بسمه تعالی

# رزومه[1]

**(۱۳۹۹/۱۱/۱۲)**


## سامان بابایی کفاکی

استاد دانشگاه سمنان - دانشکده ریاضی، آمار و علوم کامپیوتر

آدرس: سمنان- میدان دانشگاه- پردیس شماره ۱ دانشگاه سمنان- دانشکده ریاضی، آمار و علوم کامپیوتر

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## سوابق تحصیلی

**کارشناسی:** دانشگاه مازندران (۸۲-۱۳۷۸)- رشته ریاضی کاربردی- معدل: ۱۸/۰۵

**کارشناسی ارشد:** دانشگاه صنعتی شریف (۸۴-۱۳۸۲)- رشته ریاضی کاربردی- معدل: ۱۸/۸۸ (استاد راهنما: دکتر نظام‌الدین مهدوی امیری)

**دکتری:** دانشگاه صنعتی شریف (۸۹-۱۳۸۴)- رشته ریاضی کاربردی- معدل: ۱۸/۰۵ (استاد راهنما: دکتر نظام‌الدین مهدوی امیری)

**علائق پژوهشی:** بهینه‌سازی عددی- محاسبات ماتریسی-رگرسیون آماری- الگوریتم‌های ابتکاری- برنامه‌ریزی با اعداد صحیح و شبکه‌ها

## اهم سوابق اجرایی

- استادیار دانشگاه سمنان از تاریخ ۱۳۸۹/۷/۳ الی ۱۳۹۴/۴/۴
- دانشیار دانشگاه سمنان از تاریخ ۱۳۹۴/۴/۵ الی ۱۳۹۸/۴/۱۱
- استاد دانشگاه سمنان از تاریخ ۱۳۹۸/۴/۱۲ تا کنون
- پژوهشگر غیرمقیم پژوهشگاه دانش‌های بنیادین (IPM) در سال‌های ۹۳-۱۳۹۰
- رئیس گروه هدایت استعدادهای درخشان دانشگاه سمنان از تاریخ ۱۳۹۳/۱۰/۳ تا کنون

## اهم افتخارات آموزشی و پژوهشی

- دانش‌آموخته رتبه اول دوره کارشناسی
- کسب رتبه دوم در آزمون کارشناسی ارشد رشته ریاضی کاربردی در سال ۱۳۸۲

[1] جزئیات سوابق آموزشی، پژوهشی و اجرایی در رزومه لاتین پیوست آورده شده است.

- دانش‌آموخته رتبه اول دوره کارشناسی ارشد
- پژوهشگر برتر استان سمنان در رشته ریاضی در سال ۱۳۹۵
- پژوهشگر برتر دانشکده ریاضی، آمار و علوم کامپیوتر دانشگاه سمنان در سال‌های ۱۳۹۱، ۱۳۹۳، ۱۳۹۵، ۱۳۹۷ و ۱۳۹۹

## اهم فعالیت‌های پژوهشی

- انتشار ۷۵ مقاله در مجلات علمی-پژوهشی ملی و بین‌المللی
- ارائه ۱۶ مقاله در همایش‌ها و کنفرانس‌های ملی و بین‌المللی
-راهنمایی ۵ دانشجوی دکتری و ۱۲ دانشجوی کارشناسی ارشد در دانشگاه سمنان
- انجام ۲ طرح ملی (با حمایت صندوق حمایت از پژوهشگران و فناوران کشور) و ۱ طرح دانشگاهی
- عضویت در هیات تحریریه مجله علمی-پژوهشی بین‌المللی International Journal of Nanlinear Analysis and Applications

# CURRICULUM VITAE

(5 April 2021)

## Personal Data

### Saman Babaie–Kafaki

| | |
|---|---|
| Date of Birth: | December 29, 1980 |
| Marital Status: | Married, One child |
| Nationality: | Iranian |
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## Previous Positions

- Assistant Professor of Semnan University: September 2010–July 2015
- Non–Resident Researcher of IPM: September 2011–September 2014
- Associate Professor of Semnan University: July 2015–July 2019

## Research Interests

Numerical Optimization, Matrix Computations, Linear Regression, Metaheuristic Algorithms, Image Processing

## Education

- B.Sc.: Applied Mathematics, Mazandaran University, 1999–2003 (Average: 18.05)
- M.Sc.: Applied Mathematics, Sharif University of Technology, 2003–2005 (Average: 18.88)
  Thesis: A Primal–Dual Interior–Point Algorithm for Semidefinite Programming
  Supervisor: Professor Nezam Mahdavi–Amiri

- Ph.D.: Applied Mathematics, Sharif University of Technology, 2005–2010 (Average: 18.03)
  Thesis: New Conjugate Gradient Methods for Unconstrained Optimization
  Supervisor: Professor Nezam Mahdavi–Amiri

## Honors

- The best researcher of the Faculty of Mathematics, Statistics and Computer Science, Semnan University, 2018.
- The best researcher in the field of Mathematics in Semnan Province, 2016.
- The best researcher of the Faculty of Mathematics, Statistics and Computer Science, Semnan University, 2016.
- The best researcher of the Faculty of Mathematics, Statistics and Computer Science, Semnan University, 2014.
- The best researcher of the Faculty of Mathematics, Statistics and Computer Science, Semnan University, 2012.
- Achieved first rank among the M.Sc. alumni of Faculty of Mathematical Sciences, Sharif University of Technology, 2005.
- Earned second country wide rank in the entrance examination out of more than 5000 applicants seeking admission to graduate studies in Applied Mathematics in Iran, 2003.
- Scored first rank among the B.Sc. alumni of Faculty of Mathematical Sciences, Mazandaran University, 2003.

## Grants

- Developing Gradient Based Methods for Optimization, Iranian National Science Foundation (INSF), Grant No. 97022259, 2019.
- Developing Matrix Approaches for Iterative Methods in Unconstrained Optimization, Iranian National Science Foundation (INSF), Grant No. 96013024, 2018.
- New Approaches in Adaptive Trust Region Methods for Solving Large–Scale Unconstrained Optimization Problems, Iranian National Science Foundation (INSF), Grant No. 95849086, 2018.
- Hybrid Approaches for Solving Large–Scale Unconstrained Nonlinear Optimization Problems, Iranian National Science Foundation (INSF), Grant No. 2014537332, 2016.
- Modified Nonlinear Three–Term Conjugate Gradient Methods for Unconstrained Optimization, Institute for Research in Fundamental Sciences (IPM), Grant No. 93650051, 2014–2015.
- Adaptive Nonlinear Conjugate Gradient Methods, Institute for Research in Fundamental Sciences (IPM), Grant No. 91900051, 2012–2013.

- Hybrid Conjugate Gradient Methods, Institute for Research in Fundamental Sciences (IPM), Grant No. 90900023, 2011–2012.
- Talented students grant, Faculty of Mathematical Science, Sharif University of Technology, 2005–2006.

## Lectures

- Modified Optimization Models in Linear Regression, Ferdowsi University of Mashhad, October 2020.
- Recent Approaches in Large–Scale Nonlinear Optimization, Semnan University, April 2015.
- Recent Approaches in Nonlinear Conjugate Gradient Methods, Institute for Research in Fundamental Sciences (IPM), February 2015.

## Teaching Experiences

- Graduate: Advanced Operations Research, Nonlinear Programming, Advanced Mathematical Programming, Numerical Methods for Decision Making, Numerical Linear Algebra, Advanced Linear Programming, Integer Programming.
- Under Graduate: Calculus (1) and (2), Differential Equations, Operations Research (1) and (2), Linear Programming and Network Flows, Nonlinear Programming, Numerical Linear Algebra, Scientific Computing, Numerical Analysis, Mathematical Softwares.

## Professional Experiences

- Administrator of the Office of Talented Students in Semnan University, 2015–2021.
- Member of the scientific committee of the 14th International Conference of Iranian Operations Research Society, Sadjad University of Mashhad, 19–21 October 2021, Mashhad, Iran.
- Editor of the International Journal of Nonlinear Analysis and Applications, 2012–2020.
- Reviewer of Mathematical Reviews (MathSciNet), 2014–2020.
- Member of the scientific committee of the 13th International Conference of Iranian Operations Research Society, Shahrood University of Technology, 6–9 September 2020, Shahrood, Iran.
- Member of the scientific committee of The 10th International Conference of Iranian Operations Research Society, University of Mazandaran, 3–4 May 2017, Babolsar, Iran.
- Member of the scientific committee of The 1th National Conference on Optimization and Decision Sciences, University of Mazandaran, 9–10 March 2016, Babolsar, Iran.
- Member of the scientific committee of The 8th International Conference of Iranian Operations Research Society, Ferdowsi University of Mashhad, 21–22 May 2015, Mashhad, Iran.

- Member of the scientific committee of The 45th Annual Iranian Mathematics Conference, Semnan University, 26–29 August 2014, Semnan, Iran.
- Member of the scientific committee of The 7th International Conference of Iranian Operations Research Society, Semnan University, 14–15 May 2014, Semnan, Iran.
- Member of the scientific committee of the Third Conference of Financial Mathematics and Applications, Semnan University, 30–31 January 2013, Semnan, Iran.
- Member of the Research Council of the Faculty of Mathematics, Statistics and Computer Science of Semnan University, 2011–2014.

## Refereeing Activities

**European** Journal of Operational Research, **Computational** Optimization and Applications, **Optimization** Methods & Software, **4OR**–A Quarterly Journal of Operations Research, **Journal** of Computational and Applied Mathematics, **Optimization**, **Engineering** Optimization, **Numerical** Algorithms, **Pacific** Journal of Optimization, **Journal** of Industrial and Management Optimization, **International** Journal of Computer Mathematics, **Computers** and Mathematics with Applications, **RAIRO**–Operations Research, **Journal** of Inequalities and Applications, **Applied** Mathematics–A Journal of Chinese Universities, **Iranian** Journal of Science and Technology–Transactions A: Science, **Computational** and Applied Mathematics, **Iranian** Journal of Numerical Analysis and Optimization, **Applied** Mathematics and Computation, **Bulletin** of the Iranian Mathematical Society, **Mediterranean** Journal of Mathematics, **Far East** Journal of Mathematical Sciences, **Numerical** Functional Analysis and Optimization, **IEEE** Access, **Applied** Soft Computing, **Ain Shams** Engineering Journal, **Calcolo**, **International** Journal of Computational Methods, **PLOS** One, **Applied** Soft Computing, **Operations** Research Letters, **Optimization** Letters.

## Ph.D. Students Supervised

- Zohre Aminifard: Developing Matrix Approaches for Iterative Methods in Unconstrained Optimization, July 2019.
- Nahid Dorostkar Ahmadi: An optimal model for green–knowledge based product portfolio with emphasis on customer and engineering transaction (Case study: Behran Oil Company), March 2019. (Joint with Dr. Mohsen Shafie Nikabadi as the first supervisor)
- Ali Sorourkhah: Proposing a three–dimensional robustness analysis for using in strategic planning–case study: Saipa Automotive Research and Innovation Center, October 2017. (Joint with Professor Adel Azar as the second supervisor and Dr. Mohsen Shafie Nikabadi as the advisor)
- Saeed Rezaee: Modified Trust Region Algorithms, October 2017.
- Mohammad Reza Arazm: Using Quasi–Newton Equations in Conjugate Gradient Methods, May 2017. (Joint with Dr. Reza Ghanbari as the advisor)

## M.Sc. Students Supervised

1. Saeed Ebrahimi: On a Nonmonotone Trust Region Method for unconstrained Optimization, January 2019.
2. Jalal Vardan: Studying Global Convergence of the BFGS and PRP Methods under a Modified Wolf Line Search, September 2018.
3. Babak Shojae–Shafie: On Some Nonmonotone Trust Region Methods with Simple Quadratic Models, April 2018.
4. Mohammad Hasan Kazemi: On Some Symmetric Rank–One Updates for the Hessian Approximation, July 2017.
5. Amir Hossein Nafei: On Some Proposed Step Lengths for Improving the Gradient Method, July 2017.
6. Nasrin Mirhosseini: On a Nonlinear Conjugate Gradient Method which is Globally Convergent for Nonconvex Functions, July 2016.
7. Hossein Mehdizadeh: A Class of Descent Nonlinear Three–Term Conjugate Gradient Methods Based on Secant Conditions, June 2016.
8. Shayesteh Moradi: Some Descent Modified Fletcher–Reeves Conjugate Gradient Methods, September 2015.
9. Mazaher Bagheri Sabet Khesmakhi: Some Descent Modified Polak–Ribière–Polyak Conjugate Gradient Methods, September 2015.
10. Kolsoum Hosseinpour Saloukolaie: Multistep Nonlinear Conjugate Gradient Methods for Unconstrained Optimization, March 2015.
11. Parisa Abolghasemi: Scaled Conjugate Gradient Algorithms for Unconstrained Optimization, October 2014.
12. Esmaieel Davoudi Nia: A Modified Quasi–Newton Method for Structured Optimization with Partial Information on the Hessian, October 2014.

## Journal Articles

1. Z. Aminifard, S. Babaie–Kafaki and N. Mirhoseini, An accelerated three–term extension of a descent nonlinear conjugate gradient method, **Asia–Pacific Journal of Operational Research**, to appear, 2020.
2. Z. Aminifard, S. Babaie–Kafaki and S. Ghafoori, An augmented memoryless BFGS method based on a modified secant equation with application to compressed sensing, **Applied Numerical Mathematics**, DOI: 10.1016/j.apnum.2021.05.002.
3. Z. Aminifard and S. Babaie–Kafaki, Improving the Dai–Liao parameter choices using a fixed point equation, **Journal of Mathematical Modeling**, DOI: 10.22124/jmm.2021.16900.1466.

4. Z. Aminifard and S. Babaie–Kafaki, An adaptive descent extension of the Polak–Ribière–Polyak conjugate gradient method based on the concept of maximum magnification, **Iranian Journal of Numerical Analysis and Optimization**, DOI: 10.22067/ijnao.2021.67048.0.

5. N. Dorostkar–Ahmadi, M. Shafiei–Nikabadi and S. Babaie–Kafaki, Optimization of knowledge transferring costs in designing product portfolio: a fuzzy binary linear programming model, **VINE Journal of Information and Knowledge Management Systems**, DOI: 10.1108/VJIKMS–02–2020–0019.

6. M. Roozbeh, S. Babaie–Kafaki and Z. Aminifard, Two penalized mixed–integer nonlinear programming approaches to tackle multicollinearity and outliers effects in linear regression models, **Journal of Industrial and Management Optimization**, DOI: 10.3934/jimo.2020128.

7. A. Sorourkhah, S. Babaie–Kafaki, A. Azar and M. Shafiei–Nikabadi, A fuzzy–weighted approach to the problem of selecting the right strategy using the robustness analysis (Case study: Iran Automotive Industry), **Fuzzy Information and Engineering**, 11(1) (2019) 39–53.

8. Z. Aminifard and S. Babaie–Kafaki, Modified spectral conjugate gradient methods based on the quasi–Newton aspects, **Pacific Journal of Optimization**, 16(4) (2020) 581–594.

9. S. Babaie–Kafaki, A modified scaled memoryless symmetric rank–one method, **Bollettino dell Unione Matematica Italiana**, 13 (2020) 369–379.

10. S. Babaie–Kafaki and S. Rezaee, A randomized adaptive trust region line search method, **An International Journal of Optimization and Control: Theories & Applications (IJOCTA)**, 10(2) (2020) 259–263.

11. M. Roozbeh, M. Maanavi and S. Babaie–Kafaki, Robust high–dimensional semiparametric regression using optimized differencing method applied to the vitamin B2 production data, **Iranian Journal of Health Sciences**, 8(2) (2020) 9–22.

12. Z. Aminifard and S. Babaie–Kafaki, A restart scheme for the Dai–Liao conjugate gradient method by ignoring a direction of maximum magnification by the search direction matrix, **RAIRO Operations Research**, 54(4) (2020) 981–991.

13. S. Babaie–Kafaki and Z. Aminifard, Two–parameter scaled memoryless BFGS methods with a nonmonotone choice for the initial step length, **Numerical Algorithms**, 82(3) (2019) 1345–1357.

14. Z. Aminifard and S. Babaie–Kafaki, An optimal parameter choice for the Dai–Liao family of conjugate gradient methods by avoiding a direction of the maximum magnification by the search direction matrix, **4OR–A Quarterly Journal of Operations Research**, 17(3) (2019) 317–330.

15. S. Babaie–Kafaki and S. Rezaee, A randomized nonmonotone adaptive trust region method based on the simulated annealing strategy for unconstrained optimization, **International Journal of Intelligent Computing and Cybernetics**, 12(3) (2019) 389–399.

16. Z. Aminifard and S. Babaie–Kafaki, Matrix analyses on the Dai–Liao conjugate gradient method, **ANZIAM Journal**, 61(2) (2019) 195–203.

17. S. Rezaee and S. Babaie–Kafaki, An adaptive nonmonotone trust region method based on a modified scalar approximation of the Hessian in the successive quadratic subproblems, **RAIRO Operations Research**, 53 (2019) 829–839.

18. Z. Aminifard and S. Babaie–Kafaki, A modified descent Polak–Ribière–Polyak conjugate gradient method with global convergence property for nonconvex functions, **Calcolo**, 56(2) (2019) Article: 16.

19. S. Babaie–Kafaki, A hybrid scaling parameter for the scaled memoryless BFGS method based on the $\ell_\infty$ matrix norm, **International Journal of Computer Mathematics**, 96(8) (2019) 1595–1602.

20. S. Rezaee and S. Babaie–Kafaki, An adaptive nonmonotone trust region algorithm, **Optimization Methods** & **Software**, 34(2) (2019) 264–277.

21. N. Dorostkar–Ahmadi, M. Shafiei–Nikabadi and S. Babaie–Kafaki, Environmental assessment of vehicle lubricants by life cycle assessment approach, **Iranian Journal of Health and Environment**, 11(4) (2019) 547–562.

22. S. Babaie–Kafaki and R. Ghanbari, A linear hybridization of the Hestenes–Stiefel method and the memoryless BFGS technique, **Mediterranean Journal of Mathematics**, 15(3) (2018) Article: 86.

23. S. Rezaee and S. Babaie–Kafaki, An adaptive retrospective trust region method based on a hybridization of the monotone and nonmonotone aspects, **Pacific Journal of Optimization**, 14(4) (2018) 621–633.

24. A. Sorourkhah, S. Babaie–Kafaki, A. Azar and M. Shafiei–Nikabadi, Matrix approach to robustness analysis for strategy selection, **International Journal of Industrial Mathematics**, 10(3) (2018) 261–269.

25. S. Babaie–Kafaki and R. Ghanbari, Two adaptive Dai–Liao nonlinear conjugate gradient methods, **Iranian Journal of Science and Technology–Transactions A: Science**, 42(3) (2018) 1505–1509.

26. A. Sorourkhah, A. Azar, S. Babaie–Kafaki and M. Shafiei–Nikabadi, Using weighted–robustness analysis in strategy selection (Case study: Saipa Automotive Research and Innovation Center (in Persian), **Industrial Management Journal**, 9(4) (2018) 665–690.

27. S. Babaie–Kafaki and S. Rezaee, Two accelerated nonmonotone adaptive trust region line search methods, **Numerical Algorithms**, 78(3) (2018) 911–928.

28. S. Rezaee and S. Babaie–Kafaki, A modified nonmonotone trust region line search method, **Journal of Applied Mathematics and Computing**, 57(1) (2018) 421–436.

29. M. Roozbeh, S. Babaie–Kafaki and A. Naeimi Sadigh, A heuristic approach to combat multicollinearity in least trimmed squares regression analysis, **Applied Mathematical Modelling**, 57 (2018) 105–120.

30. S. Babaie–Kafaki and M.R. Arazm, An extension of a three–term conjugate gradient method based on the objective function values with guaranteeing global convergence without convexity assumption (in Persian), **Journal of Operational Research and its Applications**, 15(1) (2018) 19–28.

31. S. Babaie–Kafaki, A monotone preconditioned gradient method based on a banded tridiagonal inverse Hessian approximation, **UPB Scientific Bulletin–Series A: Applied Mathematics and Physics**, 80(1) (2018) 55–62.

32. S. Babaie–Kafaki and R. Ghanbari, Extensions of the Hestenes–Stiefel and Polak–Ribière–Polyak conjugate gradient methods with sufficient descent property, **Bulletin of the Iranian Mathematical Society**, 43(7) (2017) 2437–2448.

33. M.R. Arazm, S. Babaie–Kafaki and R. Ghanbari, An extended Dai–Liao conjugate gradient method with global convergence for nonconvex functions, **Glasnik Matematicki**, 52(72) (2017) 361–375.

34. S. Babaie–Kafaki and R. Ghanbari, An optimal extension of the Polak–Ribière–Polyak conjugate gradient method, **Numerical Functional Analysis and Optimization**, 38(9) (2017) 1115–1124.

35. S. Babaie–Kafaki and M. Roozbeh, A revised Cholesky decomposition to combat multicollinearity in multiple regression models, **Journal of Statistical Computation and Simulation**, 87(12) (2017) 2291–2297.

36. S. Babaie–Kafaki and R. Ghanbari, A class of adaptive Dai–Liao conjugate gradient methods based on the scaled memoryless BFGS update, **4OR–A Quarterly Journal of Operations Research**, 15(1) (2017) 85–92.

37. S. Babaie–Kafaki and R. Ghanbari, A class of descent four–term extension of the Dai–Liao conjugate gradient method based on the scaled memoryless BFGS update, **Journal of Industrial and Management Optimization**, 13(2) (2017) 649–658.

38. S. Babaie–Kafaki and R. Ghanbari, An adaptive Hager–Zhang conjugate gradient method, **FILOMAT**, 30(14) (2016) 3715–3723.

39. M. Roozbeh, S. Babaie–Kafaki and M. Arashi, A class of biased estimators based on QR decomposition, **Linear Algebra and its Applications**, 508(1) (2016) 190–205.

40. S. Babaie–Kafaki, On optimality of two adaptive choices for the parameter of Dai–Liao method, **Optimization Letters**, 10(8) (2016) 1789–1797.

41. X.L. Dong, H.W. Liu, Y.B. He, S. Babaie–Kafaki and R. Ghanbari, A new three–term conjugate gradient method with descent direction for unconstrained optimization, **Mathematical Modelling and Analysis**, 21(3) (2016) 399–411.

42. S. Babaie–Kafaki and R. Ghanbari, A descent hybrid modification of the Polak–Ribière–Polyak conjugate gradient method, **RAIRO–Operations Research**, 50(3) (2016) 567–574.

43. S. Babaie–Kafaki, Computational approaches in large–scale unconstrained optimization, In: **Big Data Optimization: Recent Developments and Challenges**, A. Emrouznejad (Ed.), Vol. 18, Springer, Switzerland, pp. 391–417, 2016.

44. S. Babaie–Kafaki, R. Ghanbari and N. Mahdavi–Amiri, Hybridizations of genetic algorithms and neighborhood search metaheuristics for fuzzy bus terminal location problems, **Applied Soft Computing**, 46(1) (2016) 220–229.

45. S. Babaie–Kafaki, A modified scaling parameter for the memoryless BFGS updating formula, **Numerical Algorithms**, 72(2) (2016) 425–433.

46. M. Fatemi and S. Babaie–Kafaki, Two extensions of the Dai–Liao method with sufficient descent property based on a penalization scheme, **Bulletin of Computational Applied Mathematics**, 4(1) (2016) 7–19.

47. S. Babaie–Kafaki and R. Ghanbari, Descent symmetrization of the Dai–Liao conjugate gradient method, **Asia–Pacific Journal of Operational Research**, 33(1) (2016) 1650008 (10 pages).

48. M. Roozbeh and S. Babaie–Kafaki, Extended least trimmed squares estimator in semiparametric regression models with correlated errors, **Journal of Statistical Computation and Simulation**, 86(2) (2016) 357–372.

49. S. Babaie–Kafaki and R. Ghanbari, Two optimal Dai–Liao conjugate gradient methods, **Optimization**, 64(11) (2015) 2277–2287.

50. S. Babaie–Kafaki, On optimality of the parameters of self–scaling memoryless quasi–Newton updating formulae, **Journal of Optimization Theory and Applications**, 167(1) (2015) 91–101.

51. S. Babaie–Kafaki and R. Ghanbari, A hybridization of the Polak–Ribière–Polyak and Fletcher–Reeves conjugate gradient methods, **Numerical Algorithms**, 68(3) (2015) 481–495.

52. S. Babaie–Kafaki, A modified three–term conjugate gradient method with sufficient descent property, **Applied Mathematics–A Journal of Chinese Universities**, 30(3) (2015) 263–272.

53. S. Babaie–Kafaki and R. Ghanbari, An extended three–term conjugate gradient method with sufficient descent property, **Miskolc Mathematical Notes**, 16(1) (2015) 45–55.

54. S. Babaie–Kafaki and R. Ghanbari, A hybridization of the Hestenes–Stiefel and Dai–Yuan conjugate gradient methods based on a least–squares approach, **Optimization Methods** & **Software**, 30(4) (2015) 673–681.

55. S. Babaie–Kafaki and R. Ghanbari, A descent extension of the Polak–Ribière–Polyak conjugate gradient method, **Computers and Mathematics with Applications**, 68(12) (2014) 2005–2011.

56. S. Babaie–Kafaki and R. Ghanbari, Two modified three–term conjugate gradient methods with sufficient descent property, **Optimization Letters**, 8(8) (2014) 2285–2297.

57. S. Babaie–Kafaki, An adaptive conjugacy condition and related nonlinear conjugate gradient methods, **International Journal of Computational Methods**, 11(4) (2014) 1350092 (18 pages).

58. S. Babaie–Kafaki, On the sufficient descent condition of the Hager–Zhang conjugate gradient methods, **4OR–A Quarterly Journal of Operations Research**, 12(3) (2014) 285–292.

59. S. Babaie–Kafaki and R. Ghanbari, A modified scaled conjugate gradient method with global convergence for nonconvex functions, **Bulletin of the Belgian Mathematical Society–Simon Stevin**, 21(3) (2014) 465–477.

60. S. Babaie–Kafaki and R. Ghanbari, Two hybrid nonlinear conjugate gradient methods based on a modified secant equation, **Optimization**, 63(7) (2014) 1027–242.

61. S. Babaie–Kafaki, An eigenvalue study on the sufficient descent property of a modified Polak–Ribière–Polyak conjugate gradient method, **Bulletin of the Iranian Mathematical Society**, 40(1) (2014) 235–242.

62. S. Babaie–Kafaki and R. Ghanbari, The Dai–Liao nonlinear conjugate gradient method with optimal parameter choices, **European Journal of Operational Research**, 234(3) (2014) 625–630.

63. S. Babaie–Kafaki and R. Ghanbari, A descent family of Dai–Liao conjugate gradient methods, **Optimization Methods** & **Software**, 29(3) (2014) 583–591.

64. S. Babaie–Kafaki, Two modified scaled nonlinear conjugate gradient methods, **Journal of Computational and Applied Mathematics**, 261(1) (2014) 172–182.

65. S. Babaie–Kafaki, A modified scaled memoryless BFGS preconditioned conjugate gradient method for unconstrained optimization, **4OR–A Quarterly Journal of Operations Research**, 11(4) (2013) 361–374.

66. S. Babaie–Kafaki and M. Fatemi, A modified two–point stepsize gradient algorithm for unconstrained minimization, **Optimization Methods** & **Software**, 28(5) (2013) 1040–1050.

67. S. Babaie–Kafaki, A hybrid conjugate gradient method based on a quadratic relaxation of Dai–Yuan hybrid conjugate gradient parameter, **Optimization**, 62(7) (2013) 929–941.

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