

OVERVIEW	PUBLISHED	ACCEPTED
BOOKS	2	3
CHAPTERS	8 (7 INVITED)	5
PATENTS	20	
JOURNALS	40 (2 INVITED)	3 (1 INVITED)
CONFERENCES	224 (28 INVITED)	1
TOTAL	306 (38 INVITED, 8 BEST PAPER AWARDS)	
OTHER CONFERENCES	53 (7 INVITED, 1 BEST PAPER AWARD)	
TECHNICAL REPORTS	73	

BOOKS 2

- V. Beiu, and U. Rückert (Eds.): Emerging Brain-Inspired Nano-Architectures
Book in progress (contract signed with World Scientific)
- V. Beiu: VLSI Complexity of Discrete Neural Networks
Book in progress (contract signed with Taylor & Francis)
- V. Beiu, R. Andonie, and R. Dogaru: Fundamental Problems of Neural Networks
Book in progress (contract signed with Technical Printing House)

- B₂ V. Beiu, and S. Harous (Eds.): Innovations
IEEE Press, November 2014 (ISBN 9781479972128) 1–132
<https://doi.org/10.1109/INNOVATIONS.2014.6985768>
- B₁ A. Schmid, S. Goel, W. Wang, V. Beiu, and S. Carrara (Eds.): Nano-Net
Springer, LNICS, October 2009 (ISBN 9783642024276) 1–286
<https://doi.org/10.1007/978-3-642-04850-0>
- … V. Beiu: Neural Networks Using Threshold Gates
A Complexity Analysis of Their Area- and Time-Efficient VLSI Implementations
PhD dissertation (*summa cum laude*), Katholieke Universiteit Leuven, Leuven, Belgium
U.D.C. 621.3.04977: 681.3*C13 (x-27-151779-3), May 1994 1–222

CHAPTERS (7 INVITED) 8

- V. Beiu, and W. Ibrahim: On Enabling Redundant Designs for Nano Computations
In V. Beiu, and U. Rückert (Eds.): Emerging Brain-Inspired Nano-Architectures
- V. Beiu, J.M. Quintana, and M.J. Avedillo
Threshold Logic Design and Implementations: From the Early Days into the Nanoera
In V. Beiu, and U. Rückert (Eds.): Emerging Brain-Inspired Nano-Architectures
- M.H. Sulieman, and V. Beiu
From Single Electron Technology (SET) Full Adders to Optimal Practical SET Adders
In V. Beiu, and U. Rückert (Eds.): Emerging Brain-Inspired Nano-Architectures
- V. Beiu, and U. Rückert: Roadmap for Nano Architectures
In V. Beiu, and U. Rückert (Eds.): Emerging Brain-Inspired Nano-Architectures
- J. Nyathi, and V. Beiu: Advanced Techniques for Reducing Power Consumption
In V. Beiu, and U. Rückert (Eds.): Emerging Brain-Inspired Nano-Architectures
- Ch₈ V. Beiu, L. Zhang, A. Beg, W. Ibrahim, and M. Tache: Axon-Inspired Communication Systems **Invited,**
Chapter 15 in J.E. Morris and K. Iniewski (Eds.): Nanoelectronic Device Applications
Handbook, CRC/Taylor & Francis (UK/USA), 2013 (ISBN 9781466565234) 193–208

Ch ₇	A. Beg, M.H. Sulieman, V. Beiu, and W. Ibrahim: Low-Power Reliable Nano Adders Chapter 6 in J.E. Morris and K. Iniewski (Eds.): Nanoelectronic Device Applications Handbook, CRC/Taylor & Francis (UK/USA), 2013 (ISBN 9781466565234)	<i>Invited₆</i>	67–75
Ch ₆	V. Beiu, W. Ibrahim, and S. Lazarova-Molnar On Device-level Majority von Neumann Multiplexing Chapter 72 in J.R. Rabuñal et al. (Eds.): Encyclopedia of Artificial Intelligence IGI Global, USA (Hershey, PA) and UK (London), 2009 (ISBN 9781599048499) https://doi.org/10.4018/978-1-59904-849-9.ch072	<i>Invited₅</i>	471–479
Ch ₅	V. Beiu, and W. Ibrahim: On Computing Nano-Architectures Using Unreliable Nano-Devices Chapter 12 in S.E. Lyshevski (Ed.): Nano- and Molecular-Electronics Handbook Taylor & Francis (UK/USA), May 2007 (ISBN 9780849385285)	<i>Invited₄</i>	1–49
Ch ₄	V. Beiu: Entropy, Constructive Neural Learning, and VLSI Efficiency In R. Andonie, and D. Grosu (Eds.): Neural Priorities in Data Transmission and EDA Tempus SJEP 8180-94, "Transilvania" Univ. of Braşov, Braşov, Romania, 1998	<i>Invited₃</i>	38–74
Ch ₃	V. Beiu: Constant Fan-in Discrete Neural Networks Are VLSI-Optimal Chapter 12 in S.W. Ellacott, J.C. Mason, and I.J. Anderson (Eds.) Mathematics of Neural Networks Models, Algorithms and Applications Kluwer Academic, Boston, MA, USA, 1997 (ISBN 9781461377948) https://doi.org/10.1007/978-1-4615-6099-9_12		89–94
Ch ₂	V. Beiu: Digital Integrated Circuit Implementations (of Neural Networks) Chapter E1.4 in E. Fiesler, and R. Beale (Eds.): Handbook of Neural Computations Institute of Physics, New York, NY, USA, 1996 (ISBN 9780750303125)	<i>Invited₂</i>	E1.4.1–34
Ch ₁	V. Beiu: Optimal VLSI Implementations of Neural Networks Chapter 18 in J.G. Taylor (Ed.): Neural Networks and Their Applications John Wiley & Sons, Chichester, UK, 1996 (ISBN 9780471962823)	<i>Invited₁</i>	255–276

PATENTS

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	– V. Beiu: Procedure Enabling Statistical Meaningful Evaluation of Any Physical Feature or Figure-of-Merit of a Digital or Analog Circuit UAEU Intellectual Property Disclosure, Jul. 16, 2014 & Feb. 11, 2015 (Rouse Ref. U0018-00167)		
P ₂₀	V. Beiu: Low-Power Differential Conductance-Based Logic Gate and Method of Operation Thereof (Washington, DC, USA, June 17, 2003) US40319573 https://patentscope.wipo.int/search/en/detail.jsf?docId=US40319573		1–18
P _{18, 19}	V. Beiu: Microprocessor and a Digital Signal Processor Including Adder and Multiplier Circuits Employing Logic Gates Having Discrete and Weighted Inputs (February 4, 2003) US39973941 https://patentscope.wipo.int/search/en/detail.jsf?docId=US39973941 US39287083 https://patentscope.wipo.int/search/en/detail.jsf?docId=US39287083		1–14
P ₁₇	V. Beiu: Adder Circuits Employing Logic Gates Having Discrete Weighted Inputs and a Method of Operation Therewith (Washington, DC, USA, December 31, 2002) US39287082 https://patentscope.wipo.int/search/en/detail.jsf?docId=US39287082		1–13
P ₁₃₋₁₆	V. Beiu: Adder Having Reduced Number of Internal Layers and Method of Operation Thereof (Washington, DC, USA, August 20, 2002) AU180986431 https://patentscope.wipo.int/search/en/detail.jsf?docId=AU180986431 TW 493139 https://twpat1.tipo.gov.tw/tipotwoc/tipotwekm?!!FR_493139 US39682800 https://patentscope.wipo.int/search/en/detail.jsf?docId=US39682800 WO2001023992 https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2001023992		1–11

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P₁ V. Beiu: LSI Unit for Mutual Exclusion
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 RO 84763, April 26, 1984 <https://patents.google.com/patent/RO84763B1/en>

JOURNALS (3 INVITED)

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... V. Beiu et al.: The Curse of Constant Failure Rates, Inputs and Averaging – A Comprehensive Review In planning
 ... V. Beiu et al.: Brain-inspired Computing Revisited – Why Energy Consumption Is So Elusive In progress
 ... V. Beiu et al.: Revisiting Schmitt Trigger Tolerance to Variations In progress
 ... V. Beiu, R.-M. Beiu, V. Dragoi: The Trustworthy Wings of the Mysterious Butterflies To be submitted
 ... M. Nagy, S.R. Cowell, and V. Beiu: On the Construction of 3D Fibonacci Spirals To be submitted
 ... M. Jianu, L. Daus, V. Dragoi, and V. Beiu: The Roots of the Reliability Polynomials of Circular Consecutive- k -out-of- n :F Systems Submitted

J₄₃ S.R. Cowell, S. Hoara, and V. Beiu: Approximating Hammocks' Reliability with Beta Distributions
 Intl. J. Comp. Comm. & Ctrl. (IF ~ 2.635, SJR ~ 0.499) Accepted

J₄₂ V. Beiu: Brain Inspired Nano Architectures *Invited,*
 Intl. J. Comp. Comm. & Ctrl. (IF ~ 2.635, SJR ~ 0.499) Accepted

J₄₁ M. Tache and V. Beiu: When Non-Gaussian Distributions Have to Be Considered
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J₄₀ M. Jianu, L. Daus, V. Dragoi, and V. Beiu
 Reliability Polynomials of Consecutive- k -out-of- n :F Systems Have Unbounded Roots
 Networks, vol. 82, no. 3, Oct. 2023 (IF ~ 2.1, SJR ~ 0.908) 222–228
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J₃₉ V. Dragoi, and V. Beiu
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J₃₈ M. Nagy, S.R. Cowell, and V. Beiu
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- J₃₇ V. Beiu, L. Daus, M. Jianu, A. Mihai, and I. Mihai: On a Surface Associated with Pascal's Triangle Symmetry, vol. 14, no. 2, Feb. 2022 (IF = 2.7, SJR = 0.483) art. 411 (1–12)
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- J₂₈ V. Beiu, and L. Dauş
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2023

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- C₂₂₅ P. Poulin, S.R. Cowell, and V. Beiu
 On the K₄-ladder Two-terminal Reliability Once Again
 International Conference on Mathematical Modeling in Physical Sciences IC-MSQUARE
 Belgrade, Serbia, August 28-31, 2023
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2022

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 3D Hammocks for Communications
 International Workshop on Soft Computing Applications SOFA2022
 Arad, Romania, November 21-23, 2022 Pending
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- C₂₂₃ R.-M. Beiu, S. Hoara, and V. Beiu
 Quantum Is Making Hammocks Ubiquitous
 International Workshop on Soft Computing Applications SOFA2022
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- C₂₂₂ M. Tache, V. Dragoi, and V. Beiu
 On Low Power Redundant Schemes
 International Workshop on Soft Computing Applications SOFA2022
 Arad, Romania, November 21-23, 2022 Pending
<https://doi.org/pending>
- C₂₂₁ A.-C. Beiu, R.-M. Beiu, and V. Beiu
 Optimal Design of Linear Consecutive Systems
 ACM Intl. Conf. Nanoscale Computing & Communication NanoCom2022
 Barcelona, Spain, October 05-07, 2022 art. 24
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- C₂₂₀ M. Tache, S. Hoara, V. Dragoi, and V. Beiu
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 International Conference on Computers Communications and Control ICCCC2022
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- C₂₁₉ M. Jianu, L. Daus, S. Hoara, and V. Beiu
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- C₂₁₈ L. Daus, V. Dragoi, M. Jianu, D. Bucerzan, and V. Beiu
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2021

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