

# Tariq Shah

## List of Publications by Year in descending order

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91  
papers

2,722  
citations

159358

30  
h-index

197535

49  
g-index

91  
all docs

91  
docs citations

91  
times ranked

856  
citing authors

#	ARTICLE	IF	CITATIONS
1	A novel technique for the construction of strong S-boxes based on chaotic Lorenz systems. <i>Nonlinear Dynamics</i> , 2012, 70, 2303-2311.	2.7	139
2	Construction of S-box based on chaotic Boolean functions and its application in image encryption. <i>Neural Computing and Applications</i> , 2016, 27, 677-685.	3.2	130
3	A projective general linear group based algorithm for the construction of substitution box for block ciphers. <i>Neural Computing and Applications</i> , 2013, 22, 1085-1093.	3.2	127
4	A novel scheme for image encryption using substitution box and chaotic system. <i>Nonlinear Dynamics</i> , 2018, 91, 359-370.	2.7	124
5	An efficient method for the construction of block cipher with multi-chaotic systems. <i>Nonlinear Dynamics</i> , 2013, 71, 489-492.	2.7	111
6	A group theoretic approach to construct cryptographically strong substitution boxes. <i>Neural Computing and Applications</i> , 2013, 23, 97-104.	3.2	104
7	An efficient construction of substitution box with fractional chaotic system. <i>Signal, Image and Video Processing</i> , 2015, 9, 1335-1338.	1.7	86
8	A novel approach for designing substitution-boxes based on nonlinear chaotic algorithm. <i>Nonlinear Dynamics</i> , 2012, 70, 1791-1794.	2.7	85
9	An efficient technique for the construction of substitution box with chaotic partial differential equation. <i>Nonlinear Dynamics</i> , 2013, 73, 1795-1801.	2.7	82
10	An efficient chaotic image encryption scheme. <i>Neural Computing and Applications</i> , 2015, 26, 1137-1148.	3.2	80
11	A novel construction of substitution box using a combination of chaotic maps with improved chaotic range. <i>Nonlinear Dynamics</i> , 2017, 88, 2757-2769.	2.7	77
12	An efficient approach for the construction of LFT S-boxes using chaotic logistic map. <i>Nonlinear Dynamics</i> , 2013, 71, 133-140.	2.7	75
13	Image encryption algorithm based on PGL(2,GF(28)) S-boxes and TD-ERCS chaotic sequence. <i>Nonlinear Dynamics</i> , 2012, 70, 181-187.	2.7	68
14	A Watermarking Technique with Chaotic Fractional S-Box Transformation. <i>Wireless Personal Communications</i> , 2016, 90, 2033-2049.	1.8	68
15	A construction of novel chaos base nonlinear component of block cipher. <i>Nonlinear Dynamics</i> , 2014, 76, 377-382.	2.7	61
16	A novel image encryption technique based on HÃ©non chaotic map and S8 symmetric group. <i>Neural Computing and Applications</i> , 2014, 25, 1717-1722.	3.2	60
17	An efficient scheme for digital watermarking using chaotic map. <i>Nonlinear Dynamics</i> , 2013, 73, 1469-1474.	2.7	52
18	A new implementation of chaotic S-boxes in CAPTCHA. <i>Signal, Image and Video Processing</i> , 2016, 10, 293-300.	1.7	50

#	ARTICLE	IF	CITATIONS
19	A highly nonlinear S-box based on a fractional linear transformation. SpringerPlus, 2016, 5, 1658.	1.2	49
20	A novel image encryption algorithm based on chaotic maps and GF(28) exponent transformation. Nonlinear Dynamics, 2013, 72, 399-406.	2.7	46
21	A Novel Image Encryption Based on Algebraic S-box and Arnold Transform. 3D Research, 2017, 8, 1.	1.8	46
22	Literature survey on nonlinear components and chaotic nonlinear components of block ciphers. Nonlinear Dynamics, 2013, 74, 869-904.	2.7	45
23	Generalized Majority Logic Criterion to Analyze the Statistical Strength of S-Boxes. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2012, 67, 282-288.	0.7	43
24	A novel approach to improve multimedia security utilizing 3D mixed chaotic map. Microprocessors and Microsystems, 2019, 65, 1-6.	1.8	39
25	A Novel Algebraic Technique for the Construction of Strong Substitution Box. Wireless Personal Communications, 2018, 99, 213-226.	1.8	36
26	Image privacy scheme using quantum spinning and rotation. Journal of Electronic Imaging, 2018, 27, 1.	0.5	36
27	Efficient method for designing chaotic S-boxes based on generalized Baker's map and TDERC chaotic sequence. Nonlinear Dynamics, 2013, 74, 271-275.	2.7	34
28	A novel method for designing nonlinear component for block cipher based on TD-ERCS chaotic sequence. Nonlinear Dynamics, 2013, 73, 633-637.	2.7	33
29	Construction of highly nonlinear S-boxes for degree 8 primitive irreducible polynomials over $\mathbb{F}_2$ . Multimedia Tools and Applications, 2019, 78, 1219-1234.	2.6	33
30	A Power Associative Loop Structure for the Construction of Non-Linear Components of Block Cipher. IEEE Access, 2020, 8, 123492-123506.	2.6	33
31	A new approach for image encryption and watermarking based on substitution box over the classes of chain rings. Multimedia Tools and Applications, 2017, 76, 24027-24062.	2.6	31
32	Substitution Box on Maximal Cyclic Subgroup of Units of a Galois Ring. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2013, 68, 567-572.	0.7	28
33	An efficient image privacy scheme based on nonlinear chaotic system and linear canonical transformation. Physica A: Statistical Mechanics and Its Applications, 2020, 546, 123458.	1.2	26
34	Design of an S-box using Rabinovich-Fabrikant system of differential equations perceiving third order nonlinearity. Multimedia Tools and Applications, 2020, 79, 6649-6660.	2.6	25
35	A Novel Algorithm of Constructing Highly Nonlinear S-p-boxes. Cryptography, 2019, 3, 6.	1.4	24
36	A color image watermarking scheme based on affine transformation and S 4 permutation. Neural Computing and Applications, 2014, 25, 2037-2045.	3.2	23

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37	Digital audio signals encryption by Mobius transformation and HÃ©non map. Multimedia Systems, 2020, 26, 235-245.	3.0	23
38	A Novel Statistical Analysis of Chaotic S-box in Image Encryption. 3D Research, 2014, 5, 1.	1.8	21
39	Analysis of S-box in Image Encryption Using Root Mean Square Error Method. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2012, 67, 327-332.	0.7	19
40	A novel construction of substitution box with Zaslavskii chaotic map and symmetric group. Journal of Intelligent and Fuzzy Systems, 2015, 28, 1509-1517.	0.8	19
41	A new technique of frequency domain watermarking based on a local ring. Wireless Networks, 2019, 25, 1491-1503.	2.0	19
42	Construction of Non-linear Component of Block Cipher by Means of Chaotic Dynamical System and Symmetric Group. Wireless Personal Communications, 2020, 112, 467-480.	1.8	19
43	Image encryption algorithm based on total shuffling scheme and chaotic S-box transformation. JVC/Journal of Vibration and Control, 2014, 20, 2133-2136.	1.5	18
44	A copyright protection using watermarking scheme based on nonlinear permutation and its quality metrics. Neural Computing and Applications, 2015, 26, 845-855.	3.2	18
45	A scheme based on algebraic and chaotic structures for the construction of substitution box. Multimedia Tools and Applications, 2019, 78, 32467-32484.	2.6	18
46	Design of new $4 \times 4$ S-box from finite commutative chain rings. Computational and Applied Mathematics, 2017, 36, 843-857.	1.3	17
47	Cryptosystem techniques based on the improved Chebyshev map: an application in image encryption. Multimedia Tools and Applications, 2019, 78, 31467-31484.	2.6	17
48	Improved SERPENT Algorithm: Design to RGB Image Encryption Implementation. IEEE Access, 2020, 8, 52609-52621.	2.6	17
49	Construction of S-Boxes Using Different Maps Over Elliptic Curves for Image Encryption. IEEE Access, 2021, 9, 157106-157123.	2.6	17
50	To Study the Effect of the Generating Polynomial on the Quality of Nonlinear Components in Block Ciphers. Security and Communication Networks, 2018, 2018, 1-8.	1.0	16
51	BCH Codes with computational approach and its applications in image encryption. Journal of Intelligent and Fuzzy Systems, 2019, 37, 3925-3939.	0.8	16
52	Galois Ring $\mathbb{Z}_2[x]/(x^3+8)$ Dependent $24 \times 24$ S-Box Design: An RGB Image Encryption Application. Wireless Personal Communications, 2020, 113, 1201-1224.	1.8	16
53	Block cipher's nonlinear component design by elliptic curves: an image encryption application. Multimedia Tools and Applications, 2021, 80, 4693-4718.	2.6	16
54	A Novel Scheme of Image Encryption Based on Elliptic Curves Isomorphism and Substitution Boxes. IEEE Access, 2021, 9, 77798-77810.	2.6	16

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55	A three-dimensional chaotic map and their applications to digital audio security. Multimedia Tools and Applications, 2021, 80, 22251-22273.	2.6	16
56	Texture Analysis of Chaotic Coupled Map Lattices Based Image Encryption Algorithm. 3D Research, 2014, 5, 1.	1.8	14
57	A novel efficient image encryption algorithm based on affine transformation combine with linear fractional transformation. Multidimensional Systems and Signal Processing, 2020, 31, 885-905.	1.7	14
58	S8 affine-power-affine S-boxes and their applications. Neural Computing and Applications, 2012, 21, 377-383.	3.2	13
59	On codes over quaternion integers. Applicable Algebra in Engineering, Communications and Computing, 2013, 24, 477-496.	0.3	12
60	A novel discrete image encryption algorithm based on finite algebraic structures. Multimedia Tools and Applications, 2020, 79, 28023-28042.	2.6	12
61	Onion steganography: a novel layering approach. Nonlinear Dynamics, 2016, 84, 1431-1446.	2.7	10
62	Steps Towards Redesigning Cryptosystems by a Non-associative Algebra of IP-Loops. Wireless Personal Communications, 2019, 108, 1379-1392.	1.8	10
63	Improved Twofish Algorithm: A Digital Image Enciphering Application. IEEE Access, 2021, 9, 76518-76530.	2.6	9
64	Construction and decoding of BCH codes over chain of commutative rings. Mathematical Sciences, 2012, 6, 1.	1.0	8
65	Maximal cyclic subgroups of the groups of units of Galois rings: a computational approach. Computational and Applied Mathematics, 2017, 36, 1273-1297.	1.3	8
66	S-Box on Subgroup of Galois Field. Cryptography, 2019, 3, 13.	1.4	6
67	Designing S-boxes triplet over a finite chain ring and its application in RGB image encryption. Multimedia Tools and Applications, 2020, 79, 26885-26911.	2.6	6
68	An Efficient Audio Encryption Scheme Based on Finite Fields. IEEE Access, 2021, 9, 144385-144394.	2.6	6
69	A method for improving the code rate and error correction capability of a cyclic code. Computational and Applied Mathematics, 2013, 32, 261-274.	1.3	5
70	A Novel Cryptosystem Based on General Linear Group. 3D Research, 2015, 6, 1.	1.8	5
71	Construction of New S-Boxes Over Finite Field and Their Application to Watermarking. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2012, 67, 705-710.	0.7	4
72	CYCLIC CODES THROUGH $B[X; \text{rac}\{a\}\{b\}\{\mathbb{Z}\}_0]$ , WITH $\text{rac}\{a\}\{b\} \in \{\mathbb{Q}\}^+$ AND $b = a+1$ , AND ENCODING. Discrete Mathematics, Algorithms and Applications, 2012, 04, 1250059.	0.4	4

#	ARTICLE	IF	CITATIONS
73	CYCLIC CODES THROUGH $B[X]$ , $B[X; \text{rac}\{1\}\{k\}Z_{\{0\}}]$ AND $B[X; \text{rac}\{1\}\{p^k\}Z_{\{0\}}]$ : A COMPARISON. Journal of Algebra and Its Applications, 2012, 11, 1250078.	0.3	4
74	Intuitionistic Fuzzy Normal subrings over a non-associative ring. Analele Stiintifice Ale Universitatii Ovidius Constanta, Seria Matematica, 2012, 20, 369-386.	0.1	3
75	Spectrum Distribution in Cognitive Radio: Error Correcting Codes Perspective. International Journal of Distributed Sensor Networks, 2014, 10, 864916.	1.3	3
76	Analyses of S-Box in Image Encryption Applications Based on Fuzzy Decision Making Criterion. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2014, 69, 207-214.	0.7	3
77	Intuitionistic Fuzzy Soft Set Decision Criterion for Selecting Appropriate Block Cipher. 3D Research, 2015, 6, 1.	1.8	3
78	Image Encryption Based on Action of Projective General Linear Group on a Galois Field $GF(2^8)$ . , 2018, , .		3
79	A new transmission model in cognitive radio based on cyclic generalized polynomial codes for bandwidth reduction. Discrete Mathematics, Algorithms and Applications, 2014, 06, 1450059.	0.4	2
80	Application of soft sets to non-associative rings. Journal of Intelligent and Fuzzy Systems, 2016, 30, 1537-1546.	0.8	1
81	Characterization of cyclic codes over $\{ \hat{a}, \neg [X; (1/m)Z_0] \}$ $m > 1$ and efficient encoding decoding algorithm for cyclic codes. International Journal of Computer Mathematics, 2017, 94, 1015-1027.	1.0	1
82	Image reconstruction and text embedding using scan patterns with XOR in graph cut technique. Journal of Intelligent and Fuzzy Systems, 2017, 33, 1097-1104.	0.8	1
83	Serpent Algorithm: An Improvement by $4 \times 4$ S-Box from Finite Chain Ring. , 2018, , .		1
84	An Efficient Image Privacy-Preserving Scheme Based On Mixed Chaotic Map and Compression. International Journal of Image and Graphics, 0, , 2250020.	1.2	1
85	Design of 24-by-24-replacement-matrix: a functionality to astronomical visual. Multimedia Tools and Applications, 2022, 81, 5929.	2.6	1
86	Pseudo random sequences based on elliptic curve subgroups and mathematical model for its application to digital image security. Multimedia Tools and Applications, 0, , 1.	2.6	1
87	Block Cipher's Substitution Box Generation Based on Natural Randomness in Underwater Acoustics and Knight's Tour Chain. Computational Intelligence and Neuroscience, 2022, 2022, 1-17.	1.1	1
88	Primitive to non-primitive BCH codes: An instantaneous path shifting scheme for data transmission. Journal of Algebra and Its Applications, 2018, 17, 1850238.	0.3	0
89	Factorization properties of subrings in trigonometric polynomial rings. Publications De L'Institut Mathematique, 2009, 86, 123-131.	0.3	0
90	Asymmetric Cryptosystem on Matrix Algebra over a Chain Ring. Symmetry, 2021, 13, 45.	1.1	0

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91	The Effect of the Primitive Irreducible Polynomial on the Quality of Cryptographic Properties of Block Ciphers. Security and Communication Networks, 2020, 2020, 1-14.	1.0	0