Roope Vehkalahti

List of Publications by Year
in descending order

49	345	1478505 6	1058476 14
papers	citations	h-index	g-index

50	50	50	103
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The DMT of Real and Quaternionic Lattice Codes and DMT Classification of Division Algebra Codes. IEEE Transactions on Information Theory, 2022, 68, 2999-3013.	2.4	1
2	Non-commutative Ring Learning with Errors from Cyclic Algebras. Journal of Cryptology, 2022, 35, .	2.8	3
3	Towards Ultra-Reliable Signature Coding With Multiple Transmit Antennas. , 2021, , .		1
4	A Two-way QKD Protocol Outperforming One-way Protocols at Low QBER. , 2020, , .		4
5	Algebraic Lattice Codes for Linear Fading Channels. Mathematical Engineering, 2020, , 179-200.	0.2	0
6	Code Design Principles for Ultra-Reliable Random Access with Preassigned Patterns. , 2019, , .		3
7	The DMT Classification of Real and Quaternionic Lattice Codes. , 2018, , .		1
8	Grant-Free Access in URLLC with Combinatorial Codes and Interference Cancellation. , 2018, , .		6
9	Almost Universal Codes for MIMO Wiretap Channels. IEEE Transactions on Information Theory, 2018, 64, 7218-7241.	2.4	7
10	Interference Cancelling Codes for Ultra-Reliable Random Access. International Journal of Wireless Information Networks, 2018, 25, 422-433.	2.7	6
11	Almost universal codes achieving ergodic MIMO capacity within a constant gap. IEEE Transactions on Information Theory, 2017, , 1-1.	2.4	4
12	Grassmannian codes from multiple families of mutually unbiased bases. , 2017, , .		3
13	Combinatorial code designs for ultra-reliable IoT random access. , 2017, , .		3
14	Towards a complete DMT classification of division algebra codes. , 2016, , .		2
15	Almost universal codes for fading wiretap channels. , 2016, , .		11
16	Number field lattices achieve Gaussian and Rayleigh channel capacity within a constant gap. , 2015, , .		10
17	A Noncommutative Analogue of the Odlyzko Bounds and Bounds on Performance for Space-Time Lattice Codes. IEEE Transactions on Information Theory, 2015, 61, 1971-1984.	2.4	4
18	Division algebra codes achieve MIMO block fading channel capacity within a constant gap. , 2015, , .		3

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19	An Error Event Sensitive Tradeoff Between Rate and Coding Gain in MIMO MAC. IEEE Transactions on Information Theory, 2015, 61, 5931-5947.	2.4	0
20	Constructions a of lattices from number fields and division algebras. , 2014, , .		4
21	Shifted inverse determinant sums and new bounds for the DMT of space-time lattice codes. , 2014, , .		0
22	Inverse Determinant Sums and Connections Between Fading Channel Information Theory and Algebra. IEEE Transactions on Information Theory, 2013, 59, 6060-6082.	2.4	14
23	A new design criterion for spherically-shaped division algebra-based space-time codes. , 2013, , .		2
24	Connecting DMT of division algebra space-time codes and point counting in Lie groups. , 2012, , .		2
25	Construction of MIMO MAC codes achieving the pigeon hole bound. , 2012, , .		1
26	Fast-Decodable Asymmetric Space-Time Codes From Division Algebras. IEEE Transactions on Information Theory, 2012, 58, 2362-2385.	2.4	40
27	Diversity-multiplexing gain tradeoff: A tool in algebra?. , 2011, , .		4
28	Reducing complexity with less than minimum delay space-time lattice codes. , 2011, , .		6
29	DMT Optimal Codes Constructions for Multiple-Access MIMO Channel. IEEE Transactions on Information Theory, 2011, 57, 3594-3617.	2.4	17
30	Performance evaluation of 4×2 MIMO schemes for mobile broadcasting. , 2011, , .		2
31	Algebraic hybrid satellite-terrestrial space-time codes for digital broadcasting in SFN. , 2011, , .		3
32	An algebraic look into MAC-DMT of lattice space-time codes. , 2011, , .		4
33	A general framework for constructing fast-decodable asymmetric space-time codes. , 2011, , .		1
34	The Coding Gain of Real Matrix Lattices: Bounds and Existence Results. IEEE Transactions on Information Theory, 2010, 56, 4359-4366.	2.4	2
35	An algebraic MIDO-MISO code construction. , 2010, , .		18
36	A family of cyclic division algebra based fast-decodable 4×2 space-time block codes. , 2010, , .		6

#	Article	IF	Citations
37	Some simple observations on MISO codes. , 2010, , .		4
38	On the decay of the determinants of multiuser MIMO lattice codes. , 2010, , .		3
39	Fast-decodable MIDO codes from crossed product algebras. , 2010, , .		20
40	Remarks on the criteria of constructing MIMO-MAC DMT optimal codes. , 2010, , .		8
41	An algebraic tool for obtaining conditional non-vanishing determinants. , 2009, , .		3
42	On the Densest MIMO Lattices From Cyclic Division Algebras. IEEE Transactions on Information Theory, 2009, 55, 3751-3780.	2.4	60
43	New Spaceâ€“Time Code Constructions for Two-User Multiple Access Channels. IEEE Journal on Selected Topics in Signal Processing, 2009, 3, 939-957.	10.8	20
44	Some simple observations on lattice codes. , 2009, , .		0
45	Some properties of Alamouti-like MISO codes. , 2009, , .		2
46	Constructing Optimal Division Algebras for Space-Time Coding. , 2007, , .		3
47	3-Designs from all <mml:math altimg="si1.gif" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd"	1.0	1
48	Dense MIMO Matrix Lattices â€" A Meeting Point for Class Field Theory and Invariant Theory. , 2007, , 247-256.		8
49	Optimal Matrix Lattices for MIMO Codes from Division Algebras. , 2006, , .		14