

Table of Contents

Preface..... xiv

Chapter 1

Fuzzy Cognitive Maps in Reliability Modeling..... 1

*Alexander Rotshtein, Lev Academic Center, Jerusalem College of
Technology, Israel & Vasyl Stus Donetsk National University,
Vinnitsa, Ukraine*

*Ludmila Pustyl'nik, Afeka Tel-Aviv Academic College of Engineering,
Israel*

Denys Katielnikov, Vinnytsia National Technical University, Ukraine

Chapter 2

Fuzzy Reliability of Weighted-((f / (r, s)), k) / (m, n) G System20

Seema Negi, S. V. Govt. P. G. College, Lohaghat, India

*S. B. Singh, G. B. Pant University of Agriculture and Technology,
Pantnagar, India*

Kamlesh Bisht, Uttarakhand Open University, Haldwani, India

Chapter 3

Fuzzy Hybrid FMEA for Risk Assessment in Service Industry: An Integrated
Intuitionistic Fuzzy AHP and TOPSIS Approach.....43

Nihan Kabadayi, Istanbul University, Turkey

Chapter 4

Fuzzy Reliability Theory in the Decision-Making Process76

Halid Kaplan, University of Texas at San Antonio, USA

Muhammed Can, University of Minho, Portugal

Chapter 5

Risk Evaluation of a Construction Building Using a Hybrid Approach.....90

Burak Efe, Necmettin Erbakan University, Turkey

Mustafa Kurt, Gazi University, Turkey

Chapter 6

A Novel Entropy Measure for Interval-Valued Intuitionistic Fuzzy Set and Its Application to Failure Mode and Effect Analysis..... 115

Kamal Kumar, Amity University, Haryana, India

Naveen Mani, Sandip University, Nashik, India

Amit Sharma, Amity University, Haryana, India

Reeta Bhardwaj, Amity University, Haryana, India

Chapter 7

Solving Interval Type-2 Fuzzy Reliability-Redundancy Allocation Systems With Efficient PSO Algorithm..... 135

Zubair Ashraf, South Asian University, India

Md. Gulzarul Hasan, Madanapalle Institute of Technology and Science, India

Mohd Shoaib Khan, South Asian University, India

Chapter 8

Fuzzy Reliability Evaluation of Complex Systems Using Intuitionistic Fuzzy Sets..... 166

Ashok Singh Bhandari, Graphic Era (Deemed), India

Akshay Kumar, Graphic Era Hill University, India

Mangey Ram, Graphic Era (Deemed), India

Chapter 9

Fuzzy Reliability Assessment of Consecutive r Out of k From n G System Using UGF..... 181

KM. Meenakshi, M. B. G. P. G. College, Haldwani, India

Akshay Kumar, Graphic Era Hill University, India

S. B. Singh, G. B. Pant University of Agriculture and Technology, Pantnagar, India

Chapter 10

Fuzzy System Reliability Using Fuzzy Lifetime Distribution Emphasizing Octagonal Intuitionistic Fuzzy Numbers 192

Pawan Kumar, Government Degree College, Bhikiyasain, India

Chapter 11

Fuzzy System Reliability Using Hesitant Fuzzy Element and Score Function .209

Deepak Kumar, Kumaun University, DSB Campus, India

S. B. Singh, G. B. Pant University of Agriculture and Technology, India

Anita Kumari, Kumaun University, India

Chapter 12	
Fuzzy Reliability Theory: A Bibliometric-Based Review	222
<i>Ingrid N. Pinto-López, UPAEP Universidad, Mexico</i>	
<i>Cynthia M. Montaudon-Tomas, UPAEP Universidad, Mexico</i>	
Compilation of References	260
Related References	287
About the Contributors	314
Index	319