

## **CURRICULUM VITAE**

### **Dr Raheam Ahmad Mansor Al-Saphory**

Department of Mathematics,  
College of Education for Pure Science,  
University of TIKRIT,  
TIKRIT, IRAQ.

**Tel. :** 009647706240418.

Born on February 1/2/1965,  
Baghdad (IRAQ),  
Iraqi Nationality, Married 5 children.

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page: <http://perso.univ-perp.fr/aej/doctorantschercheurs.html>  
and [https://www.researchgate.net/profile/Raheam\\_AL-SAPHORY](https://www.researchgate.net/profile/Raheam_AL-SAPHORY)



### **AREAS OF RESEARCH INTERESTS**

- Distributed Parameter Systems Analysis and Control
- Dynamical Systems and Optimization.
- Modelling of Industrial Processes.
- Theory of Quasi-Hilbert space and Bio-Mathematical systems.
- Systems theory, Partial differential equations and its applications.

### **PROFESSIONAL EXPERIENCE**

- Committee chairman of superior studies in Department of Mathematics, College of education for Pure Science, Tikrit University, **2015-present**.
- Professor (Full) at University of Tikrit, Tikrit, Iraq, **2014-present**.
- Assistant Professor at University of Tikrit, Tikrit, Iraq, **2008-2014**.
- Head of Mathematical Department, College of Education for the pure sciences, Tikrit, University, Iraq, **2010-2011**.
- Commission head of publications and scientific researches, **2009-present**.
- Attached Lecturer at University of Tikrit, Tikrit, Iraq, **2007-2008**.
- Lecturer at University of Al-Mustansriyah, Baghdad, Iraq, **2002-2007**.

- Post Doc., Systems Theory Laboratory, University of Perpignan, France, **2001-2002.**
- Researcher at Systems Theory Laboratory (LTS), University of Perpignan, France, **1997-2001.**
- Trainee at the CILEC, University of Saint-Etienne, Saint-Etienne, France, **1996-1997.**

### Teaching Courses

- Professor (Full) in Applied Mathematics, Department of Mathematics of College of Education at Tikrit University : Teaching Control Systems Analysis, Applied Functional Analysis, Mathematical Analysis for the postgraduate student in **Msc.** and **Ph. D.**, and Partial Differential Equations and Calculus for the student in **Bsc.**, **2014 --present.**
- Assistant Professor in Applied Mathematics, Department of Mathematics of College of Education at Tikrit University : Teaching Control Systems Analysis Applied Functional Analysis, for the postgraduate student in **Msc.**, and Partial Differential Equations and Calculus for the student in **Bsc.**, **2012--2014.**
- Assistant Professor in Applied Mathematics, Department of Mathematics of College of Education at Tikrit University : Teaching Control Systems Analysis, for the postgraduate student in **Msc.**, and Partial Differential Equations and Calculus for the student in **Bsc.**, **2009--2012.**
- Attached Lecturer in Applied Mathematics, Department of Mathematics of College of Education at Tikrit University : Teaching Control Systems, for the postgraduate student in **Msc.**, and Partial Differential Equations and Calculus for the student in **Bsc.**, **2007-2008.**
- Lecturer in Mathematics, Department of Mathematics of College of Science, Al-Mustansiriyah University: Teaching Analysis of Optimal Control Systems, for the postgraduate student in **Msc.** and Functional Analysis, advance Calculus for the student in 4<sup>th</sup> Class in **Bsc.**, **2002-2007.**
- Assistant Lecturer in Mathematics, Department of Mathematics : Teaching Control Optimal Theory, Mathematical Analysis, Mathematics (Statistics and Probability, Algebra, Theory of the Groups, Calculus) for students in the Departments of Biology or Chemistry, College of Sciences, University of Al-Mustansriyah, Baghdad, Iraq, **1991-1996.**
- Research assistant at University of Al-Mustansriyah, Baghdad, Iraq, **1989-1991.**
- Teacher of Mathematics, Ministry of Education, Baghdad, Iraq, **1986-1989.**

### EDUCATION

- **B. Sc.** In Mathematics Science, University of Al-Mustansriyah, Baghdad, Iraq, **1982-1986.**
- **M. Sc.** In Applied Mathematics, University of Al-Mustansriyah, Baghdad, Iraq, **1989- 1991.**
- **Ph. D.** In Applied Mathematics, Academic of Montpellier, University of Perpignan, Perpignan, France, **1997-2001** (<http://www.genealogy.math.ndsu.nodak.edu/id.php?id=64154>).

## THE SOCIETIES MEMBERSHIP

- **Member of IEEE Systems Council 2014- .**
- **Member of (IEEE-Section IRAQ), Society of Electrical Energy Engineering, 2010- .**
- **Member of (SMAI-FRANCE) Society of Applied Mathematics and Industries, 2002- .**
- **Member of (IFSA) International Foundation of Sensors and Actuators, 2002- .**
- **Member of Iraqis Society of Physics and Mathematics, 1992- .**

## PUBLICATIONS

### **Published :**

- R. Al-Saphory, N. Al-Jawari and A. Al-Janabi, Asymptotic Regional Gradient Reduced-Order Observer, Journal of Central South University, Submitted September-**2016**.
- Al-Saphory R Al-Jawari N., and Al-Janabi A., Sensors structures and regional gradient exponential detectability of parabolic distributed systems, Scientific Bulletin, October submitted **2016**.
- Al-Saphory R., Sufficient Conditions for Observability in Electrocardiography Problem, Tikrit Journal of Pure Science, 21 (3), pp 166-173, **2016**, [https:// www.researchgate.net/publication/303752658\\_166-173?ev=prf\\_pub](https://www.researchgate.net/publication/303752658_166-173?ev=prf_pub).
- Al-Saphory R Al-Jawari N., and Al-Janabi A., Asymptotic Regional Gradient Full-Order Observer in Distributed Parabolic Systems, International Journal of Contemporary Mathematical Sciences, Vol. 11, no7, pp 343-358, **2016**.
- Al-Saphory R Al-Jawari N., and Al-Janabi A. General asymptotic regional gradient observer, Australian Journal of Basic and Applied Sciences, 10 (9) May, pp 8-18 , 2016.
- Al-Saphory R. and El Jai A., Some important notions in regional asymptotic distributed parameter systems analysis, 25 June **2016**, [https://www.researchgate.net/publication/304382465\\_Al-Saphory-El\\_Jai\\_works](https://www.researchgate.net/publication/304382465_Al-Saphory-El_Jai_works).
- Al-Saphory R Al-Jawari N., and Al-Janabi A. Regional boundary gradient strategic sensors characterizations, Mathematical Theory and Modeling, Vol. 6, No. 1, **2016**.
- Al-Saphory R. and Jaafar Z. Regional exponential general observability in distributed parameter systems, Journal of Advances in Mathematics (JAM), Vol. 11, No.4, pp. 5166-5188, **2015**.
- Al-Saphory R. and Al-Mullah Sh., Regional exponential reduced observability in distributed parameter systems, Journal of Advances in Mathematics (JAM), Vol. 11, No.4, pp. 5059-5079, **2015**.
- Al-Saphory R Al-Jawari N., and Al-Janabi A. Regional gradient strategic sensors characterizations, Journal of Advances in Mathematics (JAM), Vol. 10, No.6, pp. 3605-3618, **2015**.

- Al-Saphory R., Sensors structures and regional exponential detectability, Control Conference (ECC), 2001 European, 4-7 Sept. 2001, Publisher:IEEE *Xplore* at 27 April, pp 2215 – 2220, **2015**, (<http://ieeexplore.ieee.org/document/7076253/?reload=true&arnumber=7076253>).
- Al-Saphory R and Jasim M., Quasi-compactness in quasi-Banach space  $\ell_p$ , for  $0 < p < 1$ , Journal of Advances in Mathematics (JAM), Vol. 4, No.1, pp. 326-342, **2013**.
- Al-Saphory R., Al-Joubory A, Strategic Sensors and Regional Boundary Exponential Observation, the seventh conference of education college for women, Tikrit University, Iraq, April 6-7, 2013.
- Al-Saphory R., Al-Joubory M. and Jasim M., Regional strategic sensors characterizations, Journal of mathematics and Computational science, Vol. 3, No. 2, pp. 401-418, **2013**.
- Al-Saphory R., Jasim M., and Swady R., Dynamical stability of charged isentropic superdense, Journal of mathematics and Computational science, Vol. 3, No. 1, pp. 266-277, **2013**.
- Al-Saphory R. and Salman A., Structures actuators and regional stabilizability in distributed parameter systems, Journal of the fourth international scientific conference in mathematics, Al-Qadissiya University, IRAQ, November 21-23, **2012**, [https://www.researchgate.net/publication/261141418\\_Abstracts\\_of\\_conference?ev=prf\\_pub](https://www.researchgate.net/publication/261141418_Abstracts_of_conference?ev=prf_pub).
- R. Al-Saphory, Asymptotic regional analysis for a class of distributed parameter systems, Google Book, Amazon Publisher, USA, 2011.
- Al-Saphory R., Strategic sensors and regional exponential observability, International Scholarly Research Network (ISRN Applied Mathematics), Vol. 2011, Article ID 673052, 14 pages, doi:10.5402/2011/673052, **2011**.
- Al-Saphory R., Strategic sensors and regional exponential observation in Neumann boundary conditions, Journal of Zanco for Pure and Applied Science, Salahadin University, Hawler-Iraqi Kurdistan Region, Erbil, IRAQ, Vol. 22, No. 6, **2011**.
- Al-Saphory R., Al-Jawari, N. and Al-Qaisi, A, Regional gradient detectability for infinite dimensional systems, Tikrit journal of pure science, Vol. 15, No. 1, **2010**, [https://www.researchgate.net/publication/261550172\\_REGIONAL\\_GRADIENT\\_DETECTABILITY\\_FOR\\_INFINITY\\_DIMENSIONAL\\_SYSTEMS](https://www.researchgate.net/publication/261550172_REGIONAL_GRADIENT_DETECTABILITY_FOR_INFINITY_DIMENSIONAL_SYSTEMS).
- Al-Saphory R., and Al-Joubori M., A, Regional approach for dynamical free systems, Tikrit journal of pure science, Vol. 15, No. 2, 2010, [https://www.researchgate.net/publication/232956977\\_Regional\\_Asymptotic\\_Approach\\_for\\_Dynamical\\_Free\\_Systems](https://www.researchgate.net/publication/232956977_Regional_Asymptotic_Approach_for_Dynamical_Free_Systems).
- Al-Saphory R., Al-Janabi A. and Al-Delfi J., Quasi-Banach space for the sequence space  $\ell_p$ , where  $0 < p < 1$ , Journal of Education College, University of Al-Mustansriyah, Baghdad, Iraq, Vol. 1, No. 1, pp. 1-12, **2007**, [https://www.researchgate.net/publication/233993400\\_Quasi-Banach\\_space\\_for\\_the\\_sequence\\_space\\_lp\\_where\\_0p1\\_-](https://www.researchgate.net/publication/233993400_Quasi-Banach_space_for_the_sequence_space_lp_where_0p1_-).
- Al-Saphory R. and El Jai A., Measurements structures and asymptotic regional state reconstruction of parabolic systems, International Journal of Measurement, accepted **2003**.
- Al-Saphory R., Actuators structures and regional stabilizability of parabolic systems, *Second International Conference on System Identification and Control Problems (SICPRO 2003)*, Moscow, January 29-31, **2003**.
- Al-Saphory R., A Sufficient Condition for Regional Compensator in Parabolic Distributed Systems, The 5th IASTED International Conference Intelligent Systems and Control (ISC 2002)

October 1- 4, 2002 ;Tsukuba, Japan. pp 1-6. **2002.**, [https://www.researchgate.net/publication/277476137\\_Al-Saphory\\_paper\\_No\\_366-066](https://www.researchgate.net/publication/277476137_Al-Saphory_paper_No_366-066).

- Al-Saphory R. and El Jai A., Asymptotic regional state reconstruction, *International Journal of Systems Science*, Vol. 33, No 13, pp. 1025-1037, **2002**.
- Al-Saphory R. and M. C. El Jai, Observation asymptotique régionale frontière d'une classe de systèmes distribués, *6ème Colloque Franco-Roumain de Mathématiques Appliquées*, 2-6 septembre 2002, Perpignan, France, **2002**.
- Al-Saphory R., Regional boundary asymptotic observer in distributed parameter systems, *International Conference on Applied Mathematics (JANO 7 2002)*, Tanget, Morocco, 17-19 April **2002**.
- Al-Saphory R., Asymptotic regional boundary observer in distributed parameter systems via sensors structures, *International Journal of Sensors*, Vol. 2, No 4, pp. 137-152, **2002**.
- Al-Saphory R. and El Jai A., Sensors characterizations for regional boundary detectability of distributed parameter systems, *International Journal of Sensors and Actuators*, Vol. 94, No.1, pp.1-10, **2001**.
- Al-Saphory R. and El Jai A., Sensors and asymptotic  $\omega$ -observer for distributed diffusion systems, *International Journal of Sensors*, Vol. 1, No. 5, pp. 161-182, **2001**.
- Al-Saphory R. and El Jai A., Sensors structures and regional detectability of parabolic distributed systems, *International Journal of Sensors and Actuators*, Vol. 90, No. 3, pp. 163-171, **2001**.
- Al-Saphory R. and El Jai A., Sensors and regional detectability of distributed parameter systems, rapport N. 1 /2001, (LTS), University of Perpignan, France, pp. 1-19, **2001**.
- Al-Saphory R. and El Jai A., Regional Luenberger observer and sensors structures, rapport N. 2 /2000, (LTS), University of Perpignan, France, pp. 1-20, **2001**.
- Al-Saphory R. and Al-Janabi A., The necessary condition for optimal control of dynamical systems, Journal published by Iraqis Society of Physics and Mathematics, Vol. 15, No.1, pp. 30-50, 2000,[https://www.researchgate.net/publication/233993417\\_The\\_necessary\\_condition\\_for\\_optimal\\_control\\_of\\_dynamical\\_systems](https://www.researchgate.net/publication/233993417_The_necessary_condition_for_optimal_control_of_dynamical_systems).
- Al-Saphory R., Regional Luenberger observer type, *Works shop on Modelling Theory and Control (JTMC 1999)*, University of Perpignan, France, 30 Mars, **1999**.
- Al-Saphory R., On a necessary condition for optimal control of dynamical systems, *The 10<sup>th</sup> conference of Society Physic and Mathematics Iraqis*, University of Al-Anbar, Iraq, 16-18 April **1993**.

## CONFERENCES

- Al-Saphory R., Al-Joubory A, Strategic Sensors and Regional Boundary Exponential Observation, The seventh conference of education college for women, Tikrit University, Iraq, April 6-7, **2013**.

- Al-Saphory R. and Salman A., Structures actuators and regional stabilizability in distributed parameter systems, The fourth international scientific conference in mathematics, Al-Qadissiya University, IRAQ, November 21-23, **2012**..
- Al-Saphory R., Strategic sensors and regional exponential observation in Neumann boundary conditions, The first Iraqi-French Mathematics, Erbil, Iraq, November 14-18, **2009**.
- Al-Saphory R., Actuators structures and regional stabilizability of parabolic systems, *Second International Conference on System Identification and Control Problems (SICPRO 2003)*, Moscow, January 29-31, **2003**.
- Al-Saphory R. and M. C. El Jai, Observation asymptotique régionale frontière d'une classe de systèmes distribués, *6ème Colloque Franco-Roumain de Mathématiques Appliquées*, 2-6 septembre 2002, Perpignan, France, **2002**.
- Al-Saphory R., Regional compensator in parabolic distributed parameter systems, *IASTED International Conference on Intelligent Systems and Control (ISC 2002)*, October 1-4, Tsukuba, Japan, **2002**.
- Al-Saphory R., Regional boundary asymptotic observer in distributed parameter systems, *International Conference on Applied Mathematics (JANO 7 2002)*, Tanget, Morocco, 17-19 April **2002**.
- Al-Saphory R., Sensors structures and regional exponential detectability, *European Control Conference (ECC 2001)*, Porto, Portugal, September 4-7, **2001**.
- Al-Saphory R., Regional Luenberger observer type, *Works shop on Modelling Theory and Control (JTMC 1999)*, University of Perpignan, France, 30 Mars, **1999**.
- Al-Saphory R., On a necessary condition for optimal control of dynamical systems, *The 10<sup>th</sup> conference of Society Physic and Mathematics Iraqis*, University of Al-Anbar, Iraq, 16-18 April **1993**.

## PARTICIPATIONS OF CONFERENCES AND MANIFESTATIONS

- The 2<sup>nd</sup> Symposium on Mathematics for the Preparatory Teachers and Curricula Developed, Department of Mathematics, Education College, Tikrit University, December 20, **2012**.
- The of 1<sup>st</sup> Symposium on Mathematics for the Intermediate Teachers and Curricula Developed, Department of Mathematics, Education College, Tikrit University, December 19, **2012**.
- Fourth Scientific Conference for College of Computer Science and Mathematics, Tikrit University, Iraq, November 15-16, **2012**.
- The Seventh Conference of Education College for Scientific Branches, Tikrit University, May 6-7, **2012**.
- The 1<sup>st</sup> Symposium on Mathematics and Multidisciplinary Aspects, Applied Mathematics Discipline in Applied Mathematics Department, Technology University Cooperated with IEEE Iraq Section, April 4, **2012**.
- International Conference of Mathematics and Its Applications (ICMA 2011), University of Basrah, Mars 1-3, **2011**.
- Graduation Researches Conference (2009-2010), College of Education, Tikrit University, April 13-14, **2010**.
- 1<sup>st</sup> Symposium on the Basis of Scientific Cooperation Between IEEE with the Scientific and Academic Cadres, College of Computer Science and Mathematics, Tikrit University Cooperated

with IEEE Iraq Section, January 15, **2010**.

- Some Theoretical Approaches and Numerical for the Studies of Systems (*JTMC 2001*), University of Perpignan, France, December 4, **2001**.
- The 3<sup>rd</sup> Conference of Applied Mathematics and Engineers Sciences (*CIMASI 2000*), Casablanca, Morocco, October 23-25, **2000**.
- Mathematical Theory of Networks and Systems (*MTNS 2000*), Perpignan, France, June 19-23, **2000**.
- Modelling Theory and Control (*JTMC 1999*), University of Perpignan, France, Mars 30, **1999**.
- Land Use Change Interactions with Fire in Mediterranean landscapes (*LUCIFER 1998*) Perpignan, France, December 18-19, **1998**.
- Modelling Theory and Theory of Systems, University of Perpignan, France, June 25, **1998**.
- Thermal on the Alternatives of Finite Elements Methods (*JTMC 1997*), Perpignan, France, December, **1997**.
- The 3<sup>rd</sup> conference of Al-Mustansriyah University, Baghdad, Iraq, April 2-4, **1994**.
- The 2<sup>nd</sup> conference of Al-Mustansriyah University, Baghdad, Iraq, April 2-4, **1992**.
- The 1<sup>st</sup> conference of Al-Mustansriyah University, Baghdad, Iraq, April 2-4, **1990**.

## TRAINING

- School, Workshop and conference on topics of Applied mathematics organised by CIMPA-France and University of Salahaddin-Erbil, Iraq, December 21-29, **2016**.
- Workshop on topics of Applied mathematics organised by CIMPA-France and University of Salahaddin-Erbil, Iraq, May 8-14, **2014**.
- Academic staff training programme at Bangor university Wales, United kingdom, the programme included current research and teaching methodology for academic staff, 15<sup>th</sup> April 2013-10<sup>th</sup> May **2013**.
- Workshop and seminars on the topics of numerical methods for partial differential equations, to discuss the theory and computational approach for free boundary problems, organised by CIMPA-France and University of Salahaddin-Erbil, Iraq, May 8-14, **2012**.
- Workshop of training to the Methodology of Science, "Teaching methods qualification", College of Education, Tikrit University, Tikrit, Iraq, July 1-15, **2007**.
- Workshop of training to the computer techniques of the research, "Computer qualification", College of Engineering, Al-Mustansriyah University, Baghdad, Iraq, January 22-26, **2006**.
- Workshop of training to the computer techniques of the research, "Page WEB" University of Perpignan, France, Mars 01-30, **2002**.
- Workshop of training to the computer techniques of the research, "Fortran 90" College of science, University of Perpignan, France, October- December, **2001**.
- Courses is organised within the framework of the Doctoral School Environment, "New surrounding areas of modelling of the spatio-temporal systems: cellular machines" College of science, University of Perpignan, France, March 05-09, **2001**.
- Training in Distributed Parameter Systems Analysis and Control, University of Moulay Ismail, College of Science, Maknès, Morocco, October 15-22, **2000**.

## DIVERSE ACTIVITIES

- **Coordinators with Iraqi Universities** of workshop on topics of Applied mathematics organised by CIMPA-France and University of Salahaddin-Erbil, Iraq, May 5-14, **2014** ( see <http://uni-sci.org/krs/orgcommitee.html>).
- Member of national advisory board for 2<sup>nd</sup> international conference of mathematics and its applications, Basrah, October 23<sup>th</sup> – 24<sup>th</sup>, **2013**, please see the website of the conference ([http://www.basconmath.org/fos\\_math\\_icm\\_committees.asp.htm](http://www.basconmath.org/fos_math_icm_committees.asp.htm)).
- Organiser of 1<sup>st</sup> Symposium on Mathematics for the Intermediate Teachers and Curricula Developed, Department of Mathematics, Education College, Tikrit University, 19 December **2012**.
- Organiser of 2<sup>nd</sup> Symposium on Mathematics for the Preparatory Teachers and Curricula Developed, Department of Mathematics, Education College, Tikrit University, December 20, **2012**.
- Organiser and Member of Scientific Commission for the Seventh Conference of Education College for Scientific Branches, Tikrit University, May 6-7, **2012**.
- Organiser and Member of Scientific Commission for the Graduation Researches Conference (2009-2010), College of Education, Tikrit University, April 13-14, **2010**.
- Organisers assistant of the Fourteenth International Symposium of Mathematical Theory of Networks and Systems (*MTNS 2000*), Perpignan, France, June 19-23, **2000**.
- Organisers assistant of all scientifically activities and manifestations at System Theory Laboratory, University of Perpignan, France, **1997-2002**.

## LANGUAGES

**Arabic, French and English.**

## MSc.-Ph. D. THESISES SUPERVISED

### - SUPERVISION

#### MSC. & MA (Masters Degree)

Name of Candidates or Student	Title of Thesis	Examined Date
Jawad Khalifa AL-Delfi	On an infinite dimensional Leslie matrix in the sequence space $\ell_p$ , $0 < p < 1$ .	<b>2005</b>
Zainab Fadhel Abed Al-Rubi'i	Regional exponential observability in distributed parameter systems.	<b>2005</b>
Israa Khales Kareem Al-Qaisi	Regional gradient detectability in	<b>2006</b>



	distributed parameter systems.	
Anas Diab Khalef	Regional boundary exponential observability in distributed parameter systems.	<b>2013</b>
Zaineb A Jaafar	Regional exponential general observability in distributed parameter systems.	<b>2015</b>
Shahad A. Al-Mullah	Regional exponential reduced observability in distributed parameter systems.	<b>2015</b>
Hind K. Kulaib	Regional boundary exponential observability in distributed parameter systems.	<b>2016-2017</b>

## - SUPERVISION

### Post Graduate Level (PHD.)

Name of Candidate	Title of Dissertations	Examined
Assmaa N. Al-Janabi	Asymptotic regional gradient analysis for some classes in DPS.	<b>2014-2016</b>

**Referee of:**

**Referee of many national and international conferences, journals:**

( Universal Journal of Mathematics, IMA Journal of Mathematical Control and Information, Robotics and Autonomous Systems, Journal of Advances in Mathematics, IEEE control systems, Applied Mathematics and Computation ), and many thesis's.