

№ №	Title	Printed or Handwriting	Publishing House	Number of Pages	Coauthor(s)
1	2	3	4	5	6
1	Generalized multistream spatial modulation with signal constellations based on Hurwitz integers and low complexity detection	Printed	IEEE Wireless Communications Letters, Vol.7, No.3, June, 2018	4 p.	Freudenberger J., Rohweder D.
2	Generalized multistream spatial modulation for wireless systems with Nakagami- $m$ fading	Printed	In proceedings of 12 <sup>th</sup> International Conference on Communications, Bucharest, Romania, 2018	4 p.	Ugrelidze N., Sordia M., Akobia D.
3	Low-density parity-check codes over finite Gaussian integer fields	Printed	In proceedings of 2018 International Symposium on Information Theory, Vail, Colorado, USA, 2018	5 p.	Freudenberger J., Rohweder D.
4	A soft-input bit-flipping decoder for generalized concatenated codes	Printed	In proceedings of 2018 International Symposium on Information Theory, Vail, Colorado, USA, 2018	5 p.	Freudenberger J., Rajab M.
5	Soft-input bit-flipping decoding of generalised concatenated codes for application in non-volatile flash memories	Printed	IET Communications, Vol.13, Issue 4, March, 2019	8 p.	Rajab M., Freudenberger J.
6	A low-complexity three-error-correcting BCH decoder with applications in concatenated codes	Printed	In proceedings of 12 <sup>th</sup> International ITG Conference on Systems, Communication and Coding (SCC), Rostock, Germany, 2019	5 p.	Freudenberger J., Rajab M.

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7	Low-complexity detection for Spatial Modulation	Printed	In proceedings of 12 <sup>th</sup> International ITG Conference on Systems, Communication and Coding (SCC), Rostock, Germany, 2019	5 p.	Freudenberger J., Rohweder D.
8	New generalized multistream spatial modulation for wireless communications	Printed	In proceedings of Wireless Days 2019 Conference, Manchester, UK, 2019	7 p.	Ugreldize N., Sordia M.
9	Low-complexity detection for generalized multistream spatial modulation	Printed	In proceedings of 20 <sup>th</sup> International Workshop on Signal Processing Advances in Wireless Communications (SPWAC), Cannes, France, 2019	6 p.	Rohweder D., Stern S., Fisher R.F.H., Freudenberger J.
10	Low-complexity detection for multi-dimensional spatial modulation schemes	Printed	In proceedings of 24 <sup>th</sup> International ITG Workshop on Smart Antennas (WSA 2020), Hamburg, Germany, 2020	6 p.	Rohweder D., Stern S., Fisher R.F.H., Freudenberger J.
11	Codes over Gaussian integers for spatial modulation	Printed	In proceedings of 24 <sup>th</sup> International ITG Workshop on Smart Antennas (WSA 2020), Hamburg, Germany, 2020	6 p.	Rohweder D., Freudenberger J.
12	New four-dimensional signal constellations construction	Printed	IET Communications, Vol.14, Issue 10, June, 2020	6 p.	Ugreldize N., Sordia M.
13	Development of Digital Communication Systems for Radio Channels	Printed	Caucasus University Publishing House, Tbilisi, 2020 (in Georgian)	154 p.	Ugreldize N.

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1	2	3	4	5	6
14	Four-dimensional signal constellations based on binary frequency-shift keying and M-ary amplitude-phase-shift keying	Printed	Journal of Computer and Communications, Vol. 8, No. 12, 2020	11 p.	Ugrelidze N., Freudenberger J.
15	Generalized multistream spatial modulation based on one Mannheim error correcting codes and their low-complexity detection	Printed	In proceedings of 10 <sup>th</sup> International Conference on Consumer Electronics (ICCE), Berlin, Germany, 2020	6 p.	Rohweder D., Oleschak P., Freudenberger J.
16	Sixth Generation (6G) Wireless Communication Networks and Systems	Printed	Caucasus University Publishing House, Tbilisi, 2021 (in Georgian)	224 p.	Ugrelidze N.
17	A comparison of characteristics of 4D 2FSK-MPSK and 2D MPSK signals	Printed	American Journal of Engineering Research, Vol. 10, No. 5, 2021	5 p.	Ugrelidze N., Akobia D.
18	Four-dimensional Hurwitz constellations, set partitionings, detection, and multilevel coding	Printed	IEEE Transactions on Communications, Vol.69, No. 8, August, 2021	12 p.	Rohweder D., Stern S., Fisher R.F.H., Freudenberger J.
19	Theoretical Basis of Error-correcting Coding (Textbook)	Printed	Publishing House of Georgian Technical University, Tbilisi, 2021 (in Georgian)	203 p.	Ugrelidze N., Mtvralashvili T.

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20	Wi-Fi: Modern Standards and Development Trends	Printed	Communications Commission of Georgia, publisher Merab Katamadze, Tbilisi, 2021 (in Georgian)	159 p.	Ugrelidze N.
21	Generalized multistream spatial modulation based on frequency-phase modulated signals	Printed	IEEE Wireless Communications Letters, Vol.11, No.4, April, 2022	5 p.	Ugrelidze N., Freudenberger J.
22	The Road to 6G: Challenges for Communications Engineers	Printed	Georgian Communications Commission of Georgia, „Kolori Publishing House“, Tbilisi, 2022 (in Georgian)	207 p.	Ugrelidze N.
23	Neural network aided reference voltage adaptation for NAND flash memory	Printed	In proceedings of 12 <sup>th</sup> International Conference on Consumer Electronics (ICCE), Berlin, Germany, 2022	5 p.	Bailon D., Taburet G., Freudenberger J.
24	Cell-wise encoding and decoding for TLC flash memories	Printed	In proceedings of 12 <sup>th</sup> International Conference on Consumer Electronics (ICCE), Berlin, Germany, 2022	6 p.	Bailon D., Freudenberger J.
25	New Security Technologies for 6G Networks	Printed	Georgian Technical University, "Favorite Style" Publishing House, Tbilisi, 2022 (in Georgian)	140 p.	Khurodze R., Chkaidze M.
26	Estimating mutual information for link adaptation in generalized spatial modulation systems with neural networks	Printed	In proceedings of 26 <sup>th</sup> Workshop on Smart Antennas and 13 <sup>th</sup> Conference on Systems, Communications, and Coding, Braunschweig, Germany, 2023	5 p.	Bailon D., Kuhn V., Freudenberger J.

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1	2	3	4	5	6
27	Read reference voltage adaptation for NAND flash memories with neural networks based on sparse histograms	Printed	IEEE Access, 2023	11 p.	Bailon D., Freudenberger J.
28	Coded modulation systems for device-to-device communication in 5G networks	Printed	Abstracts of the scientific-technological conference "5G technologies, challenges and solutions", Tbilisi, July 22, 2023 (in Georgian)	3 p.	Ugrelidze N., Sakhiashvili B.
29	Features for read reference voltage estimation in NAND flash memory	Printed	In proceedings of 13 <sup>th</sup> International Conference on Consumer Electronics (ICCE), Berlin, Germany, 2023	6 p.	Bailon D., Freudenberger J.
30	Two-Dimensional Circular Signal Systems	Printed	In proceedings of 8 <sup>th</sup> International Conference on Frontiers of Signal Processing (ICFSP), Corfu, Greece, 2023	7 p.	Ugrelidze N., Noselidze I., Sakhiashvili B.
31	Four-Dimensional Hybrid Signals with Spatial Modulation Systems	Printed	In proceedings of 3 <sup>rd</sup> International Conference on Electrical, Computer and Energy Technologies (ICECET), Cape Town-South Africa, 2023	6 p.	Ugrelidze N., Sakhiashvili B.
32	Communications with Satellites in Low Earth Orbit	Printed	University of Georgia Publishing House, Tbilisi, 2023 (in Georgian)	120 p.	Ugrelidze N., Chkhaidze M.