman of IT Dispute Resolution Committee – at the Ministry of Communications and Information Technology (2004-2012).
- Chief Editor of International Journal of Systems Engineering IJSE (2007-now).
- Director of the Egyptian University Network "EUN", Supreme Council of Egyptian Universities (1998-2001):
  - Provided Egyptian universities and research institutions with internet services.
  - Developed strategies to enhance information applications among universities community.
  - Orchestrated joint protocols between universities and worldwide enterprises companies like Microsoft and Oracle.
  - Developed infrastructure among universities.
  - Participated in higher education enhancement programs.
- Director of Information and Resource Management IRM, Information and Decision Support Center IDSC, the Cabinet of Ministers, Egypt (1996-2001):
  - Managed the development of business information systems for governmental agencies.
  - Directed telecommunications and computer networking activities.
  - Managed Internet activities at the national level.
  - Acquired hardware and software resources.
  - Provided technical support to governmental as well as private sectors.
  - Acted as a senior consultant in the domain of information technology.
- Director the Continuing Engineering Education Center "CEEC" at the Faculty of Engineering – Ain Shams University. Appointed as the first Director of the Center (1997-1990).
- Editor of the Scientific Bulletin of Faculty of Engineering – Ain Shams University (1984-1990).

- Project Manager of a joint project with Information Center at Faculty of Engineering – Ain Shams University and ECOGIM to develop the Master Plan of the transportation Sector (1988-1990).

## CONSULTATIONS

- Senior Consultant to the Minister of Communications and Information Technology to establish and manage the following activities(2001-2004):
  - Establish an IT industry development entity to play a pivotal role in the IT industry in Egypt.
  - Establish Software Engineering Competence Center SECC to promote and support the development of software industry in Egypt.
  - Improve software engineering practices to reach higher maturity level in order to attract foreign direct investment for subcontracting Egyptian software companies for software development.
  - Encourage the establishment of global services companies for providing market intelligence to undertake export promotion activities such as technology assessments, market analysis,...etc.
- Consultant to Minister of Higher Education to(1998-2001):
  - Support IT Services to Egyptian Universities.
  - Manage and monitor the implementation of protocols of joint cooperation between Ministry of Higher Education and world wide enterprises companies.
- Consultant to Information and Decision Support Center of the Cabinet of Ministers in Egypt to(1986-1990):
  - Establish and execute training plan in information management and decision support.
  - Manage the development of information systems.
  - Provide technical support management to governmental agencies.
- Consultant to Arab British Dynamics to(1976-1979):
  - Perform feasibility study to acquire a computer for research system and development.
  - Conduct training program on computer simulation of dynamics systems.
- Consultant to Iron and Steel Industry (1976-1979) for the implementation of microprocessor-based controllers and computer supervisory system of steel converters, conduct training program to control engineers.
- Consultant to the Research Institute of the University of Petroleum and Minerals (Dhahran, Saudi Arabia) to establish(1980-1984):
  - Computer supervisory and monitoring system for rids water network.
  - Computer system for El Hassa Irrigation system.
- Project Manager of a National Transportation Project to(1988-1990):
  - Design and implement information system to select transportation sectors.
  - Prepare a master plan to automate the transportation sector.

- Participated in many national evaluation committees to acquire computer systems and information systems to numerous governmental agencies.
- Information system consultant to numerous governmental agencies
- Providing consultation to Egyptian universities and academic institutions in information networks and internet activities.
- Member of Professional Academics Promotion Committee in the domain of Automation, systems engineering and computer engineering.
- Member of the National Committee of Information, Academy of Science and Technology.

### **AWARDS:**

- Killam Izzac Williams Scholarship during the period 1971-1972, Alberta, Canada.
- Outstanding Achievements in both teaching and research activities from the Faculty of Engineering, King Saud University, Kingdom of Saudi Arabia.
- Outstanding Achievement in Information Dissemination on the National Level from the Egyptian Society of Information.
- Outstanding Recognition Award from Ain Shams University in recognition to the outstanding achievements to the university.

### **MEMBERSHIPS:**

- Member of IEEE, control system society and computer society.
- Member of the Egyptian Engineering Syndicate.
- Member of the Internet Society.

### **LIST OF PUBLICATIONS**

- Is Available and will be provided uupon request.

## LIST OF PUBLICATIONS OF DR. GAMAL EL-DIN MOHAMED ALY:

1. **G. M. Aly**, Analysis of pulse with modulated systems “ M. Sc thesis Ain Shams University, Egypt, 1968.
2. **G. M. Aly** , “ Computational methods for optimal control problems “ , Ph. D. thesis, university of Calgary, Canada, 1972.
3. M.A. Ghoneimy and **G.M.Aly**, “A phase plan method for the analysis of pulse width modulated systems” international j. control , vol. 16 no 4, 1972, pp.737-750.
4. **G. M. Aly** and W. C. Chan, “Application of modified quasilinearization for optimal control with unspecified final time”, International J Control vol. 17 no 4, 1973, pp.809-815 .
5. **G. M. Aly** and W. C. Chan, “A modified quasilinearization for optimal control with unspecified final time”, International J. Control vol. 17 no 4, 1973, pp.945 - 954.
6. **G. M. Aly** and W. C. Chan, “A computational model of optimal control with unknown final time”, International J. Control vol. 18 no 5, 1973, pp.1067-1075.
7. **G. M. Aly** and W. C. Chan, “Numerical computational of optimal control with unknown final time”, Math; Analysis and Appl., vol. 45 no 2, 1974, pp.274 – 284.
8. **G. M. Aly** and M. A. Sheirah “ Modeling and estimation of industrial process” , Proceeding of 2nd National Conference of Automatic Control, Cairo, Egypt, 1975, pp. 218 – 238
9. **G. M. Aly** and S. Amer “ An optimal controller distillation column”, 3rd National Conference on Automatic Control , Cairo, Egypt, 1976.
10. **G. M. Aly**, and M. M. Aziz and m. A. Ghoneimy, “Optimal multilevel control on hot rolling mills”, Proceedings of IFAC Conference on Systems Approach for Development, Cairo, Egypt, 1977, pp.271-276.
11. **Gamal M. Aly**, and A. S. Fawzy, , ”On Computation of Optimal Control problems”, Proceedings of 3rd Int. Conf. Congress for Statistics, Computer and Social research, Egypt, 1978, pp.295-310.
12. **Gamal M. Aly**, and A. S. Fawzy, “On computation of output feedback controller of distillation column,” Proceedings of 3rd int. Congress for Statistics, Computer and Social Research. Egypt, 1978, pp.311-316.

13. **G. M. Aly**, and A.S. Fawzy, "Computer control of Distillation column," Proceedings of Int. Symposium on measurement and Control, MECO 78, Greece, 1978, pp.608-612.
14. **G. M. Aly** "The computation of optimal singular control", International J. Control, Vol.28, No.5, 1978, pp.681-688.
15. **Gamal M. Aly**, and A. Abdel Megeed, "Multilevel technique for the computation of optimal singular control, International J. Control, Vol.29, No. 5, 1979, pp.829-834".
16. **Gamal M. Aly**, "An indirect approach for the solution of free final time optimal control problems", Proceedings of 4th Int. congress for Statistics, Computer Science and Social Research, Egypt, 1979, pp.249-261.5.
17. **Gamal M. Aly**, "A computational method for free final time optimal control problems", presented at the Int. MECO 79 Conference, France, 1979.
18. M.M. Aziz, **Gamal Aly**, M.A. Ghonaimy, "Multilevel stochastic control of hot rolling steel mills", Proceedings of IMACS International Conference on Simulation of Distributed-Parameters and Large Scale System, Greece,1979, pp.167-172.
19. **Gamal Aly**, M.M. Aziz, "Estimation and control of large systems with applications to industrial processes", Proceedings of 12th Annual Pittsburgh Conference on Modeling and Simulation, USA,1981, pp.1317-1322.
20. S.I. Abo Elela and **G. Aly**, "Simulation of fixed film biological reactors for waste water treatment." Proceedings of 12th Annual Pittsburgh Conference on Modeling and Simulation, USA,1981, pp.1341-1346.
21. **G. Aly**, A. Abdul Megeed and M.A. Ghonaimy, "Multilevel of multivariable discrete systems: Application to distillation process", Proceedings of 4th IASTED International Conference on Measurement and Control MECO 81, Egypt, 1981, pp.208-211.
22. **G. Aly**, and Y.L. Abdel Megid, "Two level load frequency control of interconnected power system", Proceedings on Int. Conf. On Application of Mini and Microcomputers IECI 81, San Francisco, USA, 1981, pp.213-218.
23. Y.L. Abdel Megid and **Gamal M. Aly**, "Two level optimal stabilization in multi-machine power systems ", Electric Power Research Journal, Vol.6, No. 2, 1983, pp.450-461.

24. **Gamal M. Aly**, "Two-level Feedback control of nonlinear large-scale systems", Proceedings of Int. Symposium on Applied Information, France, 1983, pp.201-206.
25. **Gamal Aly**, M. A. Wali and Y.L. Abdel Megid, "Detuned minimum variance regulator for load frequency control", Proceedings of IEEE Int. Symposium on Circuits and System, California, USA, 1983, pp.1418-1421.
26. **Gamal Aly**, Y.L. Abdel Megid and M. A. Wali, "Load frequency control of interconnected power systems via minimum variance regulators", Electric Power Research Journal, Vol.7, No. 1, 1984, pp.1-11.
27. **Gamal M. Aly**, and M.S. Al-Mulhem, "Two-level computational method of nonlinear control systems", Proceedings of 14th Pittsburgh Conference on Modeling and Simulation, USA, 1983.
28. N.E. Gough and **Gamal. M. Aly**, "Microcomputers in process control", 7th National Computer Conf., Riyadh, Saudi Arabia.
29. Y.L. Majid, **G. M. Aly**, and A. A. Cherid, "Robust decentralized control for load frequency control of power systems.", 6th European Conf. On Electrothechnics, EUROCON 1984, Computers in Communications and Control, Brighton, 1984, pp.69-73.
30. Gohoneimy M.A.R., Sheriah M.A., **G. M. Aly**, Shahein H.I., "Evaluation of control development of an Egyptian university." IEEE Control Magazine 1984.
31. A.Dahshan, A.S. Fawzy, **G. M. Aly**, and M. Singaby, "An optimal coordination approach for solving control problems using the method of inequalities" Proceedings of IEEE Int. Conf. System Man Cybernatics, Atlanta, Georgia, USA, 1986, pp.1525-1529.
32. **G. M. Aly**, and M.M. Asweif, "Decoupled and MIMO turning regulator, a comparative study", AMSE Int. Conf. Modeling and Simulation, Egypt, 1987.
33. **G. M. Aly**, and M.M Sweif," Returned and self tuning regulator for guidance system", 1st Int. Conf. Industrial and Applied Mathematics. ICIAM 87, Paris, 1987.
34. **G. M. Aly**, and M.Z. Iskarous, "Microprocessor based educational robot," Int. Conf. Computer Application in Industry, Cairo, 1988.
35. **G. M. Aly**, A. Badr and Z. Binder, "Multimodel control of MIMO systems: location and control algorithms," International J. Systems Science, Vol. 19, No.9, 1988, pp.1687-1698.

36. **G. M. Aly**, E. Salam and Y.Noshy,” Computer control of oxygen steel making process,” Int. J. Control and Computer, vol.17, No.3, 1989, pp.91-95.
37. N. Hegazi, **G. M. Aly**, E. Abed, E. Hamada,” A natural Arabic language understanding system” 1st Conf. Of the Regional Institute for Information and telecommunication, Tunis 1989.
38. A.S. El Dhashan, **G. M. Aly**, M.I. El Singaby, “Design of a longitudinal ride control system for a stol aircraft by using an optimal coordination approach, IFAC symposium, AIPAC 89, Nancy, France, 1989.
39. N. Hegazi, **G. M. Aly**, E. Abed, E. Hamada, “Arabic expert system syntax education” , 2nd Con. On Arabic Computational Linguistics, Kuwait, November 1989.
40. **Gamal M. Aly**, Wahid G. Ali, “Digital design of variable structure control systems”, Int. J. Systems Sci., Vol.21, No.8, 1990, pp1709-1720.
41. A.Badr, A. Tarraf, **Gamal Aly**, “Multi-model control algorithm for different model structures” 8th Int. Conf. On Control Systems and Computer Science, Bucharest, May 1991.
42. A. Badr, A. Tarraf, **Gamal Aly**, “Multiprocessor System for Process control”, 8th Int. Conference on Control Systems and Computer Science, Bucharest, May 1991.
43. **G. M. Aly**, A.S. Swief, “Adaptive decentralized autopilot controller of tactical missile”, Int. Conference on Intelligent Control and Instrumentation, SICICI’92, Singapore, 1992, pp.647-652.
44. **G. M. Aly**, A.S. Swief, “Design and validation of robust controller for maneuvering target”, Int. Conference on Intelligent Control and Instrumentation, SICICI’92, Singapore, 1992, pp.928-933.
45. **Gamal M. Aly**, Martha S. Habashi, Sahar M. Haggag, “Natural Language Interface to Puma Robot”, 17th Int. Conference on Statistics, Computer Science and Social Research, Egypt, 1992.
46. **Gamal M. Aly**, Martha S. Habashi, Sahar M. Haggag, “Development of ROLAN, a natural language understanding system”, 17th Int. Conference on Statistics, Computer Science and Social Research, Egypt, 1992.
47. **Gamal M. Aly**, H. Mahgoub, E. Zakzuk, M El-Assar, “Design of 2-D model reference adaptive systems based on the second method of Lyapunov”, Journal f Control Theory and advanced technology, Vol.10, No.2, 1994, pp.128-295.

48. E. Taalab, A. M. Wahdan and **G. M. Aly**, "universal SCADA system", *Ain Shams Engineering Bulletin*, Vol.27, No.2, 1992, pp.393-412.
49. **Gamal M. Aly** and Rafiq M. Aldeen, "Expert data acquisition for intelligent control systems", *IEEE Instrumentation and Measurement Technology Conference*, Hamamatsu, Japan, 1994, pp.208-211.
50. **Gamal M. Aly** and Ashraf A. A-Ghazzawi, "Fuzzy logic-based optimal controllers", *Int. Conference on Computer Applications in Industry*, Cairo, Egypt, 1994, pp.245-248.
51. **Gamal M. Aly** and M. A. Tayeb, "Fuzzy logic-based variable structure controllers", *Int. Conference on Computer Applications in Industry*, Cairo, Egypt, 1994, pp.249-252. Also, in *Journal of Control and Computers*, Vol.22, No.2, 1994, pp.36-41.
52. M. A. Al-Akhras and **G. M. Aly**, "Ain intelligent adaptive controller based on neural networks", *Int. Journal of Control and Computers*, Vol.22, No.2, 1994, pp.36-41.
53. Al-Akhras, **Gamal M. Aly** and Roger J. Green, "Multi-model neural network-based intelligent controller", *IEEE/IAS Int. Conference on Industrial Automation and control*, Hyderabad, India, 1995.
54. Mostafa M. Gomaa and **G. M. Aly**, "General Purpose Simulation System using Pteri Nets (GPSN)", *1st Minia International Conference for Advanced Trends in Engineering, MICATE'99*, Minia, Egypt, 1999, pp.253-268.
55. **G. M. Aly**, Mostafa Gomaa, and Mohammed Sobh, "Fuzzy Control Educational Tutorial and Simulator", *3rd IEEE/IACS Multi-Conference on Computers, Systems, Circuits, and Communications (CSCC'99)*, Athens, Greece, 1999, pp.251-260.
56. **Gamal M. Aly**, Nabil El-Nadi, Z.T. Fayed, and Hossam M. Faheem, "A Design of an Associative Memory Array Processor for Character Recognition," *The second conference on language engineering*, Cairo, Egypt, 1999.
57. **Gamal M. Aly**, Nabil El-Nadi, Z.T. Fayed, and Hossam M. Faheem, "A Design of ardware Intelligent Agent for Pattern Matching," in the proceedings of the 34th national Conference of Statistics, Computer Science, and Operations Research, Cairo, 1999.

58. Mostafa M. Gomaa and **Gamal M. Aly**, "Artificial Neural Network-based Integrated Environment", 4th IMACS/IEEE Multi-Conference on Computers, Systems, Circuits, and Communications (CSCC'2000), Athens, Greece, July, 2000.
59. Mostafa M. Gomaa and **Gamal M. Aly**, "Artificial Neural Network-Based Integrated Environment", Proceedings of 2nd International Conference on Computers in Industry, Bahrain 13-15 Nov. 2000, PP 169-177.
60. **Gamal M. Aly**, Nabil El-Nadi, Z.T. Fayed, and Hossam M. Faheem, "A Design of a Pattern Recognition System based on the Cooperation between an Associative Memory Array Processor and the Microcomputer," The 8th International Conference of Artificial Intelligence Applications, Cairo, Feb., 2000.
61. **Gamal M. Aly**, Nabil El-Nadi, Z.T. Fayed, and Hossam M. Faheem, "A Design of an Associative Memory Array processor for Component Labeling," in the proceedings of the 8th International Conference of Artificial Intelligence Applications, Cairo, Feb., 2000.
62. **Gamal M. Aly**, Nabil El-Nadi, Z.T. Fayed, and Hossam M. Faheem, " A Design of an Associative Memory Array processor for Ultrasonograph Image Acquisition and Proceeding," Rocky Mountain Bioengineering Symposium, IEEE Engineering in Medicine and Biology Society, April, 2000.
63. **Gamal M. Aly**, Nabil El-Nadi, Z.T. Fayed, and Hossam M. Faheem, " A Design of Hardware Intelligent Agent for Pattern Recognition," in the proceedings of the first IEEE Electro / Information Technology Conference, Chicago, June, 2000.
64. **Gamal M. Aly**, Nabil El-Nadi, Z.T. Fayed, and Hossam M. Faheem, " A Design an Associative Memory Array processor for Typecasting," IEEE potentials International Journal, April / May 2001 issue.
65. K.M. Ragab, M. K. El-Mahy, A.Emara, **G. M. Aly**, An Adaptive Multi Target Tracking Estimator, 9th Int. Conf. on Aerospace Sciences, Aviation Technology, Military Technological College, Cairo Egypt, May 2001, PP 1165-1175.
66. Mostafa M. Gomaa and **Gamal M. Aly**, "Fault Detection and Diagnosis of Industrial Control Systems using Artificial Neural Networks", proceedings of Intelligence Computing and Information Systems ICICIS, Conf., Cairo, 2002. PP 167-172.

67. Mostafa M. Gomaa and **Gamal M. Aly**, "Neuro Genetic Based Supervisory System of Industrial Processors", Proceedings of Intelligence Computing and Information Systems ICICIS, Conf., Cairo, 2002. PP 129-135.
68. M. K. El-Mahy, K.M. Ragab, A. Emara, **G. M. Aly**, An Estimation Algorithm with Application to Multiple Target Tracking Radar, Proceedings of the 3rd Int. Conf. on Electrical Engineering ICEENG, Military Technical College, Cairo Egypt, May 2002.
69. Mohamed A. El-Salam, Ashraf Salem, **Gamal Aly**, " RTOS Modeling using System C, Proceedings of International Workshop on System on Chip for Real-time Applications IWSOC' 2002, Kluwer Academic Publisher, Banff – Canada, July 2002.
70. Alaa D. Shtay, Tarek El Fouly and **Gamal M. Aly** " Modeling of Manufacturing Systems using Neural networks " Int. Conf. on Physics and Control, Russia August 2003, PP 201 – 206.
71. Alaa D. Shtay, Tarek El Fouly and **Gamal M. Aly** " Modeling of Closed Loop Control of Manufacturing Systems using Neural Networks", Society of Instrumentation and Control Engineers (SICE) Conference, Japan, 2003.
72. Mostafa M. Gomaa, **Gamal M. Aly**, Hatem M. Sayed, " Assessment Criteria of Multi-Model Control Techniques ", published in the Scientific Bulletin of the Faculty of Engineering, Ain Shams University, Vol. 40, No. 1, pp. 691-706, 31 March 2005.
73. Mostafa M. Gomaa, **Gamal M. Aly**, Hatem M. Sayed, " A Neuro-Fuzzy Based Multi-Model Control Technique ", Scientific Bulletin of the Faculty of Engineering, Ain Shams University, Vol. 40, No. 1, pp. 677-690, 31 March 2005.
74. Georgy J. F., Khalil M.I., **Aly G. M.** , " Improved Monte Carlo Localization For Mobile Robots", Scientific Bulletin of the Faculty of Engineering, Ain Shams University, Part II, Vol. 42, No. 4, 2007, pp. 731-764.
75. Zaki Ahmed M., El-Shafey Mohamed M., **Ali Gamal M.**, " Fuzzy Controller for Mobile Robots using Evolvable Hardware", IEEE Int. Conf. on Electronics, Circuits and Systems ICECS 2007, Morocco, December 2007, pp. 1201-1204.
76. H.S. Hamza, **Gamal M. Aly**, Using product line architectures to leverage systematic reuse of business knowledge: an industrial experience, Proc. of the 2010 Workshop on Knowledge-Oriented

Product Line Engineering (KOPLE2010) in conjunction with SPLASH 2010, Reno, NB, USA, October 2010.

77. Wasseim H. Mahjoub, Hossam Osman and **Gamal M. Aly**, "Video Player Parallzation and Optimization for Embedded Asymmetric Dual- Core Architecture"; IEEE Int. Conference on Computer Engineering and Systems, Cairo, Egypt, Nov. 2010, pp 146-151.
78. Ahmed M. Zaki, Ayman M. Bahaa El Din, Mohamed H. El Shafy and **Gamal M. Aly**, "A New Architecture for Accurate Dot Product of Floating Point Numbers" IEEE Int. Conference on Computer Engineering and Systems, Cairo, Egypt. Nov. 2010, pp 139-145.
79. Azza K. Nabih, Mostafa M. Gomaa, Hossam S. Osman, **Gamal M. Aly**, "Modeling Simulation and Control of Smart Homes Using Petri Nets" Int. J. Smart Home, Vol. 5, No.3, July 2011, pp 1-14.
80. Ahmed M. Zaki, Ayman M. Bahaa El Din, Mohamed H. El Shafy and **Gamal M. Aly**, "Accurate Floating Point Operations Using Controlled Floating Point Precision" IEEE Pacific Rim Conference, on Communications, Computers and Signal Processing, Victoria, Canada, August 2011, pp 696-701.
81. W.H.Mahjoub, H.Osman and **G. M. Aly**, " H 264 Deblocking Filter Enhancement " Accepted for presentation in Int. Conference Computer Engineering and Systems ICCES11, Cairo, Egypt; ,Nov 2011.
82. Amr S. Elsayy, Seif Eldawlatly, Mohamed Taher and Gamal M. Aly, " A Principal Component Analysis Ensemble Classifier for P300 Speller Applications" , 8<sup>th</sup> International Symposium on Image and Signal Processing, Trieste – Italy, Sep 4 – 6, 2013, pp. 444-449.
83. Osama M. Abu-Elnasr, Mohammed A. Abo-Elsoud, Magdy Z.Rashad and Gamal M. Aly, " Organizing Software Architecture based Measurement Analysis (OSAMA) Model", International Journal of Computer Science Issues IJCSI, Vol 11, Issue 3, No 1, May2014, pp 70-76.
84. Osama M. Abu-Elnasr, Magdy Z.Rashad, Mohammed A. Abo-Elsoud, and Gamal M. Aly, " Towards a Framework Empowering Software Testing Process for Better Quality" , International Journal of Computer Applications Vol 94, No. 14, May 2014, pp9-16.
85. A. S. Elsayy, S. Eldawlatly, M. Taher and G. M. Aly, "Performance Analysis of a Principal Component Analysis Ensemble Classifier for Emotiv Headset P300 Spellers," *Proc. of 36th IEEE Engineering in*

*Medicine and Biology Conference (EMBC)*, Chicago, USA, August 2014.

86. Amr S. Elsayy, Seif Eldawlatly, Mohamed Taher and Gamal M. Aly; "MindEdit: A P300-based Text Editor for Mobile Devices", Submitted for publication to *Biomedical Signal Processing and Control*, 2016.