# Adnan Daraghmeh

Resume

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# Personal Information

- Date of Birth: Feb 20, 1978.
- Place of Birth: Tubas-Palestine
- Nationality: Palestinian
- Marital Status: Married
- o Present address: Department of Mathematics, An-Najah National University

# Academic Qualifications

2013-2016 **PhD of Applied Mathematics-Control Theory and Optimization**, *Department of Mathematics and Computer Science - Freie Universität Berlin*, Berlin-Germany. Thesis Title: Model Order Reduction of Linear Control Systems: Comparison of Balance Truncation and Singular Perturbation Approximation with Application to Optimal Control . Supervisors:

Prof. Dr. Carsten Hartmann, Freie Universität Berlin, BTU Cottbus-Senftenberg, Germany. Prof. Dr. Naji Qatanani, An-Najah National University, Nablus, Palestine.

- 2001-2004 M.Sc of Computational Mathematics, An-Najah National University, Palestine.
- 1996-1999 B.Sc of Mathematics, An-Najah National University, Palestine.

## Employment

- 2016-present Assistant Professor, An-Najah National University, Nablus.
  - 2012–2013 A Full time lecturer , An-Najah National University, Nablus.
  - 2009–2012 A Part time lecturer , An-Najah National University, Nablus.
  - 2008–2009 A Full time lecturer, Al- Quds Open University, Tubas-Palestine.
  - 2005-2008 A Part time lecturer, Al- Quds Open University, Tubas-Palestine.

#### 2000–2008 Teacher, Palestinian Ministry of Education And Higher Education, Tubas-Palestine.

#### **Teaching Experience**

#### Courses:

- Undergraduate Courses: Numerical Analysis, Vector Analysis, Differential Equations, Applied Mathematics, Engineering Mathematics, Calculus, History of Mathematics, Discrete Mathematics, Applied Statistics, Probability.
- o Graduate Courses: Numerical Linear Algebra, Special Topics, Numerical Analysis

#### Master Thesis supervision:

 Supervised over 8 M.Sc students in the field of applied mathematics and related topics

#### Master Thesis committee member:

- I was an internal examiner for:
  - Wala' Mohammad Draidi, Numerical Techniques for Solving Integral Equations with Carleman Kernel. Supervisor: Prof.Dr Naji Qatanani. 2017
  - Aya Basem Saadeh, Numerical Methods for Solving Fractional Differential Equations and their Applications. Supervisor: Prof.Dr Naji Qatanani. 2018

## Field of Research Interest

- Research interest in applied mathematics and numerical analysis with emphasis on:
  - Mathematical Control Theory.
  - Dynamical Programming.
  - Operations Research.
  - Applied Linear Programming.
  - Partial Differential Equations.
  - Integral Equations.

## Certificate of attendance mathematical courses

- I attended the following courses during my PhD studies at Freie Universität Berlin from 11/2013 to 04/2016:
  - Introduction to Mathematical Control Theory (19126, FU Berlin)
  - Numerical Analysis (3236L636, TU Berlin)
  - Numerical Linear Algebra (3236L207, TU Berlin)
  - Numerical Partial Differential Equations (3236L251, TU Berlin)
  - Introduction to Operations Research (0830L040, TU Berlin)
  - Operations Research (108001, FU Berlin)
  - Applied Programming (12652, FU Berlin)

## Conferences and Workshops

- o E-learning course in Arab American University 2005-2006
- Palestinian Conference on Modern Trends in Mathematics and Physics II, August 2-4, 2010, An-Najah University, Nablus, Palestine.

- Fifth Palestinian Conference on Modern Trends in Mathematics and Physics , July  $31^{st}$  August  $2^{nd}$ , 2016, The Arab American University, Jenin, Palestine.
- The  $6^{th}$  Annual Symposium on Education and New Learning Methodolgies Efficient Ecosystems for Industry-Based Learning Models, September 8, 2018, An-Najah University, Nablus, Palestine.
- Symposium on "Simulation based Sciences and Engineering", 7 9 March 2019, Palestine Academy for Science and Technology, Palestine.

#### A wards

 Erasmus Mundus doctoral scholarship (Ph.D), Freie Universität Berlin, Institute of Mathematics and Computer Science, Berlin-Germany, September 2013 –July 2016.

#### Publications

- 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.
- A. Daraghmeh, N.Qatanani and C. Hartmann, Optimal control of linear systems with balanced reduced-order models: Perturbation approximations, Applied Mathematics and Computation 337 (2018) 119–136.
- N.Qatanani, A. Daraghmeh, A.SaadAldin, On The Numerical Simulation of Heat Conduction Problem, EPH - International Journal of Mathematics and Statistics, Vol.4, Issue 5, May 2018.
- **A. Daraghmeh** and N. Qatanani, Error Bound for Non-Zero Initial Condition Using the Singular Perturbation Approximation Method, Mathematics MDPI, Volume 6, 232,1-16, 2018.
- A. Daraghmeh, C. Hartmann and N.Qatanani, Balanced model reduction of linear systems with nonzero initial conditions: Singular perturbation approximation, Applied Mathematics and Computation 353 (2019) 295–307.
- A. Daraghmeh, An Optimal Control For A Homogeneous Linear Dynamical Systems, An Najah Univ. J. Res.(N. Sc.) Vol. 33(1), 2019
- A. Daraghmeh, N. Qatanani ,Numerical error bound of optimal control for homogeneous linear systems, Archives of Control Sciences Volume 29(LXV), 2019 No. 2, pages 323–337
- Safa' Hamdan, N. Qatanani and A. Daraghmeh, Numerical Techniques for Solving Linear Volterra Fractional Integral Equation, Hindawi, Journal of Applied Mathematics, Volume 2019, Article ID 5678103, 9 pages, https://doi.org/10.1155/2019/5678103.
- Ahmad Jalal, N. Qatanani and A. Daraghmeh, Approximation Techniques for Solving Linear Systems of Volterra Integro-Differential Equations, Hindawi, Journal of Applied Mathematics, Volume 2020, Article ID 2360487, 13 pages, https://doi.org/10.1155/2020/2360487.

- L. Ineirat, A. Daraghmeh and N. Qatanani, Iterative Techniques for Solving Positive Triangular Fully Fuzzy Linear System, European Journal of Scientific Research ISSN 1450-216X / 1450-202X Vol. 157 No 4 October, 2020, pp.450 -467.
- **A. Daraghmeh**, N. Qatanani and A.Saadeh, Numerical Solution of Fractional Differential Equations, Applied Mathematics, 2020, 11, 1100-1115.

## **Professional Affiliation**

- o Member of the Palestinian Mathematics Olympiad Committee, 2017-present
- o Reviewer referee for International Mathematical Journals
- 3 Papers for the (MDPI) journal of Applied Sciences in the period 2019–2020.
- 1 Paper for the (MDPI) journal of Applied Sciences in 2019.
- 2 Paper for the International Journal of Robust and Nonlinear Control in 2020.
- 3 Paper for the An-Najah University Journal for Research A (Natural Sciences)
  - o Member of many committees at Department of Mathematics, An-Najah University

### Languages

- Language 1 Arabic: Native
- Language 2 English: Very good
- Language 3 German: Good

## Skills

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

#### References

- Prof.Dr.Carsten Hartmann, Brandenburg University of Technology Cottbus-Senftenberg Brandenburgische, Cottbus-Germany.
- Email:carsten.hartmann@b-tu.de
- Freie Universität Berlin, Institute of Mathematics, Berlin-Germany. Email:chartman@mi.fu-berlin.de
- Prof.Dr.Naji Qatanani, Department of Mathematics, An-Najah National University, Nablus-Palestine.
  - Email: nqatanani@najah.edu