Ahmed Ibrahim Ahmed Galal, Ph.D.

Personal Information

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Academic Qualifications

Degree	Institution	Month/Year
Ph.D.	Kyushu University, Japan. Ph.D. in Electronics. Faculty of Information science and Electrical Engineering,	09/2011
M.Sc.	Minia University Electrical Engineering Department, Faculty of Engineering, Minia University	03/2003
B.Sc.	Faculty of Engineering, Minia University, Egypt. B.Sc. in Electrical Engineering, Faculty of Engineering.	06/1995

Academic Positions

Position	Institution
2023-present	**Associate Professor** Electrical Engineering Dept., Faculty of Engineering, Minia University.
2011-2023	**Assistant Professor** Electrical Engineering Dept., Faculty of Engineering, Minia University.

Ahmed I. Galal

2016-2016	**Post-doctor fellowship**
	Faculty of Information science and Electrical Engineering,
	kyushu University, Japan.
2008-2011	**Research assistant and doctoral student**
	Faculty of Information science and Electrical Engineering,
	kyushu University, Japan
2007-2008	**International Research Student**
	in the Field of Electrical and Electronic Systems Engineering,
	Department of Electrical and Electronic Systems Engineering,
	Kyushu University, Japan.
2003-2007	**Assistant lecturer**
	Electrical Engineering Dept., Faculty of Engineering, Minia
	University.
1996-2002	**Demonstrator**
	Electrical Engineering Dept., Faculty of Engineering, Minia
	University.

Projects & Research Grants

- Science & technology development fund (STDF) for the project number "26004" with the title " Radio frequency hyperthermia for cancer therapy" from 2018 to 2020.

- Scientific mission grant to Japan from February 2016 to August 2016.

- Quality manger of advanced electrical power systems Laboratory funded from HLAP "Higher Education Institutes Labs Accreditation Project" 2012 till now.

Teaching Experience
- **Undergraduate courses**

Electrical Measurements, Electronic Measurements, Electronics fundamentals, Electronic circuits, Design of Integrated circuits, Communication system, Digital circuit design, Sampling theory, Electrical testing 1,2,3,4.

- **Postgraduate courses**

Digital circuit design, Digital Circuit, Solid State Electronics (1, 2), Design of active circuits, Semiconductors.

- **Projects**

Supervision of final year students for graduation projects in the field of Home automation, smart building, smart transportation, Robotics and its application , Integrated circuits design (LNA, mixer, ….,etc.)

Professional activity

- Supervisor of 15 master students and 6 doctor students. (10 students finished)

Ahmed I. Galal

- Reviewer for technical Journals includes IEEE Microwave and Wireless component letters and International Journal of Communication and Electronics (AEUE Elsevier Journal).
- Reviewer for technical Conferences includes Asia Pacific Microwave conference (APMC).

Training Program

Attended a training program for "Faculty and Leadership Development project:

- Strategies of instruction (Feb. 2003).
- Internet (Feb. 2003).
- How to Use Technology in Teaching (March 2003).
- Development of methods of Scientific Research (June 2005).
- Development of Thinking Skills (July 2005)
- Development of Communication Effective Skills (July 2005).
- Recent trends in teaching (Jan. 2006).
- Effective presentation Skills (Oct. 2011).
- Quality standard in education process (Nov. 2011).
- Program specification and curriculum maps for higher education institutes (Dec. 2013)
- The effective learning for higher education institute (Dec. 2013)
- Internal auditing in higher education institute (Jan. 2014)
- Self-assessment in higher education institute (Jan. 2014)
- Strategic planning (Feb. 2015)
- Creation a personal website (Oct. 2016).

International Short Courses and Seminar

- Development of system LSI for wireless LAN, Kyushu university, Japan (Oct. 2007)
- Advanced research in information science and electrical engineering, Kyushu university, Japan (Apr. 2009)
- Advanced Seminar in electronic device engineering, Kyushu university, Japan (Oct. 2009)
- Advanced research in applied solid state physics, Kyushu university, Japan (Jan. 2010)

Technical Skills

- OS Windows, DOS
- programming Fortran, Basic, Visual Basic, VHDL
- LATEX, Microsoft Office, Visio, Adobe Acrobat Professional, ICDL
- MATLAB, Simulink, AUTOCAD

Ahmed I. Galal

- Embedded system Experience, designing and programming
- Experience to develop Altera FPGAs.
- Integrated circuit design using Cadence software
- Electronic Circuits Assembly/Soldering
- Fault Detection/Diagnosis, Inspections/Debugging
- Work planning, job distribution, following, trainer

Languages

- Arabic : Native
- English : Fluent
- Japanese : Basic

Membership & Affiliations
- Member of Egyptian Engineering Syndicate, Egypt.
- Member of Minia University Faculties staff, Egypt.
- Member of Faculty of Engineering Council, Minia University.
- Member of Electrical Engineering Department Council.
- Member of the advisory unit in the Faculty of Engineering, Minia University.
- Member of quality assurance and accreditation program unit, Faculty of Engineering, Minia University.

Other activity

- Participate in preparing quality files for Electrical Engineering Dep. Including course report, course specification, program specification, and program report for under and postgraduate students.
- Working as Department organizer in the visit of quality assurance and accreditation team
- Participate in preparing the undergraduate regulations for Electrical Engineering Department
- Participate in preparing the Postgraduate regulations for Electrical Engineering Department
- Judge in students innovation contests by IEEE Student Chapter, Faculty of Engineering, Minia University.
- Syllabus Development Committee for graduate and undergraduate levels, Faculty of Engineering, Minia University.

Ahmed I. Galal

Research area

- Simulation, modeling, and design of analog RF CMOS front-end components for ultra-wideband (UWB) applications.

- Design of high linearity, low power, and low noise system LSI components for wireless communications systems.

Publication List

1. R. Pokharel, **A.I. A. Galal**, O. Nizhnik, H. Kanaya, and K.Yoshida, "An introduction of ultra-wideband (UWB) technologies for high volume data communication and prospective view for hardware implementation," NESAJ 2008 Proceedings, pp. 1-8, 2008.

2. R. Pokharel, **A.I. A. Galal**, O. Nizhnik, H. Kanaya, and K.Yoshida, " Design of flat gain and low noise figure LNA for 3.1-10.2 GHz band UWB application in 0.18um CMOS process" IEEJ 2008 Proceeding, pp. 161-164, 2008.

3. **A. I. A. Galal**, R. Pokharel, H. Kanaya, and K.Yoshida, " Comparison between bipolar transistor and NMOS transistors in linearization technique at 5 GHz low noise amplifier " APMC 2008 Proc., pp. 1-4, 2008.

4. M. A. Abdelghany, **A.I. A. Galal**, R. Pokharel, H. Kanaya, and K.Yoshida, "A low flicker noise direct conversion receiver for the IEEE 802.11a wireless LAN standard," APMC 2009 Proc., pp. 1-4, 2009.

5. **A. I. A. Galal**, R. Pokharel, H. Kanaya, and K.Yoshida, " Ultra-wideband low noise amplifier with shunt resistive feedback in 0.18um CMOS process," IEEE SiRF 2010 Proc., pp. 33-36, 2010.

6. **A. I. A. Galal**, R. Pokharel, H. Kanaya, and K.Yoshida, " 1-5GHz wideband low noise amplifier using active inductor," IEEE ICUWB 2010 Proc. , pp. 1-4, 2010.

7. Sohiful Anour, R. Pokharel, **A. I. A. Galal** , R. Sapawi, H. Kanaya, and K.Yoshida, " An excellent flatness 3.0-7.0 GHz CMOS PA for UWB applications," IEEE Microwave and Wireless Component Letter, vol. 64, no.9, pp. 510-512, 2010.

8. **A. I. A. Galal**, R. Pokharel, H. Kanaya, and K.Yoshida, "Linearization technique using bipolar transistor at 5 GHz low noise amplifier," Int. Journal of Electronics and Communications, vol. 64, no. 10, pp. 978-982, 2009.

9. **A. I. A. Galal**, M. A. Abdelghany, R. Pokharel, H. Kanaya, and K.Yoshida, "A low power low flicker noise merged balun LNA and mixer for 5.2 GHz wireless LAN receivers," IEEE Tencon 2010 Proc., pp. 1517-1520, 2010.

10. **A. I. A. Galal**, R. Pokharel, H. Kanaya, and K.Yoshida, "3-7 GHz low power wide-band common gate low noise amplifier in 0.18um CMOS process," APMC 2010 Proc., pp. 342-345, 2010.

11. N. Koirala, R. Pokharel, **A. I. A. Galal** , H. Kanaya, and K.Yoshida, "A compact low noise amplifier with integrated notch filter using CMOS active inductor for UWB systems," NESAJ 2011 Proc., pp. 1-4, 2011.

12. N. Koirala, R. Pokharel, **A. I. A. Galal** , H. Kanaya, and K.Yoshida, " Design of low noise

amplifier with integrated notch filter for interference rejection in ultra-wideband system," CJMW 2011 Proc., pp. 409-412, 2011.

13. **A. I. A. Galal**, R. Pokharel, H. Kanaya, and K.Yoshida, "High linearity technique for ultra-wideband low noise amplifier in 0.18um CMOS technology," Int. Journal of Electronics and Communication, vol. 66, issue1, Jan. 2012, pp. 12-17, 2011.

14. **A. I. A. Galal**, R. Pokharel, H. Kanaya, and K. Yoshida, " A low power UWB low noise amplifier using current reused and feedback techniques," Microwave and optical technology letter, vol. 54, issue 2, Feb. 2012, pp. 471-474, 2012.

15. R. Miyamoto, **A. I. A. Galal** , H. Kanaya " Development of UHF to 2.4 GHz and 5.2 GHz dual band up-conversion CMOS mixer", Electronics Packaging Technology Conference (EPTC), 2016 IEEE 18th, pp.199-202, 2016.

16. AG Seliem, WA El-Wafa, **A. I. A. Galal**, HFA Hamed, " Parallel Smith-Waterman algorithm hardware implementation for ancestors and offspring gene tracer", Computer Applications & Research (WSCAR), 2016 World Symposium on, pp. 116-121.

17. R Maher, E Tammam, **A. I. A. Galal**, HF Hamed, " Design of a broadband planar antenna for RF energy harvesting", International conference on Electrical, Electronics, and Optimization Techniques (ICEEOT), pp. 1808-1810, 2016.

18. Chai Eu Guan, **Ahmed I A Galal**, Nagamitsu Mizoguchi, Akira Ishikawa, Shugo Fukagawa, Ryuji Kitaya, Haruichi Kanaya, "Analysis and Design of a Full 360 degrees, Harmonic-Suppressed Hybrid Coupler Phase Shifter ",IEICE Transactions on Electronics, 2017, pp. 875-883, 2017.

19. R Maher, E Tammam, **A. I. A. Galal**, HF Hamed," Study of the Intermodulation Effects on the Efficiency of the RF Rectifier Used for Energy Harvesting ", Japan-Africa conference on Electronics, Communications, and Computers (JAC-ECC),Alexandria, Egypt, December 18-20, 2017.

20. Hader E. El-hmaily, Rabab Ezz-Eldin, **A. I. A. Galal** and Hesham F.A. Hamed, "GNRFET/MOSFET Conjunction Power Gating Structures", in Proceeding of 2018 IEEE 61st International Midwest Symposium on Circuits and Systems (MWSCAS), Windsor, ON, Canada, 5-8 Aug. 2018.

21. Rehan Ahmed, Mohamed El-Sharkawy ,**A. I A. Galal**, " Waste heat recovery for hybrid electric vehicles using thermoelectric generation system ", 2nd MJET magazine , Minia University, July 27-29, 2019.

22. Lobna G. Elfadali, El-Sayed A. Hasaneen, **Ahmed I. A. Galal** and Hesham F. Hamed,"An Ultra-Low-Power, Low-Noise, Linear Preamplifier with Wide Dynamic Range for Electret Microphones", 30th international conference of Microelectronics ICM sousse, Tunsia,16-19 Dec., pp. 108-111, 2018.

23. Mazen Yassen, Emad Tammam, Ahmed A. Ibrahim, Ashraf M. Said and **Ahmed I. A. Galal**, "A Dual Ring Interstitial monopole Antenna with Spherical Heating Pattern for Hepatic Tumor Microwave Ablation", 36th National Radio Science Conference, NRSC2019, 16-18 April, Port said, Egypt, 2019.

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24. Mahmoud H. Kamel, Zaynab K.Mahmoud, Salma W.Elshaeer, Rawaan Mohamed, Asmaa Hassan, **Ahmed I. A. Galal**, "Comparative Design of NMOS and PMOS Capacitor-less Low Dropout Voltage Regulators (LDOs) Suited for SoC Applications", 36th National Radio Science Conference, NRSC2019, 16-18 April, Port said, Egypt, 2019.

25. Mohammed Morad, Hossam S Abbas, Mohamed Nayel, Adel A Elbaset, **AIA Galal**, "Electrical Energy Consumption Forecasting Using Gaussian Process Regression", 2018 Twentieth International Middle East Power Systems Conference (MEPCON), 18 Dec. 2018.

26. Mohammed Morad, Mohamed Nayel, Adel A Elbaset, **AIA Galal**, "Sizing and Analysis of Grid-Connected Microgrid System for Assiut University Using HOMER Software", 2018 Twentieth International Middle East Power Systems Conference (MEPCON), 18 Dec. 2018.

27. W W Marzouk, Adel A. Elbaset, **AIA Galal** and Amr Emad, "An Improved Approach of Inverse Kinematics Solution for Robotics Arm with Five Degree of Freedom Using ANFIS" International Journal of Academic Engineering Research (IJAER) vol. 2 Issue 11, pp. 28-33 Nov.2018.

28. HE El-hmaily, R Ezz-Eldin, **AIA Galal**, HFA Hamed," High Performance GNR Power Gating for Low-Voltage CMOS Circuits", arXiv preprint arXiv:1901.00092, Jan. 2019

29. MM Yassin, E Tammam, AA Ibrahim, AM Said, **AI Galal**, "Dielectric-loaded 5.8 GHz interstitial monopole antenna for spherically-shaped hepatic tumors ablation", 2019 PhotonIcs & Electromagnetics Research Symposium-Spring (PIERS-Spring), pp. 2529-2533, June 2019.

30. M Hussein, **AI Galal**, E Abd-Elrahman, M Zorkany, "Internet of things (IoT) platform for multi-topic messaging", Energies Journal, vol. 13, issue 13, pp. 3346-Jan. 2020.

31. E Tammam, AA Ibrahim, AM Said, MM Yassin, **AI Galal** "On Study of Interstitial Two Slots Antenna with floating sleeve for Microwave Hepatic Tumor Ablation" , 2020 International Conference on Innovative Trends in Communication and Computer Engineering (ITCE), pp.326-329, Feb. 2020.

32. M Morad, HS Abbas, M Naye, AA Elbaset, **AIA Galal**, "Forecasting electrical energy consumption using efficient Gaussian processes: A case study", Journal of Electrical Systems, issue 1 vol. 16, Mar. 2020.

33. S Nabil, MA Abdelghany, **AIA Galal**, FA Hesham, "High Efficiency High Linearity Class-E PA using Analog Predistortion (APD) and reactance compensation Technique", 2020 International Conference on Innovative Trends in Communication and Computer Engineering (ITCE), pp. 290-294, Feb. 2020.

34. M Alaa, GM Salama, **AIA Galal**, HFA Hamed, "A Robust Lane Detection Method for Urban roads", Journal of Advanced Engineering Trends, Vol. 41, issue 1, pp. 13-26, Jan. 2022.

35. E Tammam, AM Said, AA Ibrahim, AIA Galal, "About the interstitial microwave cancer ablation: principles, advantages and challenges", IEEE Access, vol. 8, pp. 49685-49694, Mar. 2020.

36. M El Zorkany, A Yasser, **AI Galal**, "Vehicle to vehicle "V2V" communication: Scope, importance, challenges, research directions and future", The Open Transportation Journal, vol. 14, issue 1, June 2020.

37. M Alaa, GM Salama, **AIA Galal**, HFA Hamed, "A Robust Lane Detection Method for Urban roads", Journal of Advanced Engineering Trends, vol. 41, issue 1, pp. 13-26, 2022.

38. AY Gadalla, YS Mohammed, **AI Galal**, M El-Zorkany, "Design and implementation of a safety algorithm on V2V routing protocol", vol 15, issue 1, pp. 1-18, 2022.

39. M Hussein, YS Mohammed, **AI Galal,** E Abd-Elrahman, M Zorkany, "Smart Cognitive IoT Devices Using Multi-Layer Perception Neural Network on Limited Microcontroller", Sensors, MDPI, vol. 22, issue 14, pp. 5106, 2022.

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40. **A.I.A.GALAL**, SOHA NABIL, HESHAM F. A. HAMED,M. A. Abdelghany, GHAZAL A. FAHMY, "A Low Impedance Current-Reuse Path for UWB-PA to Improve Efficiency and Gain", WSEAS TRANSACTIONS on POWER SYSTEMS, Vol. 17, pp. 372-381, 2022.

Thesis

- A. I. A. Galal, "Computer aided analysis and design of linear multivariable system inverses," M.Sc. Thesis, Minia University.

- A. I. A. Galal, "Development of low power, low noise RF front end for wireless communication", Ph.D. Thesis, Kyushu University, Japan

References

1. **Prof. Dr. Keiji Yoshida**
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