



## Curriculum Vitae

**ALI ZEINAL-HAMADANI, Ph.D**

PROFESSOR

DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING

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### **Education:**

#### **Academic Qualifications**

- 1980** Ph.D. in Industrial Technology with emphasis on Quality Control and reliability Modeling.  
University of Bradford, Bradford, England.  
**Thesis:** Availability and Reliability Modeling
- 1977** M.Sc in applied Statistics with emphasis on Design and Analysis of Experiments  
University of Sussex, Brighton, England.
- 1975** B.Sc. in statistics and Computer Science.  
Collage of Statistics and Informatics, Tehran, Iran

## **Awards**

Selected as a distinguished teaching professor by Isfahan University of Technology  
(1990 and 2014)

Selected as a distinguished Statistics professor by Iranian Statistical society

## **Professional Qualifications**

- 1984** Certificate in Data Analysis, Methods and Software  
CIMPA, Nice, France
- 1988** Certificate in the Use of Statistical Methods in Earthquake  
prediction .ICTP, Italy.
- 1990** Diploma in Advanced Studies on Reliability Engineering.  
ASRE, Budapest, Hungary

## **Research Interests:**

Applied Statistics.  
Statistical Quality Control.  
Reliability and Availability Modeling of Complex System.  
Dependency and Reliability Analysis.  
Regression analysis  
Design and Analysis of Experiments (DOE)  
Data Mining

## **Academic Experience:**

The University of Bradford, England (1987-1980)  
Isfahan University of Technology, Iran (1981-...)  
Swinburne University of Technology, Melbourne, Australia ( 1991-1992)  
Qatar University , Qatar (2003)  
City University, London UK (2010-2011)

## **Courses Taught:**

Probability and its Applications, Probability Theory, Queuing Theory, Statistical Methods Mathematical Statistics, Engineering Statistics, Advanced Bio-statistics, Advanced Statistical Methods, Multivariate Statistics, Design of Experiments, Quality Control, Statistical Quality Control, Total Quality Management, Quality and Productivity, Acceptance Sampling, the theory of Reliability, Applied Reliability Analysis, Statistics for business, Design and Analysis of Experiments, Econometrics, Discrete Multivariate Data Analysis,

## **Consultation Experience:**

- 1990-92** Department of Quality Control, steel Industry of Isfahan, (Designing Quality System)
- 1992-95** Department of Quality and Productivity, shahid Ghandi Cable Industry of Yazd, (Design and Establishing Quality Systems)
- 1995-99** Department of Quality Assurance, Polyacril Factory Isfahan (Decision Making in Evaluating the Quality of products)
- 1996-...** Department of Research and Development, Mobarekeh steel Industry, (Using proper Statistical Methods in their Research)
- 1996-2000** Plans and Budget Organization of Isfahan, (strategic Planning for year 1400 in Isfahan)
- 1997-2001.** Ministry of Agriculture, (Statistical Data Analysis)
- 2002-2003** Azar Unburnable Tile Company (Quality Control)

## **Books:**

- Hamadani, A.Z.**, Beating Competition through Quality (in Farsi), Mani Press, Isfahan, 1995
- Hamadani, A.Z.** Parsian. A, A First Course in Probability (in Farsi), Shikh Bahaei press, Isfahan, 1996 (sixth edition 2003)
- Hamadni, A.Z.**, Ebrahimian, F., Yaghobzadeh, H. Knowledge discovery from data, An introduction to Data Mining. (In Farsi) , Isfahan University of Technology Press.(2014)

## **Publications:**

- Hamadani**, A.Z., Sensor Reliability Assessment, Technical Report, University of Bradford, England. (1978)
- Hamadani**, A.Z., Analysis of Repair times of Shipboard Equipments (1 and 2), Technical Report, University of Bradford, England (1979).
- Hamadani**, A.Z., Approximate Confidence limits for Reliability of Series System, Technical Report, university of Bradford, England (1980) .
- Hamadani**, A.Z., William Feller and Probability in 20<sup>th</sup> century (in Farsi) Payke-Riazi, Isfahan University of Technology, Iran (1986).
- Hamadani**, A.Z., Central limit theorem in years 1935 (in Farsi) Payke- Riazi, Isfahan University of Technology, Iran (1987).
- Hamadani**, A.Z., Availability Function and its Evaluation (in Farsi) Journal of Farhang & Andisheh, Mathematical Society of Iran.
- Hamadani**, A.Z., Shayan, E., Transient Behavior of System with Perpetual operation-Repair Cycles, Australian Society of OR. Bulletin Vol. 11, No. 2 June 1992.
- Shayan, E., **Hamadani**, A.Z., Education Portfolio in Industrial Engineering, Industrial Engineer vol. 33. No.2 June 1992.
- Hamadani**, A.Z., Pirsalehi, M., Risk and its Relation to the Return Rates in Iranian Stock Market. (In Farsi), Journal of Planning and development. Vol. 9, No.2, 1994.
- Hamadani**, A.Z., Shayan, E., Analysis of Effects of Dependency of Repair time on Operating time, Proceeding of AEMC 94, Melbourne Australia, 1994.
- Hamadani**, A.Z., the rule of statistics in Reliability Engineering (in Farsi) Proceeding of the 2<sup>nd</sup> Statistics Conference, Iran, 1994.
- Hamadani**, A.Z., Dependency and its Effect on Reliability Modeling (in Farsi), Proceeding of the Farsi Maintainability Conference Iran, 1994.
- Hamadani**, A.Z., Descriptive Statistics, Notes for an in-service course, (in Farsi), Iranian Mathematical Proceedings of the workshop on Math .Education 26<sup>th</sup> Conference, 1995.
- Hamadani**, A.Z., Parsian. A., Panel Discussion on how to teach Statistics (in Farsi) proceeding of the Workshop on Math education, 1995.
- Hamadani**, A.Z., Bivariate Distributions Useful in Reliability Analysis (in English) Iranian Mathematical Society, Bulletin, Vol. 21, No. 2. 1995.
- Hamadani**, A.Z., some Suggestions or Popularizing Statistics in Iran (in Farsi) Iranian Statistical Society Newsletter No. 15. 1997.

**Hamadani**, A.Z., and. Shayan, E., Approximate Confidence Limits for the reliability of series system. Proceeding of the Sixth International Applied statistics in Industry Conference (1998).

Rejali, A. and **Hamadani** A.Z. Statistical Analysis on a GRE-Type competition, Mathematics competitions vol. 12 No. 1 (1999).

**Hamadani**, A.Z., Reliability Analysis of stoppage time data in Mobarakeh steel industry, proceeding of the 2<sup>nd</sup> steel Symposium, Ahvaz Iran. (1999).

**Hamadani**, A.Z., The Effect of TQM on Quality systems, proceeding of 3<sup>rd</sup> steel symposium, Isfahan, Iran.(2001)

**Hamadani**, A.Z. and Khajehpoor, R. The effect of environment factors on the yield of crops, Project report (2002)

**Hamadani**,A.Z. , Parsian, A. ....The plan for collection of data about the Energy consumption of end-users in Iran. Project report (2002)

Tavanai,H , **Hamadani**,A,Z. and Valizadeh,M. Colour Yield in Two Phase Wet Fixation Dyeing of Cotton Cloth .....Iranian Polymer Journal Vol. 12 No. 6 (2003)

**Hamadani**,A,Z , Parsian,A. .... The plan for collection of data about the Energy consumption of end-users in Iran. Project Report, Isfahan University of Technology (2004)

**Hamadani**,A.Z. , Rejali ,A. ... The plan for collection of data about the consumption of bread in Iran. Project Report, Isfahan University of Technology (2005)

**Hamadani**,A,Z and Alimoradi, S. ... The package of SPC for Tandom Mil production line of Fold Mobarekeh. Project Report, Isfahan University of Technology (2006)

Tavanai,H,**Hamadani**,A,Z and Askari,M Modeling colour yield for selected reactive dyes in ... Iranian Polymer Journal Vol 15 , No. 3 (2006)

**Hamadani**,A.Z., Khademolghorani, S. ,and Saraei,M. H. New Parsimonious segmentation with combining logistic regression and decision trees : an application to industrial steel data. Proceeding of 37<sup>th</sup> conference on computers and industrial engineering (CIE2007)

Nasrabadi A.N **Hamadani**, A.Z. and. The Effect of dependency on the MRL function of redundant systems. Proceedings of the IEEM 2007

Shishebori ,D. and **Hamadani**, A.Z. The Effect of Gauge Measurement Errors on Multivariate Process Capability , Proceeding of The Third World Conference on Production and Operations Management, Tokyo 2008

Shishebori D. and **Hamadani**, A.Z. Multivariate Capability Index (MCP) with presence of Gauge Measurement Errors , WICOM 2008

Mohamadi, H , Fadaei,A , **Hamadani, A.Z.** and Mohamadi ,A , Experimental investigation of Surface roughness in cylindrical wire electro discharge machining , International Manufacturing Science and Engineering Conference, 2008

Mohamadi, H , Fadaei,A , **Hamadani, A.Z.** and Mohamadi ,A, Investigation of material removal rate of aisi D3 tool steel in cylindrical wire EDM , The 2008 International Conference on Advances in Materials and Processing Technology

Batani , N. **Hamadani,A.Z.** , Hejazi,R.T. , Joint Statistical design of triple sampling X-Bar and S charts , 9<sup>th</sup> Asia Pasific Industrial Engineering & Management Systems Conference (APIEMS 2008)

Batani, N. **Hamadani,A.Z.** Computation of the probability of a process being in control at the third stage for the TS X Chart, International Journal of Production Research Vol. 47, No. 24 December 2009 , (7069-7073)

Shishebori ,D. **Hamadani,A.Z.** , The effect of Gauge Measurement Capability on MCp and its statistical properties, International Journal of Quality and Reliability Management Vol. 26, 2009

Shishebori D. and **Hamadani, A.Z.** , the study of multivariate capability indices with respect to gauge measurement capability and dependency measure of process variables, International Conference on Quality , Productivity and Performance measurement (ICQPPM'09), Malaysia, 2009

Esmaeili Rad, E.,**Hamadani,A.Z.** and Saraei,H. The application of Data mining for increasing the effectiveness measure of power plants, The first National conference on Power plants industry, Tehran , Iran, 2009 (in Persian)

**Hamadani, A.Z.**, Esmaeili, K., Abdolahi, S. Project time management as a critical risk for S.T.P.C.Project, 5<sup>th</sup> international conference on project management, Tehran , Iran, 2009

Ghasemi, Z. Hamadani, A.Z. et al The application of Data mining in prediction of mechanical properties of Galvanizes Steel, The 7<sup>th</sup> international conference in industrial Engineering, Isfahan, Iran, 2010 ( In Persian)

Hatami, R. **Hamadani. A.Z.**, et al Optimal maintenance Strategy based on Reliability for High Voltage Keys in Power plants, The 7<sup>th</sup> international conference in IndustrialEngineering, Isfahan, Iran, 2010 ( In Persian)

Zavareh,M. **Hamadani,A.Z.**, Tavanai,H. Application of Central Composite Design (CCD) to model the color yield of six diazo direct dyes on cotton fabric, Journal of the Textile Institute Volume 101, Issue 12, 2010

Shishebori D. and **Hamadani, A.Z.** Properties of multivariate process capability in the presence of gauge measurement errors and dependency measure of process variables, Journal of Manufacturing Systems Volume 29, Issue 1, 2010, Pages 10-18

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Jahanbani Fard, M. Hejazi, R. **Hamadani, A.Z.** One-unit repairable systems with active and standby redundancy and fuzzy , 2nd International Conference on production & Industrial Engineering C PIE , India , 2010

**Hamadani, A.Z.** , Jahanbani Fard, M. Product Reliability Prediction Model Based on Bayesian Approach 7<sup>th</sup> IMA International Conference on Modeling in Industrial Maintenance and Reliability, UK, 2011

Nosoohi I. and **Hamadani, A.Z.**, Urban Planning with the aid of Factor Analysis Approach: The case of Isfahan Municipality, *Theoretical and Empirical Researches in Urban Management*, , vol. 6, issue 1, pages 56-69 2011

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Khashei, M. **Hamadani, A.Z.** Mehdi Bijari , A Fuzzy intelligent approach to the classification problem in gene expression data analysis, Knowledge-Based Systems Vol. 27 pages 465-474 , 2012

**Hamadani, A.Z.** , Abouei Ardakan, M, Rezvan, M.T. Honarmandian, M.M., Location, allocation problem for intra-transportation system in a big company by using meta heuristic algorithm, Socio-Economic planning Sciences Vol. 47 pages 309-317 (2013)

Rezvan, M.T., **Hamadani, A.Z.**, Shalbazadeh, A. Case- based reasoning for classification in the mixed data sets employing the compound distance methods, Engineering Applications of Artificial Intelligence, Vol 26, Pages 2001-2009 (2013)

Khademolqurani, S. **Hamadani, A.Z.**, An adjusted decision support system through Data Mining and Multiple Criteria Decision Making. Procida, Social and Behavioral Sciences, Vol. 73 Pages 388-395 (2013)

**Hamadani, A.Z.** , Shalbazadeh, A. Rezvan, M.T. Shahlaei Moghadam, A. An integrated Genetic-based Model of Naïve Bayes Networks for Credit Scoring, Vol. 4, pages 85-103 (2013)

**Hamadani, A.Z.** Akbarzadeh Khorshidi, H. System reliability optimization using time value of money. International Journal of Manufacturing Technology, Vol. 66 pages 97-106 (2013)

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Rezvan, M.T., **Hamadani, A.Z.** , Hejazi, R. , An Exact feature Selection algorithm based on rough theory. Complexity, Vol. 7 pages 50-63 (2014)

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Abouei Ardakan, M. **Hamadani, A.Z.** Reliability – redundancy allocation problem with cold redundancy strategy, Simulation Modeling Practice and Theory, Vol. 42 , pages 107-118 (2014)

**Hamadani, A.Z.** Zolfaghari, H. Abouei Ardakan, M. Bi-Objective redundancy allocation problem for a system with mixed repairable and non-repairable components. ISA Transactions , Vol. 53, pages 17-24 (2014)

Safari, F. Nasiri Mofakham, F. **Hamadani, A.Z.**, DOPPONENT: A Socially Efficient Preference Model of Opponent in Bilateral Multi Issue Negotiations, Journal of Computing and Security, Vol 1 No. 4, pages 283-292 (2014)

Tabatabaei, M.H., Ghane, M. **Hamadani, A.Z.** Hassani, H. , Modeling the performance properties on Woolen Hand-Knotted Carpet using response surface methodology Journal of Fashion Technology & Textile Engineering, Vol. 3 pages 1-7 (2014)

Abouei Ardakan, M. **Hamadani, A.Z.** Reliability optimization of series-parallel systems with mixed redundancy strategy in sub systems., Reliability engineering and system safety Vol 130, pages 132-139 (2014)

Khademolquani, S. **Hamadani, A.Z.** Tavanaei, H. Response surface modeling of electrosprayed polyacrylonitrile nanoparticle size, Journal of Nano particles (2014)

Tabatabaei, H.M. Ghane, M. **Hamadani, A.Z.**, Hassani, H. Modeling the functional compression properties of hand-knotted carpets using Factorial design and response surface methodology, Fibers and Polymers Vol 9 pages 1977-1984 (2014)

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Khademolqurani, S. **Hamadani, A.Z.** , Development of a decision Support System for handling health Insurance deduction, International Journal of Advanced Computer Science and Applications(IJACSA), Vol. 2 , pages 44-51 (2015)



Khademolqurani, S. **Hamadani, A.Z.**, Mokhatab Rafeei, F. A hybrid Analysis Approach to improve financial distress forecasting : Empirical Evidence from Iran. , Mathematical problems in Engineering Vol. 2015, pages 1-9 (2015)

Zolfagharri, H. **Hamadani, A.Z.** , Abouei Ardakan, M. Multi –objective availability-redundancy allocation problem for system with repairable and non-repairable components. Decision Science letters Vol 3 Pages 289-302 (2015)

Abouei Ardakan, M. **Hamadani, A.Z.** Sima, M. Reihaneh, M. A hybrid model for economic design of MEWMA control chart under maintenance policies. International Journal of Advanced Manufacturing Technology, (2015)

M. Moazeni , A. Ashrafi, **A. Z. Hamadani** Modeling and Optimization of Precipitation Hardening Heat Treatment Factors of the Al2024 Alloy Using a Two-Level Full Factorial Design. Journal of advanced Material and Processing Vol. 3 No. 2, 25-34 (2015)

M. Abouei Ardakan, M. Sima, **A. Z. Hamadani**, David W. Coit A novel strategy for redundant components in reliability--redundancy allocation problems. IIE Transactions, Vol 48, 1034-1057 (2016)

Sanaz Nikfalazar, Hadi Akabarzadeh Khorshidi, **Ali Z. Hamadani**, Fuzzy risk analysis by similarity-based multi-criteria approach to classify alternatives , Int. Journal of Manufacturing Vol 7, No. 3 250-256 (2016)

Mahsa Aghaei, **Ali Z. Hamadani**, Mostafa Abouei, Redundancy allocation problem for k-out-of-n systems with a choice of redundancy strategies, International Journal of Industrial Engineering, published with open access at Springerlink.com (2016)

Reza Ghavijorbozeh, **Ali Z. Hamadani**, Application of the mixed Weibull distribution in machine reliability analysis for a cell formation problem. International Journal of Quality and Reliability International Vol. 34, No. 1 128-142 (2017)

S. M. Tabatabaeia, M. Ghane, **A. Z. Hamadani** and H. Hasani Useful life prediction of woolen hand-knotted carpets using multivariate multiple regression the journal of textile institute, Vol 108, No. 5, 821-828,(2017)

Mostafa Abouei Ardakan, Zahra Mirzaei, **Ali Zeinal Hamadani** and Elsayed A. Elsayed, Reliability Optimization by Considering Time-Dependent Reliability for Components, Qual. Reliab. Enging. Int. John Wiley & Sons, Ltd. (2017)

Hadi Gholinejad, **A.Z. Hamadani** A new model for the redundancy allocation problem with component mixing and mixed redundancy strategy, Reliability Engineering and System Safety, Vol.164 66–73 (2017)

Mahtab J. Fard , Sattar Ameri, Syed Reza Hejazi , **Ali Zeinal Hamadani**, One-unit repairable systems with active and standby redundancy and fuzzy parameters, Parametric programming approach, International Journal of Quality & Reliability Management Vol. 34 No. 3, pp. 446-458 (2017)

## **Administrative Experience:**

Vice Dean, Dept. of Math., IUT (1982-1983)  
Dean, Department of Mathematics (IUT), (1983-1985).  
Vice Dean, Collage of Sciences (IUT), (1983-1985).  
Chairman, School of Mathematics (IUT), (1985-1987).  
Director of Central library, (IUT), (1987-1990).  
Member of the committee for Sabbatical leave (IUT), (1984-1990).  
Member of the Committee for Computer Center (IUT), (1982-1983).  
Member of Yazd University plan Committee, (1989-19...).  
Member of Scientific and Committee for the first Maintainability Conference 1994.  
Member of Scientific Organizing Committee for the first Iranian Statistics Conference (1992).  
Member of Scientific Committee for the first IMEC (1996).  
Chairman, School of Mathematical Sciences (IUT) (1992-1998)  
Executive Member of the Iranian Statistical Society (1995-2000).  
Chairman, Center For information Services, (IUT) (1999-2003)  
Member of Productivity planning, committee (IUT) (1999-2003)  
Chairman of the 5<sup>th</sup> Iranian Statistics Conference (2000)  
Editor-in Chief " Journal of Andishe-ye Amari" (1998-2001)  
Editorial board Member of Journal of Andishe- ye Amari (1998-2009)  
Member of the promotion committee of Isfahan University of Technology (2006-2008)  
Member of the research council of Isfahan University of Technology (2007-2009)  
Member of the research planning committee of Isfahan University of Technology (2009)  
Editorial board Member of Production and operations management Journal, Isfahan, Iran (2010 -...)  
Editorial board Member of the *American Journal of Mathematics and Statistics* (2012-..)  
Vice dean of research affairs, Dept. of Industrial Engineering (IUT) (2012-2016)  
Dean ,Department of Industrial and Systems Engineering, Isfahan University of Technology (2016-.....)