Curriculum Vitae

Suliman Saleh Al-Homidan

1. Personal Data

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2. Education

Ph.D. Optimization (1993)

Dundee University, Scotland, UK.

Advisor: Professor Roger Fletcher

Title of Thesis: Hybrid methods for optimization problems with

positive semi-definite matrix constraints.

M.Sc. Numerical Analysis (1989)

Dundee University, Scotland, UK.

Advisor: Professor David Griffiths

Title of Thesis: On spurious solutions of a quadratically nonlinear

system from reaction diffusion..

B.Sc. Mathematics (1986)

King Saud University, Riyadh, Saudi Arabia.

3. Employment History

2010- Present: Dean College of Sciences

King Fahd University of Petroleum & Minerals,

Saudi Arabia.

2005- 2010: Chairman of the Department of Mathematics and Statistics

King Fahd University of Petroleum & Minerals,

Saudi Arabia.

2003- 2004: Visiting Assistant Professor

Waterloo University, Waterloo, Canada.

2009- Present: Professor

King Fahd University of Petroleum & Minerals,

Saudi Arabia.

2003- 2009: Associate Professor

King Fahd University of Petroleum & Minerals,

Saudi Arabia.

1996- 2003: Assistant Professor

King Fahd University of Petroleum & Minerals,

Saudi Arabia.

1995- 1996: Director Center of Mathematics

King Abdulaziz City for Science and Technology,

Saudi Arabia.

1993- 1996: Assistant Professor

King Saud University, Riyadh, Saudi Arabia.

1986- 1993: *Graduate Assistant*

King Saud University, Riyadh, Saudi Arabia.

4. Teaching

I. Courses taught at KFUPM¹

Undergraduate courses

| No. | Course Title | Course | No. of |
|-----|---|--------|-----------|
| | | No. | Offerings |
| | Prep Year Math Courses | | |
| 1 | Preparatory Mathematics I | 001 | 6 |
| 2 | Preparatory Mathematics II | 002 | 11 |
| 3 | Preparatory Mathematics I for Diploma | 003 | 1 |
| | BS Service Courses | | |
| 4 | Calculus I | 101 | 15 |
| 5 | Calculus II | 102 | 6 |
| 6 | Introduction to Differential Equations and Linear Algebra | 206 | 2 |

¹ Term-wise teaching assignments and evaluation is given in pp. 23.

| 7 | Engineering Mathematics | 302 | 3 |
|----|-------------------------------------|-----|---|
| | Math Service Courses | | |
| 8 | Introduction to Numerical Computing | 321 | 1 |
| 9 | Summer Training | 399 | 1 |
| 10 | Numerical Analysis I | 471 | 1 |
| 11 | Linear and Nonlinear Programming | 480 | 4 |
| 12 | Seminar in Mathematics | 490 | 1 |

Graduate courses

| No. | Course Title | | No. of Offerings |
|-----|-------------------------------------|-----|---------------------|
| 1 | Nonlinear Programming | 582 | 1 |
| 2 | Reading and Research "Optimization" | 595 | 1 |

II. Courses taught at KSU

Undergraduate courses

| No. | Course Title | Course | |
|-----|---------------------------------------|--------|-----------|
| | | No. | Offerings |
| | Prep Year Math Courses | | |
| 1 | Calculus I | 101 | 4 |
| 2 | Calculus I Recitation | 101 | 1 |
| 3 | Calculus II Recitation | 102 | 1 |
| 4 | Calculus for Pharmacy | 109 | 2 |
| 5 | Linear Algebra | 244 | 1 |
| 6 | Numerical Analysis | 245 | 4 |
| 7 | Linear Programming | 456 | 4 |
| 8 | Introduction to Topology (Recitation) | 381 | 1 |
| 9 | Introduction to Basic Language | Comp | 1 |
| | | 206 | |

Graduate courses

| No. | Course Title | Course | No. of |
|-----|--------------|--------|------------------|
| | | No. | Offerings |
| 1 | Optimization | 507 | 1 |

III. Courses taught at Ha'il Community College²

| No | . Course Title | Course | No. of |
|----|----------------------------|--------|-----------|
| | | No. | Offerings |
| 1 | Preparatory Mathematics II | 002 | 2 |

IV. Course development³

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² I was asked to teach at the college during summer 1999.

- 1. MATH 480, Linear and Nonlinear Programming.
- 2. Course assignments for MATH 480.
- 3. Assignments in MATLAB language for MATH 471.
- **4.** Course assignments for MATH 471.
- 5. Course projects for MATH 582.

V. Participation in short courses and workshops

| No. | Title | Organizer | Year |
|-----|---|---------------------|------|
| 1 | Challenges facing KFUPM in Faculty | KFUPM/ | 2008 |
| | Recruiting and Retention | ARAMCO ⁴ | |
| 2 | Planning and Managing e-Learning programs | KFUPM/ | 2008 |
| | in Higher Education | ARAMCO | |
| 3 | Discussion Forum on Faculty Evaluation by | DAD^{5} | 2006 |
| | Students | | |
| 4 | Workshop on KFUPM Strategic Plan Project | DAD | 2006 |
| | "Increasing Enrolment in Graduate Programs" | | |
| 5 | Using Course Design to Create more | DAD | 2006 |
| | Significant Learning Experiences for Students | | |
| 6 | Mathematics in the Preparatory Year | Prep-Year | 2006 |
| 7 | Discussion Forum on Role of Academic | DAD | 2006 |
| | Chairmen in the 21st Century | | |
| 8 | Workshop on Academic Leadership for College | DAD | 2005 |
| | Deans and Chairmen | | |
| 9 | Faculty Annual Evaluation System | DAD | 2004 |
| 10 | Active Learning to Foster Critical Thinking | DAD | 2004 |
| 11 | Overview of faculty practice standards and | DAD | 2003 |
| | campus life at KFUPM | | |
| 12 | Introduction to MATLAB | Math & | 2003 |
| | | Stat | |
| 13 | Introduction to WebCT | DAD | 2002 |
| 14 | Introduction to Problem-Based Learning | DAD | 2002 |
| 15 | Overview of faculty practice standards and | DAD | 2001 |
| | campus life at KFUPM | | |
| 16 | Faculty Evaluation by Students Discussion | DAD | 2000 |
| | Forum | | |
| 17 | Preparing to Striving for Excellence in | KFUPM | 2001 |
| | University Teaching and Learning | | |

VI. Course coordination/exam committee

- 1. MATH 101 (Term 051)
- 2. MATH 260 (Term 002)
- **3.** MATH 302 (Term 981)

³ For more details please see page 24. ⁴ ARAMCO: Saudi Arabian Oil Company ⁵ DAD: Deanship of Academic Development

VII. Courses Home Page

http://faculty.kfupm.edu.sa/MATH/homidan/Cors.htm

VIII. Computational Skills

- Windows and
- Unix operating system,
- Fortran
- Matlab,
- Maple,
- Mathematica,
- Mathcad and
- C Languages

IX. Academic Advisor

Academic advisor of all undergraduate math major students: 001-032

5. Research

Editorial Boards of the following Journals

- 1. Journal of Optimization Theory and Applications
- 2. Journal of Inequalities and Applications
- 3. Special Issue "Equilibrium Problems and Fixed Point Theory" in Fixed Point Theory and Applications

I. Research Interests

My current research interests include:

- Numerical analysis
- Numerical Linear Algebra
- Optimization
- Linear Programming and Non-Linear Programming
- Quasi-Newton Method and SQP methods
- Interior Point Method
- Euclidean Distance Matrix and Educational Testing Problem
- Hankel and Toeplitz Matrices
- Max-Cut Problem and Correlation Matrices
- Nearest Matrix Approximation and Completion Problems
- Signal and Image Processing

II. Publications in Refereed Journals

- 1. **Al-Homidan S.**, *Hybrid Methods For Solving The Educational Testing Problem* Journal of Computational and Applied Mathematics Vol. 91 (1998) pp.31-45. **ISI** (IF⁶: 0.943).
- 2. Sebawe Abdalla M., Ahmed, M.M.A. and **Al-Homidan S.**, *Quantum Statistics Of Three Modes Coupled Oscillators*, Journal of Physics A: Mathematical and General Vol. 31 (1998) pp.3117-3139. **ISI** (IF: 1.680).
- 3. **Al-Homidan S.**, *SQP Algorithms for Solving Toeplitz Matrix Approximation Problem*, Numerical Linear Algebra with Applications, Vol. 9(8) (2002) pp.619-627. **ISI** (IF: 0.696).
- 4. **Al-Homidan S.**, *Toeplitz Matrix Approximation*, Mathematical Sciences Research Journal, Vol. 6(2) (2002) pp.104-111.
- 5. **Al-Homidan S.**, Combined Methods For Approximating Hankel Matrix, WSEAS Transactions on systems, Vol.1 (2002) pp.35-41.
- 6. **Al-Homidan S.**, *Hybrid Methods For Approximating Hankel Matrix*, Numerical Algorithms, Vol. 32 (2003) pp. 57-66. **ISI** (IF: 0.527).
- 7. **Al-Homidan S.** and Wolkowicz H., *Approximate and Exact Completion Problems for Euclidean Distance Matrices using Semidefinite Programming*, Linear Algebra and its Applications, Vol. 406 (2005) pp. 109-141. **ISI** (IF: 0.702).
- 8. **Al-Homidan S.**, *Structured Methods for Solving Hankel Matrix Approximation Problems*, Pacific journal of Optimization, Vol. 1 (2005) pp. 599-609.
- 9. Alshahrani M. and **S. Al-Homidan**, *Mixed Semidefinite And Second-Order Cone Optimization Approach For The Hankel Matrix Approximation Problem*, Nonlinear Dynamics and Systems Theory. Vol. 6(3) (2006) pp. 211-224.
- 10. **Al-Homidan S.** and Fletcher R., *Rationalizing Foot and Ankle Measurements to Conform to a Rigid Body Model*, Computer Methods in Biomechanics and Biomedical, Vol. 9 (2) (2006) pp. 103-111. **ISI** (IF: 0.779).
- 11. **Al-Homidan S.**, Semidefinite and Second Order Cone Optimization Approach for the Toeplitz Matrix Approximation Problem, Journal of Numerical Mathematics, Vol.14(1) (2006) pp.1-15.
- 12. **Al-Homidan S.**, "Solving Hankel Matrix Approximation Problem using Semidefinite Programming, Journal of Computational and Applied Mathematics, Vol. 202(2) (2007) pp. 304-314. **ISI** (IF: 0.943).
- 13. **Al-Homidan S.** and Ansari Q., *Systems of Equilibrium Problems with Lower and Upper Bounds*, Applied Mathematics Letters, Vol. 20(3) (2007) pp. 323-328. **ISI** (IF: 0.699).
- 14. **Al-Homidan S.**, Approximate Toeplitz Problem Using Semidefinite Programming, Journal of Optimization Theory and Applications, Vol. 135(3) (2007) pp. 583-598. **ISI** (IF: 0.688).
- 15. **Al-Homidan S.,** Ansari Q. and Schaible S., *Existence of Solutions of Systems of Generalized Implicit Vector Variational Inequalities*, Journal of Optimization Theory and Applications, Vol. 134(3) (2007) pp. 515-531. **ISI** (IF: 0.688).
- 16. **Al-Homidan S.**, Ansari Q. and Yao J., *Some Generalizations Of Ekeland-Type Variational Principle With Applications To Equilibrium Problems And Fixed Point Theory*, Nonlinear Analysis, Vol. 69(1) (2008) pp. 126-139. **ISI** (IF: 1.232).

⁶ IF: Impact Factor

- 17. **Al-Homidan** S., *Semidefinite Programming for the Educational Testing Problem*, Central European Journal for Operations Research, Vol. 16 (2008) pp. 239-249.
- 18. Ceng L., **Al-Homidan S.**, Ansari Q. and Yao J., *An Iterative Scheme For Equilibrium Problems And Fixed Point Problems Of Strict Pseudo-Contraction Mappings*, Journal of Computational and Applied Mathematics, Vol. 223 (2009) pp. 967-974. **ISI** (IF: 0.943).
- 19. **Al-Homidan S.** and. Alshahrani M., *Positive Definite Hankel Matrices using Cholesky Factorization*. "Computational methods in applied mathematics". Vol. 9 (2009). No. 3 pp.221-225.
- 20. **Al-Homidan S.**, Alshahrani M., Petra C. and Potra F. *Minimal Condition Number for Positive Definite Hankel Matrices using Semidefinite Programming*. Linear Algebra and its Applications, Vol. 433 (2010) pp. 1101-1109.
- 21. **Al-Homidan S.** and Ansari Q., *Generalized Minty Vector Variational-like Inequalities and Vector Optimization Problems*, Journal of Optimization Theory and Applications Vol. 144(3) (2010) pp. 1-11.
- 22. **Al-Homidan S.**, Ansari Q. and Yao J., *Collectively Fixed Point and Maximal Element Theorems inTopological Semilattice Spaces*. To appear Applicable Analysis: An International Journal.
- 23. **Al-Homidan S.** and Ansari Q., *Quasi-Equilibrium Problems with Lower and Upper Bounds in Ordered Topological Spaces.* To appear in Journal of Nonlinear and Convex Analysis
- 24. **Al-Homidan S.** and Ansari Q Fixed Point Theorems on Product Topological Semilattice Space, Generalized bstract Econmies and System of Generalized Vector-Equilibrium Problems,. To appear in Taiwanese Journal of Mathematics
- 25. Lin L., Chuang C. and **S** Al-Homidan, *Ekeland type variational principle with applications to quasi-variational inclusions*. To appear Nonlinear Analysis.
- 26. Jayswal A., Ahmad I. and **Al-Homidan S.**, *Sufficiency and duality for nonsmooth multiobjective programming problems involving generalized* (F,α,ρ,θ) –d–V-univex functions. To appear Mathematical and Computer Modelling.
- 27. I. Ahmad, Z. Husain, **Al-Homidan S.** Second order duality in nondifferentiable fractional programming. To appear Nonlinear Analysis: Real World Applications
- 28. Agarwal R. Ahmad I. and **Al-Homidan S.** Optimality and duality for for nondifferentiable multiobjective programming problems involving generalized $d-\rho$ (η,θ)–d–I-univex functions. Journal of Nonlinear and Convex Analysis
- 29. Ahmad I., **Al-Homidan S.** and Shara S., *Duality for nondifferentiable multiobjective variational problems with generalized Type I functions*. Dynamics of Continuous, Discrete and Impulsive Systems Series A: Mathematical Analysis.
- 30. Suliman Al-Homidan _ Munirah AlQarni, Structure Methods for Solving the Nearest Correlation Matrix Problem
- 31. Lu-Chuan Zeng1, Q.H. Ansari and **Al-Homidan** *Hybrid Proximal-Type Algorithms for Generalized Equilibrium Problems, Maximal Monotone Operators and Relatively Nonexpansive Mappings.* Fixed Point Theory and Applications, vol. 2011, Article ID 973028, 23 pages, 2011.
- 32. Lu-Chuan Ceng, Suliman **Al-Homidan**, and Qamrul Hasan Ansari. *Relaxed Extragradient-like Method for General System of Generalized Nonlinear Mixed*

- Equilibrium Problems and Fixed Point Problems. Fixed Point Theory and Applications
- 33. **Suliman Al-Homidan**. Hankel matrix transforms and operators
- 34. Ahmad I., **Al-Homidan S.** *Sufficiency and duality in nondifferentiable multiobjective programming problems under generalized d–I-univex.* Proceeding of the 2010 Inter. Conf. on Computational and Mathematical Method in Science and Engineering, June 26-30 2010.

Under Preparation

- **Al-Homidan S.**, Alternating Projection Algorithm for Hankel Matrix Approximation.
 - 35. **Al-Homidan S.**, Global Convergence of the Alternating Projection Method for the Max-Cut Relaxation Problem.
 - 36. Alfakih A., **Al-Homidan S.**, Piccialli V., Tweedle D. and Wolkowicz H., *Euclidean Distance Matrices Theory, Algorithms, Applications*.
 - 37. **Al-Homidan S.**, Piccialli V. and Wolkowicz H., *Relations between Approximate and Exact Completion Problems for Euclidean Distance Matrices*.
 - 38. **Al-Homidan S.** and Wolkowicz H., A Robust Semidefinite Programming Algorithm for the Nearest Positive Definite Hankl Matrix.
 - 39. **Al-Homidan S.** and Algarni M., Structured Methods for Solving Correlation Problem.
 - 40. **Al-Homidan S.** and Rapcsak T., On the Singular Value Decomposition in Analytic Hierarchy Process.
 - 41. **Al-Homidan S.**, New Algorithm for Solving the Symmetrizable Positive Definite Matrix Problem.
 - 42. **Al-Homidan S.** and Ansari Q., Fixed Point Theorems on Product Topological Semilattice Spaces, Generalized Abstract Economies and Systems of Generalized Vector Quasi-Equilibrium Problems

III. Chapters in Volumes

43. **Al-Homidan S.** and Fletcher, R. Hybrid methods for finding the nearest Euclidean distance matrix, in *Recent Advances in Nonsmooth Optimization* (Eds. D. Du, L. Qi and R. Womersley), World Scientific Publishing Co. Pte. Ltd., Singapore (1995), pp.1-17.

IV. Conference Publications

- 44. **Al-Homidan, S.** Hybrid Methods for Minimizing Least Distance Functions With Semidefinite Matrix Constraints. Proceedings of NMA'98: : *Recent Advances in Numerical Methods and ApplicationsII*, (1998) pp. 671-678.
- 45. **Al-Homidan, S.** Combined Methods for Toeplitz Matrix Approximation Methods. *Current Trends in Industrial and Applied Mathematics* (Editors P Manchanda P., Ahmad K. and Siddiqi A.) Anamaya Publishers. (2002) pp 69-78.
- 46. **Al-Homidan S.** Numerical Experiments with Toeplitz Matrix Approximation Methods. *Modern Mathematical Models, Methods and Algorithms for Real World System.* (Editors Siddiqi A., Duff I. and Christensen O.). Anamya Publishers, India & UK, (2005) pp. 448-457.

- 47. **Al-Homidan, S.** and Ansari Q. On Vector Optimization Problems and Mintytype Vector Variational-like Inequalities. Abstracts Proceedings of: ICOTA7 The 7th International *Conference* on *Optimization: Techniques and Applications*, Kobe, Japan, (2007) pp.303-304.
- 48. **Al-Homidan, S.** Matrix Nearness Problems. Abstracts Proceedings of: ICOTA7 The 7th International *Conference* on *Optimization: Techniques and Applications*, , Kobe, Japan, (2007) pp.485-486.
- 49. Al-Homidan S., Abu-Sbeih M. and Alassar R.

أهمية ترجمة العلوم الأساسية والمشاكل التي تعترضها. الندوة السادسة للمسؤولين عن تعريب التعليم العالى في الوطن العربي. مسقط، عُمان، ٢٠٠٦، صفحات ١٣٧ – ١٦٣.

V. Books

- 50. **Al-Homidan S.,** Hamed O. and Hemideh H., *Mathematical Basics in Linear Programming*, Arabic Book: الأسس الرياضية في البرمجة الخطية. Edited, reviewed and published by King Saud University. (Adopted for the course MATH 456 "Linear Programming" at the Department of Mathematics, KSU), 2002.
- 51. **Al-Homidan S.** Interior Point Methods for Linear and Nonlinear Programming, Arabic Book: طرق النقطة الداخلية للبرمجة الخطية وغير الخطية. Edited and reviewed by KFUPM and published by Obeikan Publisher. 2008.

VI. Other Publications

52. Al-Homidan S., Abu-Sbeih M. and Alassar R.,

رؤية منهجية حول ترجمة العلوم الأساسية والمشاكل التي تعترضها، الجامعة، العدد ٣٧٥، ٢٠٠٧،

الصفحة السادسة.

VII. Technical Reports

- 53. **Al-Homidan, S.** and Fletcher R., Hybrid Methods for Finding the Nearest Euclidean Distance Matrix. Report NA/157, Dept. of Maths Sciences, University of Dundee, 1995.
- 54. **Al-Homidan, S.**, Hybrid Methods For Solving The Educational Testing Problem. Technical Report No. 216, Dept. of Math & Stat, KFUPM, 1998.
- 55. **Al-Homidan, S.**, Positive Semidefinite Toeplitz Approximation Methods. Technical Report No. 259, Dept. of Math & Stat, KFUPM, 2000.
- 56. **Al-Homidan, S.,** Structured Methods for Solving Hankel Matrix Approximation Problems. Technical Report No. 266, Dept. of Math & Stat, KFUPM, 2001.
- 57. **Al-Homidan, S.** and Alshahrani M., New Formulations of the Hankel Matrix Approximation Problem. Technical Report No. 290, Dept. of Math & Stat, KFUPM, 2003.
- 58. **Al-Homidan S.** and Wolkowicz H., Approximate and exact completion problems for Euclidean distance matrices using semidefinite programming. Technical Report CORR 2004-15, University of Waterloo, Waterloo, Ontario, 2004.
- 59. **Al-Homidan S.** and Alshahrani M., Hankel Matrices using Cholesky Factorization. Technical Report No. 379, Dept. of Math & Stat, KFUPM, 2007.

IX. Research Projects

Completed

- 1. **PI**⁷ of the SABIC and Fast Track Project # FT/2000-04. "Toeplitz and Hankel Matrix Approximation". Funded by KFUPM, 9/2000-5/2002.
- 2. **CI** of the Project #37994. "Installations Model for Gas Ambush, Gas Condensed and Light Oil "Funded Through Research Institute, KFUPM, 2001-03.
- 3. **PI** of the British Council Project. "New Algorithm for Solving the Euclidean Distance Matrix Problem". Funded by the British Council, Summer 2000.
- 4. **PI** of the British Council Project. "New Algorithm for Solving the Symmetrizable Positive Definite Matrix Problem". Funded by the British Council, Summer 2003.
- 5. **PI** of the Fast Track Project # FT/2005-07. "Semi-Definite Programming for the Educational Testing problems". Funded by KFUPM, 9/2005-8/2006.
- 6. **PI** of the DAD Grant for Open Access Initiatives. Funded by KFUPM 3/2008-7-2008.
- 7. **CI** of the Fast Track Project # FT/2005/0. "Ekelands Variational Principles for Equilibrium Problems and their Applications". Funded by KFUPM, 9/2005-3/2007.

In Progress

- 8. **CI** of the Internal Research Project # IN070362. "Iterative methods for solving variational inequalities with applications". Funded by KFUPM, 5/2007 -11/2008.
- 9. **CI** of the SABIC Project #SAB/2006/05. "Ekelands Variational Principles for Equilibrium Problems and their Applications". Funded by KFUPM, 9/2006-8/2007.
- 10. **CI** of the Internal Research Project # IN070357. "Multiobjective Optimization and Vector Variational Inequalities". Funded by KFUPM, 4/2007-9/2008.
- 11. **CI** of the SABIC Project # FT070007. " Vector Quasi Equilibrium Problems and Their Applications ". Funded by KFUPM, 9/2007-8/2008.
- 12. **PI** of the Fast Track Project # FT080013. "Minimal condition Number for Positive Definite Hankel Matrices". Funded by KFUPM, 10/2008-10/2009.
- 13. **CI** of the SABIC Project # SB080004. "Ekelands Variational Principles for Set Values Maps and Generalized Equilibrium Problems". Funded by KFUPM, 9/2008–8/2009.
- 14. PI SB090014 Approximation and Summability by Hankel Matrix From March 01, 2009 to March 01, 2010.
- 15. CI FT090018 Optimality Conditions and Duality for Multiobjective optimization problems with generalized convexity form Sep1, 2009 to August 30 2010.

X. Conference Presentations, Attending and Organizing

1. 13th Biennial Conference on Numerical Analysis, University of Dundee, Scotland, UK, 4th - 7th July 1989.

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⁷ PI: Principal Investigator. CI: Co-Investigator.

- 2. 14th Biennial Conference on Numerical Analysis, University of Dundee, Scotland, UK, 2nd 5th July 1991.
- 3. 15th Biennial Conference on Numerical Analysis, University of Dundee, Scotland, UK, 29th June 2nd July 1993.
- 4. The First Meeting for Saudi Association for Mathematical Science, King Saud University, Riyadh, Saudi Arabia 8th 9th March 1994.
- 5. The Second Meeting for Saudi Association for Mathematical Science, King Saud University, Riyadh, Saudi Arabia, 11th 12th March 1997.
- 6. Workshop on Matrix Theory and Applications, Tuesday, December 16, 1997, KFUPM, Dhahran. **Member of the organizing committee**
- 7. NMA'98: 4th International Conference on Numerical Methods and Applications, August 19 23, 1998, Sofia, BULGARIA. **Paper presented**: *Methods for Minimizing Least Distance Functions with SemiDefinite Matrix Constraints*.
- 8. Workshop on Mathematical Modeling of Flow Through Super K Systems, Sept. 12-14, 1998 ARAMCO, Dhahran.
- 9. Workshop on Industrial System and Control, Nov. 2, 1998, KFUPM, Dhahran.
- 10. The Fourth Meeting for Saudi Association for Mathematical Science, King Saud University, Riyadh, Saudi Arabia, 9th 10th March 1999. **Paper presented**: *The Euclidean Distance Matrices*.
- 11. ONA'99 International Conference on Optimization and Numerical Sep. 26 30, 1999, Nanjing Normal University, Nanjing, China. **Paper presented**: *Toeplitz Matrix Approximation*.
- 12. The Fifth Meeting for Saudi Association for Mathematical Science, King Saud University, Riyadh, Saudi Arabia, 11th 12th April 2000. **Paper presented**: *Alternating projection Algorithm for toeplitz Matrix Approximation*.
- 13. International Conference on Advances in Convex Analysis and Global Optimization in the university of Aegean, Samos, Greece in June 5-9, 2000. **Paper presented**: On Nonlinear Optimization Problem with Semidefinite Toeplitz Constraints.
- 14. First International Conference on Industrial and Applied Mathematical in Indian Subcontinent and Vith Annual Conference of ISIAM, Amritsar, India, January 22-25, 2001.
- 15. Workshop on Professional Ethics: Concepts, Experiences, Obstacles. Tuesday, February 12-13, 2001, KFUPM, Dhahran. **Member of the organizing committee**
- 16. The Sixth International Conference on Approximation and Optimization in the Caribbean in Guatemala at March 25 30, 2001. Paper presented: Hybrid Methods for Approximating Hankel Matrix.
- **17.** The First Saudi Science Conference, KFUPM, Dhahran, 9-11 April 2001. **Session chairman.**
- 18. 2nd WSEAS Multiconference on Applied and Theoretical Mathematics, in Cairns, Australia, 17-21 Dec. 2001.
- 19. The Sixth Meeting for Saudi Association for Mathematical Science, King Saud University, Riyadh, Saudi Arabia, 9th 10th April 2002. Paper presented: Combined Methods For Approximating Hankel Matrix.
- 20. The Fourth ISAAC Congress, York University, Toronto, Canada, August 11-16, 2003.
 - **Paper presented**: New formulations of the Hankel matrix approximation problem.

- 21. Multiscale Optimization Methods and Applications, Florida, USA, February 26-28, 2004. **Paper presented**: Robust Solutions of Large Sparse Semidefinite Programming with Applications to the Nearest Euclidean Distance Matrix Problem.
- 22. McMaster Optimization Day, McMaster University, Hamilton, Canada, May 10, 2004.
- 23. Short Courses on SDP: Theory, Algorithms and Applications, University of Waterloo, Waterloo, Canada, 12 May 2004.
- 24. Large Scale Nonlinear and Semidefinite Programming Workshop, University of Waterloo, Waterloo, Canada, 13-15, May 2004.
- 25. 4th Annual McMaster Optimization Conference: Theory and Applications (MOPTA 04). McMaster University, Hamilton, Canada, July 28-30, 2004.
- 26. Workshop on Introduction to WebCT, KFUPM, Dhahran, Sep 19 28, 2004.
- 27. The Eighth SIAM Conference on Optimization. Stockholm, Sweden. 15-19 May 2005. **Paper presented**: Rationalizing Foot and Ankle Measurements to Conform to a Rigid Body Model.
- 28. The Annual Conference of ANZIAM 2006. AMSI, Mansfield in Victoria Australia. 5-9, February 2006. **Paper presented**: *Projection Method onto Cones with Convex Minimization*.
- 29. The CAIMS -MITACS 2006 Joint Annual Conference, Toronto, Canada, June 15-20, 2006. **Poster presented**: Semidefinite Programming for the Educational Testing Problem.
- 30. Joint Mathematics Meetings, AMS in New Orleans, USA January 5-8, 2007.
- 31. IMA Optimization and Control, Minneapolis, USA, January 16-20, 2007.
- 32. Combinatorics and Optimization 40th Anniversary Conference, Waterloo, Canada, June 18-23, 2007.
- 33. The 7th International Conference on Optimization: Techniques and Applications (ICOTA7) Kobe, Japan, 12-15, December 2007. **Paper presented**: *Matrix Nearness Problems*. **Paper presented**: *On Vector Optimization Problems and Minty-type Vector Variational-like Inequalities*.
- 34. Joint Mathematics Meetings, AMS in San Diego, USA, January 6-9, 2008.
- **35.** Conference on Numerical Analysis and Optimization, Muscat, Oman, April 6-8, 2008. **Paper presented**: *Matrix Nearness Problems*. **Session chairman.**
- 36. The Ninth SIAM Conference on Optimization. Boston, USA. May 10–13, 2008. **Paper presented**: Minimal Condition Number for Positive Definite Hankel Matrices using Semidefinite Programming.
- **37.** Symposium on Global analysis and Probability, Algassim University, May 27-28, 2008. **Invited talk:** Interior Point Method.
- **38.** The Sixth International Conference on Nonlinear Analysis and Convex Analysis (NACA2009), March 27 31, 2009, Tokyo Institute of Technology, Tokyo, Japan.
- **39. 7th** International Conference on Optimization: Optimization and its Applications, Varanasi, **India**, **February 16-18**, 2010 **invited talk: Nearest matrix problem.**
- **40.** Tthe Fourth **Saudi Science Conference**, March 21-24 , 2010, **Taibah** University, Madinah, **Saudi** Arabia.
- **41.** The Third International Joint Conference on Computational Sciences and Optimization (CSO 2010) on May 28-31, 2010 in Huangshan (Yellow) Mountain, Anhui Province, China.

XI. Technical Seminars

- 1. Optimization, University of Dundee, Scotland, 1989.
- 2. Euclidean distance matrix, University of Dundee, Scotland, 1991.
- 3. Educational testing problem, University of Dundee, Scotland, 1992.
- 4. Hybrid methods for finding the nearest Euclidean distance matrix, KSU 1993.
- 5. Hybrid methods for finding the nearest Euclidean distance matrix, KFUPM, 1994
- 6. Combined methods for Toeplitz matrix approximation methods, University of Dundee, U.K., Summer 2000.
- 7. New methods for finding the nearest Euclidean distance matrix, KFUPM 2000.
- 8. Hybrid Methods for Approximating Hankel Matrix, KFUPM 2001.
- 9. Methods for solving the Hankel matrix approximation problem, University of Waterloo, fall 2003.
- 10. Approximate and Exact Completion Problems for Euclidean Distance Matrices, KFUPM, Feb 2005.

XII. Research Supervision

M.Sc. Supervised

- 1. Alshahrani M., *Methods for Solving the Hankel Matrix Approximation Problem*, KFUPM, 2003.
- 2. Algarni M., *Structured Methods for Solving Correlation Problem*, King Faisal University, Dammam, 2008/09.

Ph.D. Thesis Committee

- 3. M.M. Nassar, King Saud University, Riyadh, 2008.
- 4. Bhragasam S. G., Joseph University, Tirchy, India, 2004.

XIII. Visits

- 1. Dundee University, Scotland, Summer 2000.
- 2. Dundee University, Scotland, Summer 2003.
- 3. Waterloo University, Waterloo, Canada, September 2003- Augest 3004.
- 4. Waterloo University, Waterloo, Canada, June, 2006.
- 5. Waterloo University, Waterloo, Canada, June, 2007.
- 6. Purdue University, West Lafayette, USA, January, 2007.
- 7. International Centre for Theoretical Physics, Trieste, Italy, November, 2008.

XV. Membership of Professional Societies

- 1. American Mathematical Society (AMS)
- 2. Society for Industrial and Applied Mathematics (SIAM)

- 3. Saudi Association for Mathematical Sciences (SAMS)
- 4. The Pacific Optimization Research Activity Group (POP)
- 5. Indian Society of Industrial and Applied Mathematics (ISIAM)
- 6. Social Science Research Network (SSRN)
- 7. Academic Keys for Sciences, Who's Who in Sciences Academia