Curriculum VITAE
Farid Alizadeh

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EDUCATION

Ph.D. Computer Science University of Minnesota (October 1991). Dissertation title: *Combinatorial Optimization with Interior Point Methods and Semi-definite Matrices.* Adviser: J.B. Rosen

M.S. Computer Science University of Nebraska–Lincoln (1987). Masters thesis title: *"Affine Transformations of k-Recognizable sets".* Adviser: David Klarner.

B.S. Economics–Mathematics Emphasis University of Wisconsin, Madison (1984)

Postdoctoral Research

NSF postdoctoral associate International Computer Science Institute, University of California at Berkeley, Postdoctoral Advisor: Richard M. Karp (1992-1994)

AWARDS AND FELLOWSHIPS

1. Winner of **2014 INFORMS Optimization Society Farkas Prize**

2. **NSF CAREER:** CCR-9501941

   Date: July 1995-April 1998
   Title: Applications of Convex Programming in Combinatorial Optimization A Mathematical, Algorithmic, and Computational Study

3. NSF Postdoctoral Research Associateship in Computational Science and Engineering Number CDA-9211106

   Co-principal Investigator: Richard M. Karp (UC-Berkeley)
   Date: April 1992-April 1994

4. DIMACS postdoctoral Fellowship, 1992

   Name: DIMACS postdoctoral Fellowship
   Period: Academic year 1992-1993
   Institution: Center for Discrete Mathematics and Theoretical Computer Science (DIMACS), Rutgers-State University of New Jersey

   Note: This fellowship was declined due to conflict with another fellowship

RESEARCH INTERESTS

- Statistical learning theory, in particular, Bayesian methods in classification and regression, working on developing a theory where data is inexact and ambiguous and is presented by an observational probability distribution

- Theory, algorithms and applications of semidefinite programming, second order cone programming, and sum-of-square optimization problems. Particular interest in application areas of shape-constrained statistical learning theory, geometric and shape optimization problems, conic optimization problems with integer constraints, and continuously time varying network flow problems.

CURRENT POSITION

- Visiting Professor, IEOR Department, Columbia University, academic year Fall 2022–Spring 2023(On sabbatical leave from Rutgers)

- Professor, Department of Management Science and Information System, Rutgers Business School, Rutgers University

PAST POSITIONS

- **Fall 2017** Visiting Scholar at Simons Institute for Theoretical Computer Science, University of California, Berkeley, CA

- **Winter and Spring 2015** Visiting Scholar, Department of Management Science and Engineering Economics, Stanford University, Palo Alto, CA (on sabbatical leave from Rutgers) **Host:** Yinyu Ye

- **Fall semester 2014** Adjunct professor at Columbia University, IEOR department (on sabbatical leave from Rutgers)

- **January 2000-December 2000** Visiting Associate Professor, IEOR Department, Columbia University, New York NY (on sabbatical leave from Rutgers)

- **July 1994-June 1998** Assistant Professor, RUTCOR, Rutgers University, Piscataway, NJ

- **May 1992-June 1994** Postdoctoral Associate, ICSI, The University of California, Berkeley CA

- **January 1992-March 1992** Adjunct Professor, Computer Science Department, Stanford University, Stanford CA

PAST RESEARCH ACTIVITIES

1. **2015-2019** With former graduate student Marta Cavaleiro developed and designed simplex-like algorithms for special semidefinite and second order cone programming problems, in particular, we have developed such methods for the problem of minimum ball containing (or intersecting) a number of other balls in d-dimensional space.

2. **2012-2018** With former graduate student Mohammad Ranjbar, on applications of semidefinite programming in time dependent network flow problems and nonnegative polynomial and moment cone optimization

3. **2008-2012** With former graduate student David Papp developed semidefinite representation of sum of squares cones in algebras and applied it to geometric optimization problems.

4. **2007-2011** With former graduate student David Papp developed techniques for multivariate shape constrained regression, density estimation and arrival rate of nonhomogeneous Poisson process.

5. **2007-2010** With former graduate students Nilay Noyan, Gabor Rudolf and David Papp developed the theory of bilinearity rank of cones, and computed it for cones of nonnegative polynomials and related cones.

6. **2005-2007** With colleague Jonathan Eckstein and graduate students Nilay Noyan and Gabor Rudolf investigated use of semidefinite and second order cone programming techniques to the estimation of unknown, smooth arrival rate of nonhomogeneous Poisson process

7. **2000-2004** With former student Yu Xia used the machinery of Euclidean Jordan algebras and extended the so-called Q method for semidefinite programming to general symmetric cones and in particular to second order cone programs

8. **1998-2001** With former student Stefan Schmieta used the machinery of Euclidean Jordan algebras and extended many classes of primal-dual interior point algorithms from semidefinite programming to general symmetric cones and in particular second order cone programming

9. **1993-1997** With Michael Overton of NYU and Jean-Pierre Haeberly of Fordham and former graduate students Stefan Schmieta (Rutgers) and Madhu Nayakkankuppam (New York University) developed a software package for semidefinite and second order programs which was made available as an open source package called SDPpack

10. **1993-1998** With Michael Overton and Jean-Pierre Haeberly developed a class of primal-dual interior point algorithms for semidefinite programming which are widely known as the AHO method and has inspired numerous other research and publications

11. **1993-1997** With Michael Overton and Jean-Pierre Haeberly developed concepts of degeneracy and strict complementarity for semidefinite programming

12. **1992-1994** held a two year NSF postdoctoral position at the International Computer Science Institute, University of California, Berkeley, California under the supervision of Richard M. Karp, and with collaboration with former graduate students Deborah Weisser, Lee Newberg and Geoffrey Zweig developed combinatorial optimization techniques for the problem of physical mapping of chromosomes in molecular biology

13. **1990-1991** With Andrew Goldberg of Stanford University developed and implemented parallel versions of Goldberg's push-relabel maximum flow algorithm on an SIMD architecture, Connection Machine CM–2 in response to DIMACS Implementation Challenge

14. **1989-1991** As a founder of the field of semidefinite programming, developed the basic theory, interior point methods for the problem, studied its duality theory, connections to eigenvalue optimization, and various applications in combinatorial optimization, culminated in my PhD dissertation, this research is considered a pivotal work in development and popularization of semidefinite programming and related topics

TEACHING EXPERIENCE

Computer science/Information Technology:

1. Undergraduate Discrete Mathematics (Nebraska sophomores, Summer 1985 and Rutgers sophomores)

2. Data structures (Nebraska juniors Summer 1986, Rutgers sophomores Fall 1995)

3. Undergraduate Numerical analysis (Nebraska senior, summer 1987)

4. Undergraduate Combinatorial theory (CS-math-OR Stanford senior-grad, Winter 1992)

5. Undergraduate Introduction to Programming (Rutgers freshman, Spring 1995)

6. Undergraduate Probability Theory (Rutgers Sophomores, Fall 1995)

7. Graduate (PhD & Masters/MITA) Algorithms and data structures (Rutgers PhD, Spring 1997, Business MITA PhD and annually Masters and PhD 2013- present)

8. Graduate (PhD) Randomized algorithms (Rutgers PhD seminar RUTCOR and CS, Spring 96 and Fall 97)

9. Undergraduate Introduction to computers and Microsoft Office (Rutgers Business School sophomores, Fall 1998)

10. Graduate (MBA) Object oriented programming with UML and Patterns (Rutgers MBA at MSIS, Fall 1999, Spring 2000)

11. Undergraduate Introduction to object oriented programming (Rutgers MSIS seniors, Fall 2001 and Fall 2004)

12. Graduate (MBA) Computer Technology (Rutgers MBA, Fall 2002, Fall 2003)

13. Graduate (Masters) Software engineering and C++ programming to Masters of Quantitative Finance students (Fall/Spring 2011-2012) and IEOR Masters students at Columbia University (Fall 2014)

14. (Masters & PhD) Algorithmic Machine Learning at the Rutgers MSIS Dept. (From 2017 to present annually)

15. Graduate Masters/MITA/PhD (Spring 2020-2021) Neural Networks and Deep Learning

16. **Capstone project supervision Master of Information Technology students:**

    - character recognition of symbols drawn on a mobile phone, using parametric curve description of each sample, and other features such as pressure, angular momentum, etc. using Tensorflow and Keras to construct deep neural network
    - Use of generative adversarial networks (GAN) to generate lyrics for a particular popular song writer
    - Use of Several learning algorithms, including recurrent and convolutional neural networks in real-time sentiment analysis

Operations Research, Business Analytics, Statistics and Learning Theory

1. (Undergraduates) Linear Programming (Rutgers Math juniors, Spring 1996)

2. (Undergraduates) Integer Programming (Rutgers OR senior Spring 1998, Columbia University IEOR Spring 2001)

3. (Undergraduates) Business Statistics (Rutgers Business juniors, Spring and Fall 99, Fall 2006), Fall/Spring 1999, 2000, 2005, 2006, 2008, 2009, 2014, 2016

4. (MBA) Data Models (Spring 2001, Spring 2004),

5. (Undergraduates) Operations Management (Rutgers Business School juniors Fall 2004, Fall 2008, Spring 2012)

6. (Masters & PhD) Linear Programming Fall 1999, Fall 2000, Fall 2002 , Spring 2013, Fall 2013,

7. (PhD) Nonlinear Programming (Rutgers Business Spring 2003)

8. (MBA) Supply chain logistics management (Rutgers Business School Spring 2004)

9. (PhD) Probability Theory (Rutgers Business School, Fall 2000)

10. (PhD) Stochastic processes (Rutgers Business School, Spring 2005, 2006)

11. (PhD) Linear multivariate statistical models (Rutgers Business School, Spring and Fall 2005, Fall 2006)

12. (PhD) Seminar on semidefinite programming (Rutgers RUTCOR and Columbia IEOR, Spring 1995, Spring 1997, Spring 2000, Fall 2001, Fall 2003, Fall 2007, Fall 2010, Fall 2012, Spring 2019)

13. (Masters & PhD) Masters and PhD level course on applications of operations research to finance (Fall 2008)

14. (Undergraduates) Large Scale Data Science (Business undergraduate Spring 2016-2018)

15. Capstone project supervision of Master of Information Technology student: Network flows for supply chain for Fairway Supermarket Chain Fall 2014,

16. Independent study supervision for Graduate students on positive polynomials (Fall 2007, Spring 2008)

PAST AND CURRENT EXTERNAL GRANTS

1. NSF CAREER: CCR-9501941

   Date: July 1995-April 1998
   Title: Applications of Convex Programming in Combinatorial Optimization A Mathematical, Algorithmic, and Computational Study
   Amount: $135,000
   Co-principal Investigator: none

2. ONR N00014-1-0704

   Date: April 1996 April 1999
   Title: Study of Semidefinite Programming and Related Problems: Theoretical, Algorithmic, and Practical Approaches
   Amount: $225,000
   Co-principal Investigator: none

3. NSF CCR-9901991

   Date: July 1999-April 2002
   Title: Symmetric Cone Optimization: Algorithmic and structural study, Application development
   Amount: $250,000
   Co-principal Investigator: none

4. ONR N00014-03-1-0042

   Date: October 2002-October 2005
   Title: Second Order Cone Programming: New algorithms, Applications to Integer Programming and Combinatorial Optimization
   Amount: $235,000
   Co-principal Investigator: none

5. NSF CCR-0306558

Date: July 2003-July 2006 (extended to July 2007)
Title: *Optimization over Positive Polynomials and Moment Cones: an Algorithmic Study with Applications in Approximation Theory, Regression and Data Visualization*
Amount: $258,592 added for July 2005 to April 2006
Co-principal Investigator: none

6. NSF CMMI-0935305

   Date: July 2009-July 2012 (extended to July 2013)
   Title: *Optimization over Positive Polynomials or Sum-Of-Squares Functions with Applications to Constrained Approximation and Shape Constrained Learning*
   Amount: $325,000
   Co-principal Investigator: none

7. NSF DMS-1623007

   Date March 2016
   Title: *DIMACS Workshop on Distance Geometry: Theory and Applications*
   Amount: $24,000
   Co-Principal Investigator: Leo Liberti (Ecole- Polytechnique) and Tami Carpenter (DIMACS)

PROFESSIONAL ACTIVITIES

1. GRADUATE STUDENT SUPERVISION

   - **Current students:** *Tanay Taludkar* of Rutgers Business School
   - *Marta Cavaleiro* of RUTCOR & Rutgers Business School (Graduation 2020) **Current affiliation:** New Jersey Institute of Technology
   - *Mehdi Ranjbar* of RUTCOR & Rutgers Business School (Graduation May 2018) **Current affiliation:** Data Scientist, Visionet Systems Inc., Princeton, NJ.
   - *David Papp* **Graduation:** 2011, **Current affiliation:** Associate Professor, North Carolina State University.
   - *Gabor Rudolf* **Graduation:** 2009, **last affiliation:** Assistant Professor, Koc University, Istanbul, Turkey. (dceased)
   - *Yu Xia* (**Graduation:** September 2003), **last affiliation:** Assistant Professor, Lakehead University, Thunderbay, Ontario, CA
   - *Stefan Schmieta* of RUTCOR, **Graduation:** August 1999, **Current Affiliation:** Chief Technology Officer, Axioma Inc.;
   - *Reuben Settergren* of RUTCOR, **Graduation:** 1997, **Current affiliation:** BEA Systems, Inc.

2. EDITORIAL DUTIES

   - **Guest Editor Discreet Geometry:** Discrete Applied Math. 2018
   - **Guest Editor Discrete Geometry:** Journal of Global Optimization, 2018

3. Outside Professional Service

- Member of Program Committee, 5$^{\text{th}}$ Applied Probability Conference, Rutgers University, Newark, NJ, 2018
- Member of Program Committee for DIMACS Special Focus on "Bridging the Gap Between Discrete and Continuous Optimization" 2018-2020
- Co-organizer of the DIMACS Workshop on ADMM methods in Optimization July 2018, DIMACS, Piscatawy, NJ
- Invited Long-term Participant for the Simon Institute for Theory of Computing at the University of California–Berkeley, Fall 2017
- Co-Organizer (along with Leo Liberti of Ecole Polytechnique) of DIMACS Workshop on Distance Geometry 2016, Piscataway, NJ
- Invited organizer of three minsymposia at the International Symposium on Mathematical Programming, Pittsburgh, PA, 2015
- Invited tutorial presentation in INFORMS annual meeting October 2006 Pittsburgh, PA
- Cluster chair of Lenoid Khachiyan cluster at International Symposium on Mathematical Programming (ISMP2006) in Rio de Janeiro 2006, organized three sessions and chaired a semi-plenary session at ISMP2006
- Invited tutorial presentation at IMA conference, University of Minnesota, Minneapolis MN, 2003
- Jointly organized a two-part minisymposium in SIAM conference on Optimization, May 1999, on Primal-dual interior point methods for optimization problems on symmetric cones
- Jointly organized a minisymposium in SIAM annual meeting, May 1999, on applications of semidefinite programming in finance, statistics, engineering and discrete optimization
- Refereed or in the process of refereeing articles submitted to professional journals including SIAM J. on Optim., SIAM J. on Control and Optimization, Mathematical Programming, Mathematics of Operations Research, SIAM J. on Discrete Mathematics, Computational Biology, International Journal of Foundation of Computer Science, Discrete Applied Mathematics, and The American Mathematical Monthly, Annals of OR, and FOCS and STOC conferences
- Served on six NSF panels (two involving *Career* proposal only) and refereed several NSF proposals
- Served as referee for government sponsored scientific grant proposals from Israel, Canada, Chile, Germany and Republic of Georgia
- Served as reviewer for tenure and other promotion for for Columbia University (twice), Polytechnique Montral, and Mathematics Department of King Fahd University (Saudi Arabia)

4. Professional Society membership
   member Mathematical Programming Society, SIAM, INFORMS, and American Mathematical Association

5. INVITED LECTURES:

- Carnegie–Mellon University (1992)
- Stanford University (1991 and 1993)
- University of Oregon (1994)
- DIMACS at Rutgers University (1994)
- RUTCOR, Rutgers University (1994)
- New York University (1994)
- Oberwolfach Workshop on Applied and Computational Convexity, Oberwolfach Germany (1995)
- M.I.T. Cambridge (1995),
- Carlton University Ottawa Canada (1995)
- Yale University (1996)
- Cornell University (1996)
- Parametric Optimization and Related Topics V Hayama Japan (1996)
- Princeton University (1995, 1996)
- I.B.M T. J. Watson Labs (1997)
- Columbia University (1997)
- University of Florida–Gainesville, Florida (1998)
- PARAOPT V conference (Tokyo Japan 1997), AT&T Labs (1998)
- HOPT conference in Rotherdam Netherlands (1998)
- University of Triere, Triere Germany (1998)
- University of Notre Dame (2000)
- University of Waterloo, Waterloo Canada (2001)
- MSRI at UC-Berkeley (2002)
- Rice University Houston Texas (2002)
- IMA University of Minnesota (2003)
- Continuous Optimization Workshop Istanbul Turkey(2003)
- V Brazilian Workshop in Continuous Optimization Florianopolis Brazil (2004)
- McMaster University Hamilton Ontario Canada (2004)
- Cowles Foundation Conference on Optimization, Yale University, New Haven, CT (2006)
- Invited Tutorial for INFORMS annual meeting November 2006, Pittsburgh PA (2006)
- IEOR Dept. Lehigh University, Bethlehem, PA (2008)
- IEOR Dept. UC-Berkeley, Berkeley, CA (2011)
- AMS regional meeting, George Washington University, Washington DC, (2012)
- AMS regional meeting, University of Maryland–Baltimore County, Baltimore MD, (2014)

- University of Texas-Austin, IEOR Program, (2014)
- Lehigh University INFORMS Student Chapter Distinguished Lecturer (2014)
- Columbia University IEOR department, (2014)
- Invited presentation at the International Symposium on Mathematical Programming, Pittsburgh, PA, 2015
- Invited Talk at the "Paths, Pivots, and Practice: The Power of Optimization", Montreal, Canada, June 2015
- Invited talk at Princeton Operations Research and Financial Engineering Department, December 2018

RUTGERS PROFESSIONAL ACTIVITIES:

1. Co-Director Master of Information Technology and Analytics Program since Spring 2019

2. Serving in the university Senate (since 2011) and co-chair of Faculty and Personnel Affairs Committee (FPAC) since Fall 2018

3. Member of DIMACS Executive Committee since Fall 2019

4. Member and Chair of MSIS tenure track faculty search committee (2011, 2014, 2018, 2021)

SELECTED PUBLICATIONS AND TECHNICAL REPORTS

1. M. CAVALEIRO AND F. ALIZADEH "A Dual Simplex-Like Algorithm for the Smallest Enclosing Ball of Balls", *Computational Optimization and Applications (COAP)*, Vol 79, pages 767-787, (2021)

2. M. CAVALEIRO AND F. ALIZADEH "A branch-and-bound algorithm for the minimum radius k-enclosing ball problem", *Operations Research Letters*, Vol. 50, Issue 3, pp 274-280, 2022.

3. M. CAVALEIRO AND F. ALIZADEH "An efficient implementation of Dearing and Zeck's dual algorithm for the Euclidean minimum covering ball problem" *Annals of Oper. Research*, 2018.

4. F. ALIZADEH AND Y. XIA "Second-Order Cone Programming for P-Spline Simulation Metamodeling", Technical Report, arXiv:15506.05536, June 2015

5. F. ALIZADEH AND Y. XIA "Simulation Metamodel Estimation With Penalized B-Splines: A Second-Order Cone Programming Approach" in Proceedings of the 2014 Winter Simulation Conference (WSC) 2014, Savannah, GA, pp. 4061-4062.

6. D. PAPP, AND F. ALIZADEH, "Semidefinite characterization of sum of squares cones in algebras" *SIAM J. Optimization* Vol. 23, no. 3, pages 1398-1423, 2014.

7. D. PAPP, AND F. ALIZADEH, " Estimating arrival rate of nonhomogeneous Poisson processes with semidefinite programming ", *Annals of Operations Research*, Vol. 208, no. 1, pages 291-308, 2013.

8. D. PAPP, AND F. ALIZADEH, "Shape constrained estimations using nonnegative splines", *Journal of Computational and graphical Statistics*, Vol. 23 no. 1, 2014 pages 211-231. (On line publication Feb 2012)

9. D. PAPP, AND F. ALIZADEH, *Multivariate arrival rate estimation using semidefinite programming*, In Proceedings of Winter Simulation Conference (WSC) 2011, Phoenix, AZ, pp. 2772 - 2782.

10. F. ALIZADEH, *Formally real Jordan algebras* in *Handbook of semidefinite, conic and polynomial optimization: theory and algorithms* International Series in Operational Research and Management Science. Volume 166, 2012. Springer.

11. G. RUDOLF, N. NOYAN, D. PAPP, AND F. ALIZADEH "Bilinear Optimality Constraints for the Cone of Positive Polynomials and Related Cones", *Math. Programming* 2011 129(5-31).

12. F. ALIZADEH, *Semidefinite and Second Order Cone Programming and Their Application to Shape Constrained Regression and Density Estimation*, INFORMS Tutorials in Operations Research, 2006. pp 37–65.

13. F. ALIZADEH, J. ECKSTEIN, N. NOYAN, AND G. RUDOLF, Arrival Rate Approximation by Nonnegative Cubic Splines *Operations Research*, Vol. 56 no. 1, (2008), pages 140-156.

14. Y. XIA AND F. ALIZADEH "The Q Method for Symmetric Cone Optimization", *Journal of Optimization Theory and Applications*, 149(1), pp. 102-137, 2011.

15. Y. XIA AND F. ALIZADEH "The Q Method for Second-Order Cone Programming", *Computers and Oper. Research*, 35 (2008) 1510-1538.

16. F. ALIZADEH AND D. GOLDFARB "Second Order Cone Programming", *Math. Programming* 95 (2003) 3-51.

17. S. SCHMIETA AND F. ALIZADEH, "Extension of Primal-dual Algorithms to Symmetric Cones", *Math. Programming* 96 (2003)409-438.

18. S. SCHMIETA AND F. ALIZADEH, "Associative and Jordan Algebras, and Polynomial Time Interior-Point Algorithms for Symmetric Cones", *Math. of Oper. Res.* 26(3):543-564, 2001.

19. F. ALIZADEH & YU XIA "The Q method for Second Order Cone Programming, Extended Abstract", In Proceedings of WSES Conference, Cairns, Australia, December 2001.

20. F. ALIZADEH AND S. SCHMIETA, "Symmetric Cones, Potential Reduction Methods and Word-by-Word Extensions", in *Handbook of Semidefinite Programming*, Editors R. Saigal, L. Vandenberghe, and H. Wolkowicz, Kluwer Publications, 2000.

21. F. ALIZADEH, J.P. HAEBERLY AND M.L. OVERTON, "Complementarity and Degeneracy in Semidefinite Programming", *Math. Programming* 77 (1997) 111-128

22. F. ALIZADEH, J.P. HAEBERLY AND M.L. OVERTON, "Primal–Dual interior Point Methods for Semidefinite Programming", *SIAM J. Optim.* V.8 No. 3, pp. 746-768, August 1998

23. I. ADLER AND F. ALIZADEH, "Primal–Dual Interior Point Algorithm for Quadratically Constrained Quadratically Constrained and semidefinite Optimization Problems", RUTCOR rrr report number 46-95, presented at the ISMP 94, Ann Arbor MI, and Park City AMS meeting on complexity of computing with real numbers, 1995

24. F. ALIZADEH, J.-P. HAEBERLY AND M.L. OVERTON, *A New Primal-Dual Interior-Point Method for Semidefinite Programming*, in: Proceedings of Fifth SIAM Conf. on Applied Linear Algebra, Snowbird, Utah, June 1994 (J.G. Lewis, ed.), pp. 113-117 (SIAM, Philadelphia).

25. F. ALIZADEH, R. M. KARP, D. K. WEISSER AND G. ZWEIG, "Physical Mapping of Chromosomes Using Unique Probes", *Computational Biology* 2:2, 159-184.

26. F. ALIZADEH, R. M. KARP, L. A NEWBERG AND D. K. WEISSER, "Physical Mapping of Chromosomes: A Combinatorial Problem in Molecular Biology", *Algorithmica*, (1995)13:52-76.

27. F. ALIZADEH, "Interior Point Methods in Semidefinite Programming with Applications to Combinatorial Optimization", 1995, *SIAM J. on Optimization* (1995)5:13-51

28. F. ALIZADEH, "Combinatorial Optimization with Semi-definite Matrices" in *Proc. of the second Conf. on Integer Programming and Combinatorial Optimization (IPCO)*, Carnegie Mellon University, May 1992.

29. F. ALIZADEH AND A. GOLDBERG, "Experiments with the Push/Relabel method for The Maximum Flow Problem on a Connection Machine", in *Proc. of DIMACS Workshop, Network Flows and Matching: first DIMACS Implementation Challenge*, 1993.

30. F. ALIZADEH, "Optimization Over the Positive Semi-Definite Cone: Interior Point Methods and Combinatorial Applications" in *Advances in Optimization and Parallel Computing*, Honorary volume on the occasion of J.B. Rosen's 70th Birthday.

31. F. ALIZADEH, "A Sublinear-Time Randomized Parallel Algorithm for the Maximum Clique Problem in Perfect Graphs", in *Proc. of the second ACM-SIAM Symposium on Discrete Algorithms (SODA)*, January 1991.