Prof.Dr.Naji Qatanani
Distinguished Professor

Resume

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Personal Information

- Date of Birth: January 6,1960
- Place of Birth: Habla-Palestine
- Nationality: Palestinian
- Marital Status: Married
- Children: Fares, Aya, Qays, Mohammad and Rua
- Language: Arabic (native), English, and German
- Present address: Deanship of Graduate Studies, An-Najah National University, Nablus, Palestine

Academic Qualifications

1996 **PhD in Applied Mathematics**, *Stuttgart University* , Stuttgart-Germany.
Supervisor: Prof. Dr. Eng. Wolfgang Wendland

1986 **M.Sc Engineering Mathematics**, *University of Newcastle Upon Tyne*, Newcastle-England, U.K. .

1985 **B.Sc (Honors) Electrical and Electronic Engineering**, *Sunderland Polytechnic*, Sunderland-England,U.K.

Employment

2019-present **Distinguished Professor of Applied Mathematics**, *An-Najah University*, Palestine.

2010-2019	**Full Professor of Applied Mathematics**, *An-Najah University*, Palestine.
08–2010	**Promotion to Professor of Applied Mathematics**, *Al-Quds University*, Palestine.
2009–2010	**Associate Professor of Applied Mathematics**, *An-Najah University*, Palestine.
2004–2009	**Associate Professor of Applied Mathematics**, *Al-Quds University*, Jerusalem-Palestine.
1996–2004	**Assistant Professor**, *Al-Quds University*, Jerusalem-Palestine.
1987–1992	**Lecturer**, *College of Science Technology*, Jerusalem-Palestine.

Positions Held

2019-present	**Dean of Graduate Studies**, *An-Najah University*, Palestine.
2015-2019	**Dean of Scientific Research**, *An-Najah University*, Palestine.
2015-present	**Member of Promotional Committee**, *An-Najah University*, Palestine.
2011–2014	**Member of Promotional Committee**, *An-Najah University*, Palestine.
2014–2015	**An Editorial member of An-Najah Journal of Research-A-Natural Sciences**, *An-Najah University*, Palestine.
2013–2014	**Member of the Scientific Research Committee**, *An-Najah University*, Palestine.
2011–2014	**Member of the University Graduate Academic Council**, *An-Najah University*, Palestine.
2011–2013	**Member of the College of Science Council**, *An-Najah University*, Palestine.
2007–2008	**Member of the College of Science and Technology Council**, *Al-Quds University*, Palestine.
2007–2009	**Member of the College of Science Council**, *Al-Quds University*, Palestine.
2004–2005	**Member of the College of Science and Technology Council**, *Al-Quds University*, Palestine.
2004–2005	**Member of the University Graduate Academic Council**, *Al-Quds University*, Palestine.
1997–2002	**Head of the M.Sc Programme in Mathematics**, *Dept.of Mathematics*, Al-Quds University, Palestine.
1999–2001	**Chairman, Dept. of Mathematics**, *Al-Quds University*, Palestine.
1998–2000	**Member of the University Graduate Academic Council**, *Al-Quds University*, Palestine.

A wards

- Selected as one of the best researchers at Al-Quds University,2006
- DAAD Visiting Professor Scholarship, Institute of Mathematics, Clausthal University, June-August 2012
- DAAD Scholarship, Institute of Analysis and Numeric, Magdeburg University, December 2004-February 2005
- Sabbatical leave, Visiting Professor Position, Institute of Analysis and Numeric, Magdeburg University, October 2002-August 2003

- Visiting Professor Scholarship, Institute of Analysis and Numeric, Magdeburg University, July 2000-September 2000
- DAAD Scholarship, Institute of Analysis and Numeric, Magdeburg University, June 1999-August 1999
- DAAD Scholarship (Ph.D), Stuttgart University, April 1992-July 1996

Field of Research Interest

- Research interest in applied mathematics and numerical analysis with emphasis on:
  - Analysis and numeric for integral equations
  - Boundary element method
  - Mathematical and Numerical methods for heat transfer problems
  - Computational methods for mathematical physics problems
  - Monte Carlo method
  - MHD flow problems

Skills

- Computer skills, matlab, mathcad , SPSS, C and C++
  - Strong communications and interpersonal skills.
- Ability to work in teams and independently.
- Self-disciplined with good time-management skills.

Teaching Experience

Courses:

- Graduate Courses: Partial and Ordinary Equations, Numerical Analysis, Functional Analysis, Applied mathematics, Special Topics and Integral Equations
- Undergraduate Courses: Calculus, Ordinary Differential Equations, Applied Mathematics, Partial Differential Equations, Numerical Analysis, Linear Algebra, Functional Analysis, Complex Analysis, Integral Equations, Engineering Mathematics, Special Functions and Vector Analysis

Graduate Students:

- Supervised 35 M.Sc students in the field of applied mathematics and related topics
- Examined many graduate students
- Supervised one Ph.D Student: Adnan Daraghmeh, Thesis title: Model Order Reduction of Linear Control Systems: Comparison of Balance Truncation and Singular Perturbation Approximation with Application to Optimal Control, defended an 18.7.2016

Professional Affiliation

- Member of the "Palestinian Mathematics Society".
- Member of "Jordan Engineers Association"
- Reviewer (referee) for many international journals including"Applied Mathematics and Computation", Elsevier

- Associate Editor of "the International Journal of Engineering Mathematics: Theory and Applications"
- An Editorial Member of the "International Journal of Numerical Analysis and Related Topics"
- An Editorial Member of the "International Journal of Pure and Applied Sciences and Technology "
- An Editorial Member of International Journal of Applied Sciences (IJAS)- CSC Journals
- International Advisory and Editorial Board Member-SWISS JOURNALS.
- An Editorial Member of International Journal of Mathematical Engineering and Science.
- An Editorial Member of Global Engineers and Technologists Review.
- An Editorial Member of The SciTech, Journal of Science and Technology.

Conferences and Workshops

- The Second Palestinian International Conference on Mathematics, Aug.19-22(1998), An-Najah University, Nablus, Palestine.
- Partial Differential Equations and Complex Analysis, Nov.17-19 (1999), Potsdam University, Potsdam, Germany.
- On Operator Algebras and Index Theory on Manifolds with Singularities, Feb. 14-18 (2000), Potsdam University, Potsdam, Germany.
- Applied Mathematics: Modern Aspects of Boundary Element Methods, October 12-16(2001), Stuttgart University, Stuttgart, Germany
- Multigrid Methods, Aug 17-20 (2003), Leipzig University, Leipzig, Germany.
- The 3rd Conference of the Federation of Unions of Palestinian Universities: Quality, Excellence, and Accreditation in Higher Education Institution, (2007), Al-Quds University.
- Effective Teaching Workshop, Oct. 4(2007), Best Eastern Hotel, Ramallah, Palestine
- Assessment of Students Performance Workshop, May 7-8 (2008), Al-Quds University in cooperation with Brandeis University.
- Palestinian Conference on Modern Trends in Mathematics and Physics, July 28-30 (2008), Birzeit University, Palestine.
- Palestinian Conference on Modern Trends in Mathematics and Physics, July (2010), An-Najah University, Palestine.
- Invited Seminar: Asymptotic Error Analysis for The Heat Radiation Integral Equation, 27th June 2012, Clausthal University, Germany.
- Invited Talk: Solving Heat Radiation problem, 23rd Nov. 2013, An Najah university.
- Invited Speaker: The 4th Palestinian Conference on Modern Trends in Mathematics and Physics, Al- Quds University August 1113,2014,
- Organizer for the CIMPA Summer School 2014- An- Najah University 18-28 August 2014.

- Computational Methods in Science and Engineering, An-Najah University 14/3/2014

Publications

Year 2003

1. **N. Qatanani**, Use of the multigrid methods for heat radiation problem, Journal of Applied Mathematics 2003: 6 (2003) 305–317.
2. **N. Qatanani** and I. Barghouthi, On magnetohydordynamic flow through porous media, Far East Journal of Applied Mathematics, Vol. 10(2) (2003), 97 − 124.
3. I. Barghouthi, **N. Qatanani** and F. Allan, Monte Carlo simulation of Boltzmann equation in space plasma at high latitudes, Monte Carlo Methods and Appl. Vol.9, No.3, (2003), 201 − 216.
4. I. Barghouthi, **N. Qatanani** and M. Abu Issa, Toroidal distributions in the polar wind plasma, Indian J.Phys. 77 B (6), (2003), 621 − 624.
5. I. Barghouthi, **N. Qatanani** and M. Abu Issa, Toroidal distributions in the polar wind plasma, Indian J.Phys. 77 B (6), (2003), 621 − 624.
6. I. Barghouthi, E. Elias, M. Abu Samra, **N. Qatanani** and M. Abu Issa, Monte Carlo simulation of O+ behavior in the auroral ionosphere, Journal of the Physical Society of Japan Vol. 72, No. 11, (2003), 3006 − 3013.

Year 2004

7. I. Bargouthi, M. Abu Issa, M. Abu Samra and **N. Qatanani**, H+ - O+ Coulomb collision frequency in the polar wind plasma, An- Najah University. J. Res. (N. Sc.), Vol.18 (1), (2004), 1 − 12.
8. F. Allan, **N. Qatanani**, I. Barghouthi and K. Takatka, Dusty gas model of flow through naturally occurring porous media, Applied Mathematics and Computation 148 (2004), 809 − 821.
9. **N. Qatanani** and M. Schulz, Preconditioned conjugate gradient method for three-dimensional non-convex enclosure geometries with diffuse and grey surfaces, Applied Mathematics and Computation 159 (2004), 797 − 807.
10. **N. Qatanani** and M. Schulz, The heat radiation problem: Three − dimensional analysis for arbitrary enclosure geometries, Journal of Applied Mathematics 2004: 4 (2004), 311 − 330.

Year 2005

11. **N. Qatanani** and I. Barghouthi, Numerical treatment of the two − dimensional heat radiation integral equation. Journal of Computational Analysis and Applications, 7(3) (2005), 319 − 349.
12. **N. Qatanani**, Gas-particulate flow through porous media, European Journal of Scientific Research, Vol. 2, No. 2, (2005), 45 − 59.
13. **N. Qatanani** and K.Salah, Error analysis for the finite element approximation of conductive-radiative model, European Journal of Scientific Research, 11 (2) (2005), 236 − 245.
14. **N. Qatanani**, An analysis of the conductive-radiative heat transfer on nonconvex enclosures, Preprint Nr. 1, Faculty for Math., University Magdeburg (2005).

Year 2006

15. **N. Qatanani** and M. Schulz, Analytical and numerical investigation of the Fredholm integral equation for the heat radiation problem, Applied Mathematics and Computation, 175 (1) (2006), 149 − 170.
16. **N. Qatanani**, Analysis of the heat equation with non-local terms in a nonconvex diffuse and grey surfaces, European Journal of Scientific Research, 15 (2) (2006), 245 − 254.

17. **N. Qatanani** and I. Alzeer, On the fast matrix computation for the heat radiation integral equation, International Journal of Mathematics and Computer Science, 1 (4), (2006), 461 − 472.

Year 2007

18. **N. Qatanani** and I. Alzeer, A new approach for the computation of the visibility function for heat radiation problem. International Journal of Mathematics and Computer Science, 2(1), (2007), 49 − 64.
19. **N. Qatanani** and I. Alzeer, On the applications of the boundary element method and error analysis for three dimensional heat radiation problem, International Journal of Engineering Mathematics (IeJEMTA), Volume 1, 2007, 16 − 30.
20. **N. Qatanani** and I. Alzeer, An efficient numerical solution for a coupled heat conduction and enclosure radiation, International Journal of Engineering Mathematics (IeJEMTA), Volume 2, 2007, 1 − 9.
21. **N. Qatanani**, Qualitative analysis of the radiative energy transfer model, European Journal of Scientific Research, Vol. 17 (3) (2007), 379 − 391.
22. **N. Qatanani**, A. Barham and Q. Heeh, Existence and uniqueness of the coupled conduction − radiation energy transfer on diffuse − gray surfaces, Surveys in Mathematics and its Applications, Vol. 2 (2007), 43 − 58.

Year 2008

23. I. Alzeer and **N. Qatanani**, An efficient algorithm for the computation of response-time bounds for CAN messages, Journal of Engineering, Computing and Architecture, Volume 2, Issue 1, 2008 .
24. I. Alzeer and **N. Qatanani**, Fast solver method for three-dimensional heat radiation problem, Journal of Engineering Mathematics (IeJEMTA), Volume 3, 2008, 57 − 68.
25. I. Alzeer and **N. Qatanani**, Numerical simulation of the steady state heat conduction equation, International Journal of Mathematical Modeling, Simulation and Applications, Volume 2, Issue 1, 2008 .
26. **N. Qatanani** and I. Alzeer, Computational modeling of coupled thermal radiation equations, International Journal of Numerical Analysis and Related Topics (IeJNART), Volume 2, 2008, 1-12.
27. **N. Qatanani** and Q. Heeh, On existence and uniqueness theorem concerning time-dependent heat transfer model, Applications and Applied Mathematics: An International Journal (AAM), Vol. 3, No. 2, December 2008.

Year 2010

28. **N. Qatanani**, Numerical Treatment of Strongly Elliptic Integral Equation , Journal of Vectorial Relativity JVR 5(2010) 63-74.

Year 2012

29. **N. Qatanani** and M. Musmar, The mathematical structure and analysis of MHD flow in porous media, International Journal of Mathematical Engineering and Science, Vol.1, No.2, 2012, 390-402.
30. **N. Qatanani**, A. Barham and M. Musmar, On the analysis of aligned MHD plane flow in porous media in presence of magnetic field, International Journal of Modern Engineering Research(IJMER) Vol.2. No.3, 2012, 10551061.
31. H. Sulieman and **N. Qatanani**, Magnetohydrodynamic Rayleigh problem with Hall effect, International Journal of Modern Engineering Research (IJMER) Vol.2. No.1, 2012, 390-402.

Year 2013

32. **N. Qatanani** and A. Daraghmeh, Asymptotic error analysis for the heat radiation boundary integral equation, European Journal of Mathematical Sciences, Vol.2, No.1, 2013, 51-61.

33. I. Kayid and **N. Qatanani**, Higher order Taylor methods for numerical solution of first order system of IVP., International J. of Math. Sci.and Engg. Appls. (IJMSEA), Vol.7, No.6, 2013, 309-318.

Year 2014

34. N. Rihan and **N. Qatanani**, Computational methods for solving Fredholm integral equation of the second kind, International Journal of Mathematics and Computation, Vol.24, No.3, 2014, 41-50.

35. A. Sa'ad Aldin and **N. Qatanani**, Analytical and numerical methods for solving magnetohydrodynamic flow problem, International J. of Math. Sci. and Engg. Appls. (IJMSEA), Vol.8, No.2, 2014, 313-329.

Year 2015

36. A. Sa'ad Aldin and **N. Qatanani**, Analytical and numerical methods for solving unsteady magnetohydrodynamic flow problem, International J. of Math. Sci. and Engg. Appls. (IJMSEA), Vol.9, No.2, 2015, 307-318.

37. M. Amawi and **N. Qatanani**, Numerical methods for solving fuzzy Fredholm integral equation of the second kind, International Journal of Applied Mathematics, Vol.28, No.3, 2015, 177-195.

Year 2016

38. A. Sa'ad Aldin and **N. Qatanani**, On Unsteady MHD Flow Through Porous Medium Between Two Parallel Flat Plates, An - Najah Univ. J. Res.(N. Sc.) Vol. 30(1), 2016.

39. M.Amawi and **N. Qatanani**, Analytical Methods for Solving Fuzzy Integral Equation of the Second Kind, Accepted for publication in the European Journal of Scientific Research.

40. Muna Amawi and **N. Qatanani**, Analytical Methods for Solving Fuzzy Integral Equation of the Second Kind, Accepted for publication in the Research Journal of Applied Sciences, 11: 1559-1568.

Year 2017

41. J.Hamaydi and **N. Qatanani**, Computational Methods for Solving Linear Fuzzy Volterra Integral Equation, Journal of Applied Mathematics Volume 2017 (2017), Article ID 2417195, 12 pages.

42. A.Sa'adAldin and **N. Qatanani**, Finite Element Solution of an Unsteady MHD Flow through Porous Medium between Two Parallel Flat Plates, Journal of Applied Mathematics Volume 2017 (2017), Article ID 6856470, 6 pages.

Year 2018

43. L.Inearat and **N. Qatanani**, Numerical Methods for Solving Fuzzy Linear Systems, Mathematics MDPI, Volume 6, 2, 1-9, 2018.

44. A.Daraghmeh, **N. Qatanani** and C.Hartmann, Optimal control of linear systems with balanced reduced-order models: Perturbation approximations, Applied Mathematics and Computation, Volume 337, 119-136, 2018.

45. **N. Qatanani** and A.SaádAldin, On The Numerical Treatment of Heat Conduction Problem by Boundary Element and Multigrid Methods ,To appear in An-Najah University Journal for Research - A (Natural Sciences), 2018.

46. A.Daraghmeh and **N. Qatanani**, Error bound for non-zero initial condition using the singular perturbation approximation method, Mathematics MDPI, Volume 6,11, 2018.

47. W.Draidi and **N. Qatanani**, Numerical schemes for solving volterra integral equations with

Carleman kernel, International Journal of Applied Mathematics, Volume 31, 5, 647-669, 2018.

Year 2019

48. A.Daraghmeh, C.Hartmann and **N. Qatanani**, Balanced model reduction of linear systems with nonzero initial conditions: Singular perturbation approximation, Applied Mathematics and Computation, Volume 353, 295-307, 2019.
49. A.Daraghmeh and **N. Qatanani**, Numerical Error Bound of Optimal Control for Homogeneous Linear Systems, Archives of Control Sciences, Volume 29,No. 2,323–337, 2019.
50. S.Hamdan, **N. Qatanani** and A.Daraghmeh, Numerical Techniques for Solving Linear Volterra Fractional Integral Equation, Journal of Applied Mathematics, Volume 2019, Article ID 5678103, 9 pages.
51. **N. Qatanani** and A.SaádAldin, On The Numerical Treatment of Heat Conduction Problem by Boundary Element and Multigrid Methods, An - Najah Univ. J. Res.(N. Sc.) Vol. 33(1), 2019.

Year 2020

52. A.Issa, **N. Qatanani** and A.Daraghmeh, Approximation Techniques for Solving Linear Systems of Volterra Integro-Differential Equations, Journal of Applied Mathematics, Volume 2020, Article ID 2360487, 13 pages.
53. N.Mater,M.Hussein,S.salha,F.Draidi,A.Shaqour,**N. Qatanani** and S.Affouneh, The Effect of The Integration of STEM On Critical Thinking and Technology Acceptance Model, Educational Studies, July 2020.