

Curriculum Vitae

Prof. Dr. Gholamreza Nakhaeizadeh



Born April 29. 1948 in Mashhad, Iran.

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Education

1. 1970: **BSc Mathematics**, University of Mashhad, Mashhad, Iran
2. 1975: **MSc Statistics**, Institute of Statistics and Informatics, Tehran, Iran
3. 1984: **PhD Economics** University of Karlsruhe, Germany, Promoter prof. Dr. Rudolf Henn, Co-Promoter Prof. Dr. Wolfgang Eichorn, title of the thesis: Test of Permanent Income Hypothesis by using Bayesian Statistics (in German)
4. 1989 **Habilitation** (Postdoctoral Thesis), University of Karlsruhe, Germany, Promoter prof. Dr. Rudolf Henn; Co-Promoters: Prof. Dr. Alfons Steiner and Prof. Dr. Martin Rutsch, title: New Classical and Keynesian Models; Theoretical Analysing and Empirical Comparison (in German)

Positions:

1. 1972-1974: **Teacher of Mathematics** at the "School of Metallurgy" associated to Iranian National Steel corporation Isfahan, Iran
2. 1974-1978: **Producer of Mathematical Programmes** at Educational Television, associated to National Iranian Television, Tehran, Iran
3. 1978-1989: **Research Fellow and Scientific Collaborator** at University of Karlsruhe, School of Economics. In this period he worked on two projects promoted by the "German Research Foundation" dealing with the application of bayesian statistics to consumption theory, as well as, with evaluation of different neu classical and keynesian models.
4. 1989-1997: **Senior Scientist** at Research Center of DaimlerChrysler AG in Ulm, Germany research fields: Machine Learning and Data Mining. In this period he was Director of the Project "StatLog" (Evaluation of Machine Learning Algorithms) promoted by the European community in collaboration with several companies and universities from different european countries . He has directed also the DaimlerChrysler internal corporate financed project "Data Mining Using Machine Learning". This project was concerned with the development, evaluation and application of various Data Mining procedures. Different Data Mining solutions in the areas such as "warranty planning and - revision", "Data Quality Mining", and "Credit Scoring" were realized within this project. In addition to these activities, the Data Mining research group of DaimlerChrysler AG was considerably involved in the project "CRISP-DM" (Cross Industry Standard Process for Data Mining) promoted by

the European community for development of a processing concept for Data Mining. CRISP DM is considered today as standard, world-wide.

5. 1997-2006: **Leader of the Research Department "Data Mining Solutions"** at Research Center of DaimlerChrysler AG in Ulm, Germany , responsible for more than 40 staff members including team leaders, research fellows, scientific collaborators , graduate and post graduate students working on different internal research projects of DaimlerChrysler. Under his leadership, the Research Department "Data Mining Solution" at DaimlerChrysler AG has been focussing on Data Mining and Text Mining methods to provide advanced, complex decision and product support systems in the fields like "Quality Management", "Customer Relationship Management", and "Credit Risk Management". Topics like Neural networks, symbolic Machine Learning, Case-Based Reasoning, Computational Statistics and Optimization as well as Information Filtering and Information Retrieval have been on the list of the core technologies that are applied, adapted, or developed by the department. Aside internal research projects at DaimlerChrysler AG, the department has been involved over the past years under his leadership in various successful european projects like INRECA II (Information and Knowledge Reengineering for Reasoning from Cases), METAL (A Meta-Learning Assistant in Machine Learning and Data Mining), and INFOMAN (aimed to advance the state-of-the-art in Enterprise Information Management Systems) as well as in several Networks of Excellence like MLNet I (Machine Learning Network of Excellence) ,MLNET II and KNet (Knowledge Discovery Network of Excellence).
6. Since 1995 : **APL-Professor for Economics and Econometrics** at School of Economic, University of Karlsruhe, Germany. He has been initiator and Co-chair of 9 international workshops on Machine Learning, Data Mining and Applied Econometrics. He is author of 3 monographs and about 35 refereed papers and co-editor of 8 books and Proceedings. Besides the contribution talks, he has given invited talks and tutorials, in Machine Learning and Data Mining in different conferences and universities in Austria, France, Germany, Iran, Italy, Portugal, Spain, Switzerland, Turkey, UK and USA.

Main Research themes

- Data mining
- Machine Learning
- Data Quality Mining
- Data Mining in Business and Banking
- Data Mining in Quality Management

Teaching

- Data Mining
- Descriptive Statistics
- Inductive Statistics
- Econometrics
- Time Series Analysis
- Sampling Theory
- Macro and Micro Economics
- Linear Programming

Ph.D. theses supervised (content mostly in German)

1. Anders, Ulrich; University of Karlsruhe „Statistical neural networks “
2. Dübon, Karl; University of Karlsruhe „Machine learning procedures for the treatment of rating risks in cellular phones business - theoretical aspects and empirical comparison “

3. Eggert, Wilm; University of Karlsruhe „Demand modelling and - forecasting for the support of the long-term marketing by the example of the German automotive industry“.
4. Jafar Shaghghi, Fariba; University of Karlsruhe „Machine learning, neural networks and statistical learning procedures for the classification and prediction “
5. Rauscher, Folke; University of Karlsruhe „Hybrid forecasting methods for exchange rate analysis: Combination possibilities of multivariate cointegration, neural networks and multi-task Learning “
6. Steurer, Elmar; University of Karlsruhe „Econometrics methods and machine learning procedures for exchange rate forecasting :Theoretical analysis and empirical comparison “.
7. Zhang, Jian; University of Karlsruhe „Quantitative modelling regarding the chances and risks of the Chinese commercial vehicle market “.

Selected contributions to other Ph.D. Theses (content mostly in German)

1. Bartlmae, Kai; University of Jena „KDD Experience Factory for Credit Scoring “
2. Borth, Michael; University of Ulm „Knowledge extraction from Bayesian Networks“ **(Co-Promoter)**
3. Diekmann, Christian; University of Karlsruhe „ Portfolio Risk in Automotive Finance“
4. Gersten, Wendy; University of Jena „Target group selection for direct marketing campaigns “ **(Co-Promoter)**
5. Hener, Alexander; University of Ingolstadt „Credit Risk Management in the Automotive Industry,“ **(Co-Promoter)**
6. Köpf, Christian; University of Ulm „ Meta-Learning: Strategies, implementations and evaluations for algorithms selection“ **(Co-Promoter)**
7. Lanquillon, Carsten; University of Magdeburg „Enhancing text classification to improve information filtering “**(Co-Promoter)**
8. Lindner Guido; University of Karlsruhe „Algorithm selection in KDD-process “**(Co-Promoter)**
9. Maier, Thilo; University of Ingolstadt „ Modeling ETL for web usage analysis and further improvements of the web usage analysis process“ **(Co-Promoter)**
10. Martin, Bernhard; University of Karlsruhe „Stable distributions in Credit Risk management “
11. Ohl, Stefan; University of Karlsruhe „ Sales forecasting and planning of variant-rich products by the example of the automotive industry “
12. Reinartz, Thomas; University of Kaiserslautern „Focusing solutions for Data Mining: Experimental results and analytical studies in real world domains “ **(Co-Promoter)**
13. Rostami, Nasrin; Universiuty of Karlsruhe „Development of energy and emmission , control strategies for Iran,“ **(Co-Promoter)**

14. Stützele, Eric; University of Karlsruhe „Development of a forecasting concept using conditioned multivariate probability distribution; Applications from the automotive industry “
15. Wingenroth, Thorsten; University of Ingolstadt „Risk management for investment of grades of Corporate bond, modelling of spreads risk in portfolio management “ **(Co-Promoter)**

Membership of Programme Committees (selected)

1. Co-Chair of the Workshop: Machine Learning and Statistics, in conjunction with the European Conference On Machine Learning , April 1994 Catania, Italy
2. Co-Chair of the Workshop: Statistics, Machine Learning and Knowledge Discovery in Databases, April 1995, Heraklion, Greece
3. The 5th International Workshop on Parallel Applications in Statistics and Economics PASE 95), August 1995. Trier-mainz, Germany
4. The 13. European Meetings on Cybernetics and Systems Research (EMCSR 96), April 1996 Vienna, Austria
5. The 9th European Conference on Machine Learning ,ECML 97, April 1997, Prague, Czech Republic
6. Co-Chair of the Workshop: Learning in dynamically changing domains: Theory Revision and Context dependence issues. April 1997, Prague, Czech Republic
7. Co-Chair of the Workshop: Data Mining in Finance, in conjunction with: 4th International Conference on Knowledge Discovery and Data Mining , Aug 1998 New York, NY, USA
8. The 10th European Conference on Machine Learning (ECML 98) April 1998, Chemnitz, Germany
9. Co-Chair of the Workshop: Application of Machine Learning and Data Mining in Finance, April 1998, Chemnitz, Germany
10. The IX International Symposium of Applied Stochastic Models and Data Analysis - ASMDA-99, June 1999, Lisbon, Portugal
11. The 6th International Workshop Fuzzy-Neuro Systems '99, March 1999 Leipzig, Germany
12. The ICML'99 Workshop: From Machine Learning to Knowledge Discovery in Databases; International Conference on Machine Learning, June 1999, Bled, Slovenia
13. The 11th European Conference on Machine Learning, ECML-2000, May 2000, Barcelona, Spain
14. Area Chair of The Eighteenth International Conference on Machine Learning ,ICML-2001, June 2001, Williams College, Massachusetts, USA
15. The Second International Workshop on Multimedia Data Mining, MDM/KDD2001, August 2001, San Francisco, USA
16. The Third International Workshop on Multimedia Data Mining, MDM/KDD2002, July 2002, Edmonton, Canada

17. The 5th International Symposium on Intelligent Data Analysis, IDA 2003, August 2003, Berlin, Germany
18. Industrial Chair of the Fourth IEEE International Conference on Data Mining, ICDM 04, November 2004, Brighton, UK
19. The Nineteenth National Conference on Artificial Intelligence, AAAI-04, July 2004, San Jose, USA
20. The 15th European Conference on Machine Learning (ECML) and the 8th European Conference on Principles and Practice of Knowledge Discovery in Databases ECML/PKDD 2004, September 2004, Pisa, Italy
21. The ECML /PKDD 2006 Workshop on Practical Data Mining: Applications, Experiences and Challenges, September 2006, Berlin, Germany

Selected Publications

1. Gholamreza Nakhaeizadeh: Is Consideration of Background Knowledge in Data Driven Solutions Possible at All? (Abstract only) p 30, ECCBR, 2006
2. Jürgen Franke, Gholamreza Nakhaeizadeh, Ingrid Renz (Eds.): Text Mining, Theoretical Aspects and Applications, Physica-Verlag, 2003
3. Credit Risk: Measurement, Evaluation and Management. Georg Bol, Gholamreza Nakhaeizadeh, Svetlozar T. Rachev, and Thomas Ridder (Eds.), 2003
4. Edgar Hotz, Udo Grimmer, Gholamreza Nakhaeizadeh: Some Recent KDD-Applications at DaimlerChrysler AG. GI Jahrestagung, 805-810, 2002
5. Jochen Hipp, Ulrich Güntzer, Gholamreza Nakhaeizadeh: Data Mining of Association Rules and the Process of Knowledge Discovery in Databases. Industrial Conference on Data Mining 2002: 15-36
6. Jochen Hipp, Christoph Mangold, Ulrich Güntzer, Gholamreza Nakhaeizadeh: Efficient Rule Retrieval and Postponed Restrict Operations for Association Rule Mining. PAKDD 2002: 52-65
7. Edgar Hotz, Udo Grimmer, W. Heuser, Gholamreza Nakhaeizadeh, M. Wieczorek: REVI-MINER, a KDD-environment for deviation detection and analysis of warranty and goodwill cost statements in automotive industry. KDD 2001: 432-437
8. Jochen Hipp, Ulrich Güntzer, Gholamreza Nakhaeizadeh: Mining Association Rules: Deriving a Superior Algorithm by Analyzing Today's Approaches. PKDD 2000: 159-168
9. Jochen Hipp, Ulrich Güntzer, Gholamreza Nakhaeizadeh: Algorithms for Association Rule Mining - A General Survey and Comparison. SIGKDD Explorations 2(1): 58-64 (2000)
10. Katja Gelbrich and Reza Nakhaeizadeh: Value Miner: A Data Mining Environment for the Calculation of the Customer Lifetime Value with Application to the Automotive Industry ; Machine Learning: ECML 2000, 11th European Conference on Machine Learning, Barcelona, Catalonia, Spain, May 31 - June 2, 2000, Proceedings, Lecture Notes in Artificial Intelligence, Vol. 1810, pp. 154-161, Springer, 2000

11. Datamining und Computational Finance. Georg Bol, Gholamreza Nakhaeizadeh, und Karl-Heinz Vollmer (Eds.), Physica-Verlag Heidelberg, 2000
12. H. Kauderer, Gholamreza Nakhaeizadeh, F. Artilles, H. Jeromin: Optimization of Collection Efforts in Automobile Financing - a KDD Supported Environment. KDD 1999: 414-416
13. Edgar Hotz, Gholamreza Nakhaeizadeh, B. Petzsche, H. Spiegelberger: WAPS, a Data Mining Support Environment for the Planning of Warranty and Goodwill Costs in the Automobile Industry. KDD 1999: 417-419
14. Gholamreza Nakhaeizadeh, Alexander Schnabl: Towards the Personalization of Algorithms Evaluation in Data Mining. KDD 1998: 289-293
15. Gholamreza Nakhaeizadeh, Charles Taylor, Carsten Lanquillon: Evaluating Usefulness for Dynamic Classification. KDD 1998: 87-93
16. Risk Measurement, Econometrics and Neural Networks. Selected Articles of the 6th Econometric-Workshop in Karlsruhe, Germany; Georg Bol, Gholamreza Nakhaeizadeh, and Karl-Heinz Vollmer (Eds.); Physica-Verlag Heidelberg, 1998
17. Data Mining: Theoretische Aspekte und Anwendungen (Beiträge zur Wirtschaftsinformatik). Gholamreza Nakhaeizadeh, Physica-Verlag, Heidelberg, 1998
18. Charles Taylor, Gholamreza Nakhaeizadeh: Learning in Dynamically Changing Domains: Theory Revision and Context Dependence Issues. ECML 1997: 353-360
19. Nakhaeizadeh, G., Taylor, CC, (eds.) Machine Learning and Statistics. The Interface. Wiley-Interscience 1997
20. Gholamreza Nakhaeizadeh, Alexander Schnabl: Development of Multi-Criteria Metrics for Evaluation of Data Mining Algorithms. KDD 1997: 37-42
21. K. Bartlmae, S. Gutjahr, and G. Nakhaeizadeh. Incorporating prior knowledge about financial markets through neural multitask learning. In Proceedings of the Fifth International Conference on Neural Networks in the Capital Markets, 1997
22. Kauderer, H. and G. Nakhaeizadeh: The effect of alternate scaling approaches on the performances of different supervised learning algorithms. an empirical study in the case of credit scoring. In Proceedings of AAAI-97 Workshop on AI Approaches to Fraud Detection & Risk Management, pp. 39-42. AAAI Press. 1997
23. Georg Bol, Gholamreza Nakhaeizadeh, und Karl-Heinz Vollmer (Eds.) Finanzmarktanalyse und -prognose mit innovativen quantitativen Verfahren. Heidelberg, Physica-Verlag, 1996
24. Gholamreza Nakhaeizadeh: CBR gleich KNN! KI 10(1): 36-37 (1996)
25. G. Nakhaeizadeh and C. C. Taylor and G. Kunisch :Dynamic Aspects of Statistical Classification. Working Notes of the AAAI-96 Workshop on Intelligent Adaptive Agents, August 1996
26. Nakhaeizadeh, G. "What Daimler-Benz Has Learned as an Industrial Partner from the Machine Learning Project StatLog?", Proc. of the Workshop on Applying Machine Learning in Practice, 22-26, (1995)
27. Kodratoff, Y., Nakhaeizadeh, G., Taylor, C., (eds.) ECML'95, Workshop Notes: Statistics, Machine Learning and Knowledge Discovery in Databases, Heraklion, Greece, 1995

28. Ulrich Knoll, Gholamreza Nakhaeizadeh, Birgit Tausend: Cost-Sensitive Pruning of Decision Trees. ECML 1994: 383-386
29. Nakhaeizadeh, G. "Interaction between machine learning and statistics, an overview" (abstract only), Machine Learning and Statistics Workshop of the ECML-94 (European Conference on Machine Learning), pp. 1-3, (1994)
30. Jurgen Graf, Gholamreza Nakhaeizadeh : Application of Learning Algorithms to Predicting Stock Prices in: Plantamura, V.L. et al. : Frontier Decision Support Concept.. pp.241ff, John Wiley, 1994
31. Jurgen Graf, Gholamreza Nakhaeizadeh: Credit Scoring Based on Neural and Machine Learning, Plantamura, V.L. et al. : Frontier Decision Support Concept.. p.183ff, John Wiley, 1994
32. Gholamreza Nakhaeizadeh: Learning Prediction of Time Series - A Theoretical and Empirical Comparison of CBR with some other Approaches. EWCBR, 65-76, 1993
33. Gholamreza Nakhaeizadeh, und Karl H. Vollmer (Eds.): Finanzmarktanwendungen neuronaler Netze und ökonomischer Verfahren, Heidelberg, Physica Verlag, 1993
34. Dieter Fensel, Gholamreza Nakhaeizadeh: Maschinelles Lernen: Theoretische Ansätze und Anwendungsaspekte. KI, 186-192, 1993
35. Gholamreza Nakhaeizadeh und Karl H. Vollmer (Eds.): Anwendungsaspekte von Prognoseverfahren. Beiträge zum 2. Karlsruher Ökonometrie- Workshop, Heidelberg, Physica Verlag 1992
36. Georg Bol, Gholamreza Nakhaeizadeh, und Karl H. Vollmer (eds.): Ökonometrie und Monetärer Sektor. Ergebnisse des 3. Karlsruher Ökonometrie- Workshops, Heidelberg, Physica Verlag ,1992
37. Gholamreza Nakhaeizadeh, Werner Mellis: Esprit-Projekt StatLog: Evaluierung statistischer und logischer maschineller Lernalgorithmen anhand realer Anwendungen. KI 5(1): 36-39, 1991
38. Gholamreza Nakhaeizadeh und Karl H. Vollmer (Eds.) Neuere Entwicklungen in der Angewandten Ökonometrie. Beiträge zum 1. Karlsruher Ökonometrie- Workshop , Heidelberg, Physica Verlag , 1990
39. Gholamreza Nakhaeizadeh: Neuklassische und Keynesianische Modelle : theoretische Analyse und empirischer Vergleich; Berlin : Springer Verlag, 1989
40. Henn, Rudolf; Nakhaeizadeh, Gholamreza : Neuere Entwicklungen in der Geldnachfrage. In: Jahrbuch für Nationalökonomie und Statistik, 395-406, 1989
41. Henn, R. und Nakhaeizadeh; G; : Vergleich verschiedener Versionen der permanenten Einkommenshypothese unter der Annahme adaptiver und rationaler Erwartungen, in: Franz W, Gaab, W; und Wolters, J. (Eds.) : Theoretische und Angewandte Wirtschaftsforschung, 155-165, Springer-Verlag 1988
42. Karmann, A. und Nakhaeizadeh, G.: Erwartungsbildung und aggregierter Konsum-Einkommens-Prozeß. Eine klassische und Bayessche Analyse für die Bundesrepublik Deutschland, in: Jahrbücher für Nationalökonomie und Statistik, Bd. 204, pp. 120-139. 1988
43. Karmann, A; Ketterer, K. H; und Nakhaeizadeh, G. : Zu den Beziehung zwischen Geldmenge und Gesamtnachfrage: Ergebnisse einer „Kausalitäts“-Untersuchung für die

Bundes Republik Deutschland. In: Opitz, O. und Rauhut, B. (Eds.) Ökonomie und Mathematik, 1987

44. Karmann, A; Kischka, P. und Nakhaeizadeh, G. : Export und Innovation - eine Kausalanalyse für die Bundesrepublik Deutschland, in: R. Henn (Hrsg.), Technologie, Wachstum und Beschäftigung, Heidelberg, pp. 424-432, 1987
45. Nakhaeizadeh, Gholamreza: The Effects of various treatments of truncation remainders in the estimation of the consumption function, a bayesian approach, Bulletin of Economic Research 38, 119-136, 1986
46. Gholamreza Nakhaeizade: Überprüfung der permanenten Einkommenshypothese mit Hilfe der Bayes Statistik. Athenäum, Königstein, 1985