Academic Curriculum Vitae

Personal Information:

Full Name: Ibrahim Othman Hamad

Academic Title: Assistant (Associate) Professor Email: (university email) ibrahim.hamad@su.edu.krd

Mobile: 00964 750 4630477

Education:

Ph.D.

Date: 25-05-2007 (Discussion), 29-07-2007 (Awarded)

Title: Generalized Curvature and Torsion in Nonstandard Analysis Place of Attainments: Mathematics Department, College of Science,

University of Salahaddin-Erbil,

Hawler (Erbil), Kurdistan Region, Iraqi.

Supervisor: Professor Dr. Tahir Hassan Ismail,

Supervisor Address: Mathematics Department,

College of Computer Science and Mathematics,

University of Mosul, Mosul, Iraq. Email: tahir hs@yahoo.com

M. Sc.

Date: 02-08-2000(Discussion), 16-09-2000 (Awarded)

Title: A Nonstandard Study on The Taylor Series Development

Place of Attainments: Math. Dept.-College of Sci.-Univ. of Salahaddin-Erbil, Iraq

Supervisor: Professor Dr. Tahir Hassan Ismail,

B. Sc.

Date: 27-06-1992

Place of Attainments: Math. Dept.-College of Sci.-Univ. of Salahaddin-Erbil-Iraq

Title of the Graduation Project:

Number of Limit Cycles of Nonlinear Autonomus Homogeneous System of Degree Three

Employment:

> 1993 – 1998: Assistant Researcher in Mathematics Department.

1998 – 2000: M.Sc Student.

2000 – 2005: Assistant Lecturer, Member of Mathematics Faculty, (Awarded 02.10.2000).

2004 – 2007: PhD student.

Lecturer, (Awarded 21.09.2005).

2009 – Present : Assistant (Associate) Professor, (Awarded 22.09.2009).





Qualifications:

Courses Taught

- 1- 1993-1998, as an Assistant Researcher:
- (Theoretical): O.D.E, probability, & Statistics, Euclidean and Non-Euclidean Geometry.
- (Tutorial): Euclidean and Non-Euclidean Geometry y, Statistics, O.D.E, P.D.E, Topology.
- (Computer Laboratory): Basic Language, Fortran Language, Pascal Language
- 2- 2000-2004, as an Assistant Lecturer: (Theoretical)
 - Mathematical Analysis, Finite Mathematics, O.D.E, probability, & Statistics, Euclidean and Non Euclidean Geometry, Pascal Language, Computer Science, Supervising of several fourth year students Graduation Projects,
- 3 2005 Present, as Lecturer and Assistant Professor: (Theoretical)
 - (Undergraduate): Math. Analysis, Calculus, Advanced Calculus, Axiomatic Systems, Operation Research, Operating Systems, System Analysis, Fundamental of mathematics., Basic Mathematics for Computer Sci, Axiomatic Systems, Modern Geometry
 - (Graduate): Adv. Mathematical Analysis, Adv. Mathematical Analysis-Theory of Integration, Adv. Mathematical Analysis-Advanced topics in Metric Spaces, Nonstandard Analysis and Asymptotic Approximations, Asymptotic Analysis

Software Skills

WinWord (V. good), Excel (V. good), Mathcad(little), Maple(good), LaTx(V.good), VB Office(V.good)

Supervising M.Sc. & Ph.D. Student

- 1. Sami Ali Hussein: *Ph. D.*, co-supervised with *Prof. Dr. Tahir Hassan Ismail* 2010–2012; *Title*: A Characterization of $\beta\theta$ and $P\theta$ -Monads in Topology. University of Mosul\ College of Computer Science and Mathematics\ Department of Mathematics.
- 2. Bakhtiar Radha Abul-Rahman: *M.Sc.* (2013-2014).

Title: Some Nonstandard Treatments of Bessel Function.

- 3. Sebar Muhamad Haji : M.Sc. (2014-2015).
 - **Title**: On Some New Type of Functions in Nonstandard Analysis.
- 4. Saman Ahmad Bapir : *M.Sc.* (2015-2016).

Title: On Some Nonstandard Study of Compactness in metric Spaces.

- 5. Mardan Amin Pirdawd : *M.Sc.* (2015-2016).
 - Title: On Some Nonstandard Studies of Analyticity Near Singularity.
- 6. Ala Omer Hasan : M.Sc. (2019-2021).
 - **Title:** Nonstandard Completion of Non-complete Metric Spaces.
- 7. Chiman Muhammad Qader: *Ph.D.* (2020-000).

Title: Currently under supervision.

Research and publications

Papers:

- 1. Rank Two Integral Aspects of Three dimensional Lotka-Volterra Equations with Nonstandard Analysis, (with Chiman M. Qader & Waleed H. Aziz), Differential Equations and Dynamical Systems, Springer, (2023), To Appear
- 2. Non-Existence of Polynomial First Integrals of a Family of Three-Dimensional Differential Systems, (with Chiman M. Qader & Waleed H. Aziz), Palestine Journal of Mathematics, Vol. 12(Special Issue I) (2023), 59–72 (Palestine) Scopus, Cite Score 0.1, Q4, https://pim.ppu.edu/vol/1339
- 3. Integral Aspects of (1:-3:1) Resonance Lotka-Volterra Equations with Nonstandard Analysis, (with Chiman M. Qader & Waleed H. Aziz), arXiv:2207.14655v1, (2022) https://arxiv.org/abs/2207.14655v1, DOI: https://doi.org/10.48550/arXiv.2207.14655
- 4. Some Nonstandard Treatment of the Singularity in the Differential Equations, (with Mardan A. Pirdawood), Special issue for Passer Journal of Basic and Applied Sciences, No. 10, (2022) 142-159 https://passer.garmian.edu.krd/article_161691.html, DOI: https://doi.org/10.24271/psr.2022.161691
- 5. Some Nonstandard Studies on Complete and Non-Complete Metric Spaces, (with Ala 0. Hassan), Journal of Univ. of Duhok, To Appear.
- 6. On Infinitesimal ω-Smooth Functions, *ZANCO* Journal of Pure and Applied Sciences, (ZJPAS), 32 (5); (2021) 1-16, https://zancojournals.su.edu.krd/index.php/JPAS, DOI: https://dx.doi.org/10.21271/ZJPAS.32.0.0
- 7. Nonstandard Completion of Non-complete Metric Spaces, (with Ala O. Hassan), ZANCO Journal of Pure and Applied Sciences (ZJPAS), 33 (4); (2021) 129-135, https://www.iasj.net/iasj/article/213255, DOI: https://dx.doi.org/10.21271/ZJPAS.33.4.13
- 8. Nonstandard Solutions for Ordinary Differential Equations near Singularity, (with Mardan A. Pirdawood), 3rd International Conference on Recent Trends in Multi-Disciplinary Research (ICRTMDR-20), 26th 27th December 2020., (Maldives), online, https://icrtmdr.com/, https://www.youtube.com/watch?v=jwX8BZA6Fvw&feature=youtu.be
- 9. Existence and Uniqueness Theorems for Infinitesimal Micromonad of an Initial Standard Point and Legendre Equation, (with Mardan A. Pirdawood), Special issue of International Conference on Pure and Applied Sciences (ICPAS 2018), pp114-119 Koya Univ., (Kurdistan region, Iraq), http://conferences.koyauniversity.org/index.php/pas/2018/paper/view/66, DOI: http://dx.doi.org/10.14500/icpas2018, DOI: http://dx.doi.org/10.14500/icpas2018.pma66.
- 10. Nonstandard Version of Intermediate Value Property, (with Sami A. Hussein), Scientific Journal of Univ. of Zakho (SJUOZ), Vol 5(1), (2017) 142-146 (Kurdistan region, Iraq), https://sjuoz.uoz.edu.krd/index.php/sjuoz/article/view/478, DOI: https://doi.org/10.25271/2017.5.1.356
- 11. On Some Nonstandard Development of Intermediate Value Property, Assiut Univ. J. of Mathematics and Computer Science, Vol 45(2), (2016) 35-45 (Egypt) https://aunj.journals.ekb.eg/article 221419.html, DOI: 10.21608/AUNJ.2016.221419
- 12. sp-theta-Topological Group in Nonstandard Analysis, (with Tahir H. Ismail & Sami A. Hussein), Assiut Univ. J. of Mathematics and Computer Science, Vol 45(2), (2016) 11-22 (Egypt), https://aunj.journals.ekb.eg/article 221410.html, DOI: 10.21608/AUNJ.2016.221410
- 13. On Some New Type of Functions in Nonstandard, (with Sebar H. Jumha), Scientific Journal of University of Zakho (SJUOZ) Vol 4(A), No 2 (2016) 253-257 https://sjuoz.uoz.edu.krd/index.php/sjuoz/article/view/358

- 14. Nonstandard Asymptotic Treatments for Some Critical Engineering Parameters Depending on Bessel Functions, (with Bakhtiar R. Abdul-Rahman), ANDAMIOS, Vol 13, No 2 (2016), (Mexico) UNIV AUTONOMA CIUDAD MEXICO.
- 15. Some Nonstandard Type of the Remainder of Bessel Function, (with Bakhtiar R. Abdul-Rahman), ZANCO Journal of Pure and Applied Sciences (ZJPAS), 28 (4); (2016)142-155
- 16. On Nonstandard Type of Integral Representation of Bessel Function, (with Bakhtiar R. Abdul-Rahman), International Journal of Enhanced Research in Science Technology & Engineering, Vol. 3 Issue 4, (2014), 347-355 (India) https://www.erpublications.com/our-journals-dtl-pdf.php?pid=1&id=82&pagesize=10&start=40&pagesize=10
- 17. On A New Type of Monads in Topology, (with Tahir H. Ismail & Sami A. Hussein), Journal of Theoretical Mathematics and Applications (JTMA), Vol.2, No.3 (2012),139-150. (New Zealand) https://www.scienpress.com/journal_focus.asp?main_id=60&Sub_id=IV&Issue=450
- 18. Pθ -Topological Groups in Nonstandard Analysis, (with Tahir H. Ismail & Sami A. Hussein), Raf. J. of Comp. & Math's, Vol.9, No.1 (2012), 191-199 https://csmj.mosuljournals.com/article_163683_en.html, DOI: 10.33899/CSMJ.2012.163683
- 19. βθ Monads in General Topology, (with Tahir H. Ismail & Sami A. Hussein), Int. J. of Contemporary Mathematical Science, Vol.7, No.5 (2012). (Bulgaria), 241-249 http://www.m-hikari.com/ijcms/ijcms-2012/5-8-2012/index.html
- 20. A Generalized Curvature of The Generalized Envelopes, (with Tahir H. Ismail), Raf. J. of Comp. & Math's, Vol.6, No.2 (2009), 39-47. https://csmj.mosuljournals.com/article_163795.html, DOI: 10.33899/csmj.2009.163795
- 21. Nonstandard Approximation Factor of the Taylor Series of Two variables, accepted for presentation in a 2ndInt. Mathematics Conference of Alebo Univ. Syria, 2008.
- 22. A Nonstandard Asymptotic Approx. of Bessel Fun. Special issue of 2ndInt. Mathematics Conference of Zarqa Private Univ. Jordon, 2008. https://iacmc.zu.edu.jo/index.php/about-iacmc/iacmc-series
- 23. Continuity as a Galaxy of Hyperreal Functions, Raf. J. of Comp. & Math's, Vol.5, No.2 (2008), 85-93. https://csmj.mosuljournals.com/article_163974.html, DOI: 10.33899/CSMJ.2008.163974
- 24. A Nonstandard Generalization of Envelops, (with Tahir H. Ismail), Raf. J. of Comp. & Math's, Vol.5, No.2 (2008), 73-83. https://csmj.mosuljournals.com/article_163973.html, DOI: 10.33899/CSMJ.2008.163973
- 25. Nonstandard Treatment of Two Dimensional Taylor Series with Reminder Formulas, Raf. J. of Comp. & Math's, Vol.5, No.1 (2008), 165-175. https://csmj.mosuljournals.com/article_163957.html, DOI: 10.33899/CSMJ.2008.163957
- 26. Reformulation of the Generalized Curvature by Using Decomposion Technique (with Tahir H. Ismail), J. of Edu. Sci., Vol.21, No.1 (2008), 45-60. https://edusj.mosuljournals.com/article-51295.html, DOI: 10.33899/EDUSJ.2008.51295
- 27. Three Near Points Method for Calculating Generalized Curvature and Torsion (with Tahir H Ismail), J. Edu. Sci., Vol.19, No.4 (2007), 122-131. https://edusj.mosuljournals.com/article_74136.html, DOI: 10.33899/EDUSJ.2007.74136
- 28. On The Generalized Curvature (with Tahir H. Ismail), Raf. J. of Comp. & Math's, Vol.3, No.2 (2006), 83-98. https://csmj.mosuljournals.com/article_164054.html, DOI: 164054.html, DOI: 164054.ht
- 29. On The Generalized Torsion (with Tahir H. Ismail), J. Dohuk Univ., Vol.9, No.2 (2006), 116-122.
- 30. The Curvature of Envelope of a Family of Straight Lines in a Plane (with Tahir H. Ismail) International Congress "NS Methods and Appl. in Mathematics- NSM" 25-31/5/ 2006, Pisa, Italy https://people.dm.unipi.it/nsm2006/, https://people.dm.unipi.it/nsm2006/abstracts.html
- 31. Some Nonstandard Results of Continuous, Monotonic Fun., J. Edu. Sci., Vol.17, No.2 (2005), 80-86. https://edusj.mosuljournals.com/article_81311.html, DOI: 10.33899/EDUSJ.2005.81311

- 32. On Some Nonstandard Asymptotic Approximation of Integrals and Series (with Tahir H. Ismail & Rashad R. Haji), Raf. J. of Comp. & Math's, Vol.2, No.2 (2005), 33-40. https://csmj.mosuljournals.com/article 164081.html, DOI: 10.33899/CSMJ.2005.164081
- 33. The Problem of Optimal Accuracy (with Rashad R. Haji), Zanco Jour. of Pure and Applied Science Salahaddin Univ., Vol.16, No.5 (2004), 65-69.
- 34. A new Type of Infinitesimal in Nonstandard Analysis, Zanco Jour. of Pure and Applied Science Salahaddin Univ., Vol.16, No.1 (2004), 67-71.
- 35. A Nonstandard Approximation Using Taylor Polynomials (with Tahir H. Ismail), Raf. J. of Comp. & Math's, Vol.12, No.21 (2001), 86-93.

Books

- Generalized Curvature and Torsion in Nonstandard Analysis, (Nonstandard Technical Treatment for Some Differential Geometry Concepts), LAP Lambert Academic Publishing (Germany) ISBN 978-3-8443-0763-4, 140 Pag. (Co-author Dr. Tahir H. Ismail), 2011 https://www.lap-publishing.com/catalog/details/store/gb/book/978-3-8443-0763-4/generalized-curvature-and-torsion-in-nonstandard-analysis
- A Characterization of Continuity of βθ and Pθ-Monads in Topology. *Verlag/Publisher: Scholar's Press* (India)*ISBN: 978-3-639-86258-4* (Co-author with Prof. Dr. Tahir H. Ismail & Sami A. Hussein), 2015 https://my.scholars-press.com/catalog/details//store/gb/book/978-3-639-86258-4/a-characterization-of-continuity-of-%CE%B2%CE%B8-and-p%CE%B8-monads-in-topolog

Articles

- The Development Project of the Educational Program in Iraq (In Arabic), Journal of Afaq Al-Terbewiyha, Issued by the Ministry of Education – Iraqi Kurdistan Region, No.3(2004), pp 107-114.
- Some Notes, About The Integration Subject in the Mathematics Book of 6th Secondary School (In Kurdish) Journal of Assoy Parwardayi, Issued by the Ministry of Education Iraqi Kurdistan Region, No.38(2003), pp 58-63.

Conferences and courses attended

Schools

- 1- CIMPA-UNESCO-IPM School, Repres. Theory of Algebras,15-25-6/, 2008. Tehran, Iran.
- 2- Research School CIMPA UNESCO EGYPT, Recent Development in the Theory of Elliptic Partial Differential Equations 25/1-3/2/2009. Alexandria, Egypt.
- 3- CIMPA-KURDISTAN-IRAQ research school, Inverse problems: Theory and applications, University of Salahaddin-Erbil, Kurdistan-Iraq, May 5-14, 2014, http://www.cimpa-icpam.org/spip.php?article564.

Conferences

- 1- International Congress "Nonstandard Methods and Applications in Mathematics- NSM" 25-31/5/ 2006, Pisa, Italy_https://people.dm.unipi.it/nsm2006/
- 2- The Second Conference on Mathematical Sciences (CMS'2008) 22-23/10/2008. Jordan, Zarqa.
- 3- The Second International Conference of Mathematics 26-30/10/2008. Syria, Aleppo.
- **4-** First Iraq-French Mathematics Conference, Cooperation with College of Science 14-18/11/2009. Hawler (Erbil) Kurdistan Region, Iraq.

- 5- The National Conference on Pure and Applied Mathematics and Mathematical Education, Ishik Unviversity (NCPAME2018) 11-12/02/2018. Erbil, Kurdistan Region, http://www.ishik.edu.ig/conf/ncpame/
- 6- 3rd International Conference on Recent Trends in Multi-Disciplinary Research (ICRTMDR-20), 26th 27th December 2020., (Maldives), online, https://icrtmdr.com/
- 7- Celebrating Claude Levesque's, Damien Roy's and Michel Waldschmidt's birthdays Joint with the sixth mini symposium of the Roman Number Theory Association May 16-21, 2022, Marina di San Gregorio, Patù (Lecce), Italy, http://www.rnta.eu/CLDRMW210/participants.html.
- 8- Third International Conference of Mathematics and its Applications (TICMA2022) 29-31/08/2022, https://ticma2022.su.edu.krd/Committee.php/
- 9- 9th Scientific Conference of University of Garmian: Pure Sciences and Technology and Technology Applications (SCUG-PSTA-2022), Oct. 26, 2022College of Education/University of Garmian/Kurdistan region, Iraq, https://psta.garmian.edu.krd/home

Professional memberships

Committees Membership and Positions

- 1993 Present: Member of the Kurdistan Region and Iraq Mathematics Society,
- 2020 Present : Member of the Kurdish Mathematics Society,
- 2000 Present : Member of the Committee of Students Guidance,
- 2000 Present : Member of most Committees in the College of Science,
- 2002 Present : Scientific & Postgraduate Committee of the Mathematics Department,
- 2020 Present: Professional Membership of The Institute for Engineering Research and Publication (IFERP), https://dashboard.iferpmembership.in/index.php
- 2000 2004: Member of College Central Examinations Committee,
- 2002 2004: Department'st Seminar & Training Committee,
- 2007 2008 : External Scientific Evaluator of Some M.Sc Thesises;
 - o 2007 Shadman R. Karim: On Fuzzy B-Sep. Axioms in Fuzzy Top. Fuzzy Spaces, Koya Univ.
 - o 2008 Hero W. Salih: General Liapunov Quantities for the Study Lopsided Sys, Koya Univ.
- 2007 Present : Member of some of an Exam. Committees of M.Sc & Ph.D. Students;
 - o 2007 Farouk A. Mina: Characterizations of Topological Spacesin NSA, Mosul Univ. M.Sc.
 - o 2008 Mahdi H. Shaxi : Approx. Method for Solving SL2DFIE of 2nd Kind, M.Sc.
 - 2010 Chiman M. Qadr: Stability of Bifurcation PS of Tobin Benhabib Sys, Salahaddin Univ. M.Sc
 - 2014 Fateh S. Aziz : On Subordination and superordination of one and multivalued functions, Salahaddin Univ. Ph.D.
 - 2015 Andam A. Mustafa: Computational Methods for Solving Glycolysis System in one Dimension, Salahaddin Univ. M.Sc.
 - 2015 Suham M. Ali: Automatic Continuity of σ-c-derivations on Some Algeb.s, Karkuk Univ. Ph.D.
 - o 2018 Ramadhan A. Muhammad: On Soft Topological Spaces with Some Appl., Duhok Univ. Ph.D.
 - o 2019 Dilan F. Ahmed: Study of Subspace Convex-Cyclic Operators with their Properties and Generalized Drazin Inverse, Univ. of Sulaimani *Ph.D.*
 - o 2020 Fuad W. Khdhr: New multi-step iterative methods for nonlinear problems with some applications, Salahaddin Univ. *Ph.D.*
 - 2022 Darawan Z. Mohammed: Approximation of S-numerical range of polynomial operator matrices,
 Salahaddin Univ. M.Sc.
 - o 2022 Kurda H. Salih: Spectral Value and it's Properties of Operators, Univ of Sulaimani. M.Sc.

- 2007 2012: Coordinator of the Scientific Committee of the Department of Mathematics.
- 2008 2011: Member and Chairman of the College Final Exam. Comm. of Higher Edu. (M.Sc.+Ph.D.),
- 2010 2011: Postgraduate & Scientific Affairs Assistant of the Dean of the College and Member of College Concil,
- 2010 Examiner and Member of Comprehensive Examination Committee of Ph.D. Students in both College of Science and Edu. at University of Salahaddin,
- 2011 External Scientific Evaluator of Mathematics Department for Soran University,
- 2011 2013: Member of the College Scientific Promotion committee.
- 2014 Organizer member of CIMPA-KURDISTAN-IRAQ research school, Inverse problems: Theory and applications, University of Salahaddin-Erbil, Kurdistan-Iraq, May 5-14, 2014, http://www.cimpa-icpam.org/spip.php?article564
- 2015 Reviewer of the journal General Mathematics Notes, Jordan ISSN 2219-7184
- 2016 Reviewer of the journal Annals of Fuzzy Mathematics and Informatic, Korea ISSN 2093-9310
- Scientific Committee member and Session Chair of the National Conference on Pure and Applied Mathematics and Mathematical Education (NCPAME2018) Ishik University 11-12/02/2018. Erbil, Kurdistan Region,, http://www.ishik.edu.iq/conf/ncpame/
- International Advisory Board and Organizer member of "3rd International Conference on Recent Trends in Multi-Disciplinary Research (ICRTMDR-20), organized by Institute for Engineering Research and Publication (IFERP), 26th and 27th December 2020, Maldives, International Conference 2020 | Recent Trends in Multi-Disciplinary Research - IFERP 2020 (icrtmdr.com), International Advisory Committee - ICRTMDR Maldives Conference 2020 , with special message on conf. website
- 2020- Present: Professional Member of Institute for Engineering Research and Publication (IFERP), https://iferp.in/.
- 2020- Present: Mathematics Stack Exchange network, <u>User Ibrahim Othman Hamad Mathematics Stack</u>
 <u>Exchange</u>
- 2021 International Advisory Board and Organizer member of "4rd International Conference on Recent Trends in Multi-Disciplinary Research (ICRTMDR-21), organized by Institute for Engineering Research and Publication (IFERP), 23th and 24th December 2021, Maldives, https://icrtmdr.com/past-conference-report.php
- 2022 Scientific Committee member and Session Chair of the Third International Conference of Mathematics and its Applications (TICMA2022) during 29-31/08/2022, https://ticma2022.su.edu.krd/Committee.php/
- 2023 Organizer committee member of International Conference on Advances in Computer Engineering, Communication Systems and Business Development (ICACECSBD-2023)"-VIRTUAL CONFERENCE on 26th & 27th May, 2023, https://www.icacecsbd.org/Organizing-committee.php

Visiting

- 2011 Institute de Mathematiques de Jussieu Paris, France; for a period one month,
- 2006 (INSPEM), University of Putra Kuala Lumpur, Malaysia, for a period 6 month as a second part of PhD research.

Professional Social Network Accounts:

• Academic. Site: https://academics.su.edu.krd/ibrahim.hamad

• ORCiD ID : <u>https://orcid.org/0000-0002-3994-1866</u>

Google Scholar: https://scholar.google.com/citations?hl=en&user=WPB4LloAAAAJ

Research Gate: https://www.researchgate.net/profile/Ibrahim_Othman_Hamad

in • LinkedIn : https://www.linkedin.com/in/ibrahim-hamad-2b019895/
• Google+ : https://currents.google.com/101246595491615166391

A • Acadimia : https://independent.academia.edu/iothmanhamad

• Arab Faculty St: https://arabscientists.azurewebsites.net/Profile/Index/Ibrahim

• Scopus : https://www.scopus.com/dashboard.uri?origin=&zone=TopNavBar

? • Facebook : https://www.facebook.com/ibrahim.othmanhamad