

# Curriculum Vitae

Tel. +49 561 3149045

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Personal Website: [www.sixsigma-24.de](http://www.sixsigma-24.de)



## Elena A. Averboukh

### Industrial Certification

2007	Instructor Axiomatic Design DFSS (Acclaro DFSS software)/Training and Consulting Partner Axiomatic Design Inc.
2005	Certified Master Black Belt/ Instructor Siemens Learning Campus, Siemens AG for Champions, Sponsors, Black Belts, Green Belts
2004	Certified Master Black Belt, Six Sigma Qualtec Inc.
2002	Certified Instructor for Black Belts/Green Belts (by Motorola University)
2002	Certified TRIZ Instructor/Coach Ideation-TRIZ (Ideation, Inc.)
2001	Instructor for Black Belts/Green Belts/Champions (Six Sigma Qualtec – On-Job Training)
2000	Certified Instructor iGrafx 2003 for Six Sigma
1999	Lead Instructor/Course Developer Minitab™ (Additive GmbH – Distributor of Minitab in Germany)
1996	Certified TRIZ Instructor (Invention Machine Inc.)

### Education and Training

1996 -	Doctorate in Engineering (Habilitation), Automatised Systems for Quality and Safety Control, University of Kassel, Germany
1992 -	Doctorate in Engineering (Habilitation), Technical Cybernetics, Decision Support & Statistical Process Control Systems, Moscow Energy Technical University
1980 - 1983	Doctorate in Engineering (PhD) in Automatic Control and Human-Machine Systems, Twer Technical University
1978 - 1982	M.Sc. in Mathematics (specialisation in Computing Techniques/IT), Twer State University
1973 – 1978	M.Sc. in Electrical Engineering (Systems Engineering), Twer Technical University

#### Delivery of Six Sigma Training:

- DMAIC training (completing 21th programme October 2007)
- DFSS training (14 classes conducted)
- DMAIC/DFSS in Software/Web Design (4 th class completing July 2007)
- Project Champion Training (21 classes conducted)
- Green Belt Training (13 classes conducted)
- Black Belt Upgrade (4 classes conducted)

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## Delivery of QFD Training, Mentoring and Consulting

- QFD training modules in all listed above DMAIC and DFSS training courses, both for Six Sigma Champions, -Green,- Black and for Master Black Belts
- Hands-on mentoring and workshops-facilitation of QFD House of quality projects within more than 200 Six Sigma projects (Define phase, Measure phase and Improve/Verify phases) for manufacturing and transactional/service applications
- Since 2007 – official training/consulting partner of Axiomatic Design Inc. in application of Acclaro DFSS software (QFD House of Quality is one of the main tools in this software technology)  
Practical training and consulting of 2 industrial teams (classes) in using Acclaro DFSS for product/service design projects

## Coaching and Mentoring

Coached and certified Master,- Black Belts, Champions/Sponsors, Six Sigma Leaders, Green Belts from a wide range of business activities: Manufacturing, Design, R&D, Marketing & Sales, CRM, Supply Chain Management, Financial Services, Human Resources, IT, Finance, E-Business.

## Course Development

- TRIZ Six Sigma Training and Upgrade training programme for Executives, Champions, Master Black Belts, and Black Belts
- training courses and course materials for Master-, Black- and Green Belts in manufacturing and transactional application areas, as well as for software/web-design, axiomatic system-, product and service design, and e-business applications,
- for training Champions, Black- and Green Belts in Business Case- and Project Selection and Management;
- special courses for Black- and Master Black Belts in
  - Axiomatic TRIZ-DFSS
  - TRIZ/Systemic Innovation
  - QFD House of Quality
  - advanced statistical topics using Minitab,
  - Business Process Modelling and Management using iGrafx 2007 for Six Sigma etc.,
  - Kansei Engineering,
  - Reliability Engineering,
  - Usability Engineering etc.

## **Skills Summary**

An energetic, internationally recognised and highly respected Instructor/Master Black Belt with excellent teaching and consulting skills and experiences, strong people and leadership skills and a demonstrated ability to lead and to achieve successful Six Sigma deployment. Unique combination of strong academic cross-disciplinary background and creativity, with more than 27 years of industrial experience and successful international industrial and business records.

## Project Management and Team Leadership

- Completed highly successful DMAIC/DFSS/TRIZ Six Sigma projects with high business and financial impact for more than 125 clients, providing extensive high-level business strategy, - processes, VOC and systems analysis, QFD House of quality, failure- and root cause analysis, process /systems modelling and evaluation, technology forecast and failure prediction, generation of innovative solutions, design and implementation of efficient control systems consulting.

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- Since 1994/95 works with governmental clients as consultant/expert evaluator of national R&D programmes (Japan STA, MITI, European Commission) in innovative customer- and user-centred systems/product design and -evaluation and human behaviour modelling for quality of life at different stages:  
Programme development, tender project-proposals evaluation, intermediate project results- and management evaluation, strategic consulting.
- Leading the implementation of Six Sigma in SMEs in Germany
- Experienced in deploying Six Sigma from the earliest stages

## Training

- Recognised in advanced Team Training
- Clients praise her teaching and consulting abilities, excellent communication skills across all hierarchical levels from CEOs to technicians
- Course participants appreciate her dynamic, interactive teaching style, success determination and devotion, and always comment on her depth of practical cross-disciplinary knowledge.
- Active in organising international conferences and moderating workshops

## Data Analysis

- Full range of DMAIC and Business/e-Business/Product DFSS tools, incl. Axiomatic TRIZ DFSS and techniques including:

- Cause & Effect, FMEA, Process Mapping
- Gauge R&R
- Process capability and Z shift
- Hypothesis testing (t test, p test, F test, ANOVA, Chi squared etc)
- Correlation and Simple/Multiple Linear Regression
- Multiple non-linear Regression, Logistic Regression
- Non-parametric statistics
- Reliability and Survival Analysis
- Multi-Variate Analysis
- Time Series Modelling
- Designed Experiments
- Axiomatic Design
- Statistical Process Control charts
- Voice of Customer Analysis, Kansei Engineering
- Benchmarking
- Needs analysis/QFD House of Quality
- Project Planning

- Highly proficient with Microsoft Office, Minitab, iGrafx 2007 Process for Six Sigma, Process Model, Crystal Ball, Acclaro TRIZ-DFSS etc,

## Software (re-) engineering

- UML (Unified Modelling Language)-tools for OO-Software (re-)engineering: Rational Rose, Analyst, Objective, Artisan, iLogix etc.
- IDEF Structured Data Analysis for software development
- Advanced methodology and tools for user-centred software design, usability engineering and usability testing
- Software ergonomics
- Programming languages C, C++, JAVA etc.

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- Software-Hardware Re-Engineering Tools

## Innovative Problem Solving

- TRIZ
- Ideation-TRIZ
- I-TRIZ for DMAIC
- I-TRIZ for DFSS
- Axiomatic TRIZ DFSS

## **Application-Specific Skills (examples)**

### Chemical Engineering

- More than 10 years research, development and project management practices in process industries automation and quality control systems 1978-1990 (production of synthetic textiles, lavsan production, manufacturing of electrovacuum glass and relevant products, like TV monitors, cement plants, petrochemical processes etc.)
  - Requirements engineering
  - Process analysis and statistical modelling
  - Innovative system design/patents
  - Development of quality control systems, winning Technical Awards
  - Evaluation and standardization of systems across industries with justified financial and business benefits

### Oil-and-Gas Industries, Well Logging

- More than 6 years research, development and management practices in well logging and oil& gas forecast and exploration (1986-1992)
  - Semi-automatic portable systems for quick-look field well-logging data analysis and interpretation (embedded in trucks): design, development, evaluation, field testing, training materials for users, and coaching of the introduction into manufacturing (project and process manager)
  - Development and introduction of new methods and statistical techniques and tools for well logging data quality control, interpretation and resources – forecast (for West Sibiria, North Cambey etc.) with justified financial benefits

### Financial Institutions

- More than 4 years practical experiences in biggest global financial institutions
- Leading deployments of Six Sigma for IT and Software Developers in Bank environments
- Training Executives, Champions, Green- and Black Belts and upgrading Master Black Belts in DMAIC, TRIZ-Innovation and Lean Six Sigma

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## Career History

### Positions held:

- 2006 - Innovation Center LUSI Ltd., Slovenia, Owner and Managing Director
- 2000 - 2002 Technical University of Poznan, **Honorary Prof.**, Post-graduate course "Internet Technologies"
- 2000 – ADDITIVE Academy GmbH, **Leader of Training Programme** " Statistical Process Control using MINITAB" and MINITAB for Six Sigma
- Lead course developer and lead trainer for Minitab Users, particularly for Six Sigma
- 2000 EU Expert/Evaluator, 5<sup>th</sup> Framework Programme "Quality of Life"
- 1996 - **Assoc.Professor**, Institute for Measurements and Automation, University of Kassel  
Interdisciplinary Centre for Quality of Life and Usability Studies (LUSI-Centre eG),  
**Director, Fellow Master Black Belt**
- Industry funded professor/instructor/Master Black Belt.** Full responsibility for project acquisition and marketing, project management, training course design and delivery, as well as for project results and reporting for commercial and governmental clients
- 1995 –2000 **Expert/Evaluator** for MITI- and STA-R&D National 5-year Programme Japan
- Recipient of the Price of Japanese Government for foreign researchers, work as a strategic consultant during the Programme preparation (\$1,7B), tender proposal evaluation, as well as programme supervision and evaluation of the progress and intermediate results
- 1993 - 1996 **Senior Researcher**, Laboratory for Man-Machine Systems, University of Kassel, Germany
- Co/deputy leader and project manager of several international R&D projects funded by DFG, European Commission; member of technical committee of industrial project consortium
- 1992 -1994 **Head of division** "Expert systems and technologies", INTEPRO, St.-Petersburg Ship Building Technical University
- Full responsibility for project acquisition and marketing, project management, training course design and delivery, as well as for project results and reporting for commercial and governmental clients
- 1991- 1993 **Director** of "Intelligent and Control Laboratories" (INCOLAB), Ltd.
- Full responsibility for project acquisition and marketing, management, financial results, training course design and delivery, as well as for project results and reporting for commercial and governmental clients

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1986- 1991 **Senior Researcher and Head of Laboratory**, Research Institute in All-Union Scientific-Industrial Consortium for Geophysical Research and Plant in Wells, Twer (former "Sojuzpromgeophysika", currently GERS AG)

Full responsibility for project definition and management, as well as for project results and reporting for commercial and governmental clients. Responsibility for Quality Control Methods and Best Practices in division.

1978- 1986 **Junior Researcher, PhD Student and Senior Researcher**, Department „Automatisation and Control Systems“ (ACS), , Twer Technical University

Industry-related R&D project, deputy project-manager, training course design and delivery for students and continuing education for professor staff, responsible for innovation, project results and reporting for commercial and governmental clients

## Awards:

1995 Japanese Government Research Award for Foreign Specialists (Science and Technology Agency)

1984 Silver medal of All-Union Exhibition of National Economy (VDNH, Moscow) for "System for Stabilisation of Quality Characteristics of Electrovacuum Glasses"

## Lecturing

1998- LUSI-Centre eG, Six Sigma (DMAIC, DFSS, I-TRIZ) for Executives, Champions, Master-, Black- and Green Belts in Manufacturing, Transactional and Software Applications, Software Usability Qualification Programme, Meta- and OO-Modelling Methods and Technologies, Statistical Process Control, Six Sigma, System Engineering, Axiomatic Design etc.

1997- Academy in Mannheim, Ass. Professor, "Creativity and Usability Engineering"

1996- University of Kassel, Ass. Professor „Quality and Safety Control Systems“/ Usability Master Class Courses "Creativity & Usability Engineering", "User Interface Design", " Innovative System-Design Technologies", "WEB-Usability" etc.

1995-1996 University of Kassel, Lector „Measuring, Control and Automatisation Techniques“

1986-1991 Twer State University, Docent (Associated Professor)  
5th year, "Data processing and quality control systems and techniques (in geo- and petrophysics)"  
Supervising industrial practice, course works and M.Sc. Diplomas

1981-1991 Twer Technical University, Lector : 5th year, "Modelling and Optimisation of Complex Systems", "Automatisation Systems for Enterprises", "Control Systems for Technological Processes" Continuing education for academic staff "Control Systems for Technological Processes"  
Supervising course works and M.Sc. Diplomas

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## Publications:

Numerous publications, in the field of design and evaluation of complex interactive systems, software technologies, quality control and monitoring systems, adaptive user interfaces, quality assurance and usability testing, ergonomics, task and knowledge analysis, human performance modelling, intelligent tutoring systems, control diagnostics and identification of technological processes, statistical and simulation modelling. List of publications is available.

## Patents:

9 Patents implemented in industries, 1 is Technical Standard.

**Languages:** English, German, Russian - fluent ( Verbal and Written), Slovenian - good, Slavic languages – read and understand

**Membership:** IFAC, IEEE societies. Nominated by DIN expert in DIN AA4/AA8, CEN TC 122, WG6 (Ergonomics), in DIN ad-hoc Group on Usability. Active in organising International Conferences.

## References:

**1. Katrin Scheingruber**, Leadership, Learning & Performance (LLP), MOTOROLA GMBH

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**2. Mark Stolyar, Six Sigma Green Belt**, Engineering Manager Siemens Dematic, Dallas, US

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**3. Paul Ruggier, Six Sigma Master Black Belt** Xchanging/ETB, Six Sigma Deployment Leader

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