Tarun K Bhattacharyya

List of Publications by Year in Descending Order

109 papers	723 citations	15 h-index	21 g-index
139 ext. papers	947 ext. citations	2.6 avg, IF	4.93 L-index

#	Paper	IF	Citations
109	Review□MoSe2 Nanostructures and Related Electrodes for Advanced Supercapacitor Developments. *Journal of the Electrochemical Society*, **2022**, 169, 013503	3.9	3
108	Emergence of two-dimensional nanomaterials-based breath sensors for non-invasive detection of diseases. *Sensors and Actuators A: Physical*, **2022**, 338, 113507	3.9	4
107	Design and Analysis of a CMOS Moore Fractal MOM Capacitor With an Application to an RF Active Image Reject Filter. *IEEE Transactions on Electron Devices*, **2021**, 1-7	2.9	
106	Reduced graphene oxide nanosheets for selective picomolar detection of Bovine serum albumin. *IEEE Transactions on Nanobioscience*, **2021**, PP,	3.4	1
105	Microwave synthesized manganese vanadium oxide: High performing electrode material for energy storage. *Materials Today: Proceedings*, **2021**, 50, 74-74	1.4	1
104	Power and area-efficient static current mode logic frequency divider in 180-nm complementary metal-oxide-semiconductor technology. *International Journal of Circuit Theory and Applications*, **2021**, 49, 2396	2	
103	Semi analytical model for electrical transport in single wall carbon nanotube thin film transistors. *Solid-State Electronics*, **2021**, 180, 107988	1.7	
102	A Package-Cognizant CMOS On-chip Antenna for 2.4-GHz Free-space and Implantable Applications. *IEEE Transactions on Antennas and Propagation*, **2021**, 1-1	4.9	1
101	Lignocellulose based Bio-waste Materials derived Activated Porous Carbon as Superior Electrode Materials for High-Performance Supercapacitor. *Journal of Energy Storage*, **2021**, 34, 102229	7.8	19
100	Flexible Room Temperature Ammonia Gas Sensor Based on Low-Temperature Tuning of Functional Groups in Grapheme. *IEEE Transactions on Electron Devices*, **2021**, 68, 3181-3188	2.9	7
99	Pseudo Electron Injection in Amine-Modified MoS□Based Sensor for Humidity Monitoring. *IEEE Transactions on Electron Devices*, **2021**, 68, 5173-5178	2.9	0
98	Opportunities in Device Scaling for 3-nm Node and Beyond: FinFET Versus GAA-FET Versus UFET. *IEEE Transactions on Electron Devices*, **2020**, 67, 2633-2638	2.9	18
97	A Wide Tunable Hysteresis CML Delay Cell for High Frequency. *IEEE Microwave and Wireless Components Letters*, **2020**, 30, 641-644	2.6	
96	Functionalized Gold Nanoparticles Decorated Reduced Graphene Oxide Sheets for Efficient Detection of Mercury. *IEEE Sensors Journal*, **2020**, 20, 5712-5719	4	9
95	A 7.1-GHz 0.7-mW Programmable Counter With Fast EOC Generation in 65-nm CMOS. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2020**, 67, 2397-2401	3.5	1
94	MoS2-based nanosensors in biomedical and environmental monitoring applications. *Electrochimica Acta*, **2020**, 349, 136370	6.7	31
93	Resistive Analysis of Scattering-Dependent Electrical Transport in Single-Wall Carbon-Nanotube Networks. *IEEE Transactions on Electron Devices*, **2020**, 67, 5676-5684	2.9	5

92	ZnO/ $gamma$ -Fe2O3 Heterostructure Toward High-Performance Acetone Sensing. *IEEE Sensors Journal*, **2019**, 19, 8576-8582	4	10
91	Feasibility Studies on Nafion Membrane Actuated Micropump Integrated With Hollow Microneedles for Insulin Delivery Device. *Journal of Microelectromechanical Systems*, **2019**, 28, 987-996	2.5	9
90	Mixed-Phase nc-SiOX:H Interlayer to Improve Light Trapping and Shunt Quenching in a-Si:H Solar Cell. *IEEE Journal of Photovoltaics*, **2019**, 9, 18-25	3.7	0
89	Causes of PLL spurs and their modeling. *Analog Integrated Circuits and Signal Processing*, **2019**, 100, 639-652	1.2	5
88	Spurs in subsampling fractional PLLs. *Analog Integrated Circuits and Signal Processing*, **2019**, 100, 621-632	1.2	1
87	Hierarchical ZnO Nanorods With Tailored Surface Defects for Enhanced Acetone Sensing. *IEEE Sensors Journal*, **2019**, 19, 3601-3608	4	9
86	A Model of Spurs for Delta-Sigma Fractional PLLs **2019**,		2
85	A Miniaturized and Reconfigurable On-chip Slot Antenna for RFID Applications **2019**,		2
84	Spur reduction architecture for multiphase fractional PLLs. *IET Circuits, Devices and Systems*, **2019**, 13, 1169-1180	1.1	4
83	A constant loop bandwidth in delta sigma fractional-N PLL frequency synthesizer with phase noise cancellation. *The Integration VLSI Journal*, **2019**, 65, 175-188	1.4	1
82	Parasitic loss mitigation and photocurrent enhancement in amorphous silicon solar cells by using phosphorous-doped fluorinated μc-SiO:H back reflector. *Journal of Materials Science: Materials in Electronics*, **2018**, 29, 11104-11116	2.1	2
81	Charge pump with reduced current mismatch for reference spur minimization in PLLs. *Analog Integrated Circuits and Signal Processing*, **2018**, 95, 209-221	1.2	3
80	Development of SU-8 hollow microneedles on a silicon substrate with microfluidic interconnects for transdermal drug delivery. *Journal of Micromechanics and Microengineering*, **2018**, 28, 105017	2	13
79	Reduction of Hole Injection Barrier Height at TCO/P Interface Using a-SiO:H Interlayer. *IEEE Journal of Photovoltaics*, **2018**, 8, 8-15	3.7	3
78	Fabrication of BSA-MoS2 Bio-Composite Electronic Devices for Low-Power and Fast-Response Chemical Sensor. *IEEE Sensors Journal*, **2018**, 1-1	4	1
77	Phase noise analysis of proposed PFD and CP switching circuit and its advantages over various PFD/CP switching circuits in phase-locked loops. *The Integration VLSI Journal*, **2018**, 63, 115-129	1.4	1
76	Design and Scalable Fabrication of Hollow SU-8 Microneedles for Transdermal Drug Delivery. *IEEE Sensors Journal*, **2018**, 18, 5635-5644	4	12
75	Tuning Surface Defects of Mesoporous ZnO Nanorods for High Speed Humidity Sensing Application **2018**,		2

74	Glassy carbon microneedles-new transdermal drug delivery device derived from a scalable C-MEMS process. *Microsystems and Nanoengineering*, **2018**, 4, 38	7.7	23
73	Consideration of UFET Architecture for the 5 nm Node and Beyond Logic Transistor. *IEEE Journal of the Electron Devices Society*, **2018**, 6, 1129-1135	2.3	8
72	A fast and efficient constant loop bandwidth with proposed PFD and pulse swallow divider circuit in Fractional-N PLL frequency synthesizer. *Microelectronics Journal*, **2017**, 61, 21-34	1.8	4
71	A novel pulse swallow based frequency divider circuit for a phase-locked loops. *Analog Integrated Circuits and Signal Processing*, **2017**, 92, 55-69	1.2	1
70	Mutated IWO Optimized 4-D Array for Femtocell Cognitive Radio. *IEEE Antennas and Wireless Propagation Letters*, **2017**, 16, 2614-2617	3.8	3
69	Structural comparison of SU-8 microtubes fabricated by direct laser writing and UV lithography **2017**,		2
68	Conjugation of Bovine Serum Albumin With ZnO Nanosphere-A Novel Approach for Ultra-Low Level Mercury Ion Detection. *IEEE Transactions on Nanobioscience*, **2016**, 15, 748-755	3.4	3
67	Implementation of a digital modulator and programmable prescaler divider circuit for a fractional-N PLL **2016**,		1
66	A Compact Yagi-Uda Type Pattern Diversity Antenna Driven by CPW-Fed Pseudomonopole. *IEEE Transactions on Antennas and Propagation*, **2016**, 64, 25-32	4.9	18
65	Low-Field Transport in Bovine Serum Albumin Conjugated ZnO Nanoparticle Networks. *IEEE Electron Device Letters*, **2016**, 37, 100-102	4.4	
64	Synthesis of Bovine Serum Albumin Conjugated With ZnO Nanosphere for High-Speed Humidity Sensing Application. *IEEE Sensors Journal*, **2016**, 16, 1510-1517	4	8
63	A fast automatic frequency and amplitude control LC-VCO circuit with noise filtering technique for a fractional-N PLL frequency synthesizer. *Microelectronics Journal*, **2016**, 52, 134-146	1.8	7
62	A PFD and Charge Pump switching circuit to optimize the output phase noise of the PLL in 0.13- m CMOS **2015**,		5
61	Correction on Effect of Temperature Variation and Packaging on SOI MEMS Inductor With DRIE Trench on Low-Resistivity Substrate [Feb 14 400-407]. *IEEE Transactions on Electron Devices*, **2015**, 62, 236-236	2.9	
60	A 1.3 2.4-GHz 3.1-mW VCO Using Electro-Thermo- Mechanically Tunable Self-Assembled MEMS Inductor on HR Substrate. *IEEE Transactions on Microwave Theory and Techniques*, **2015**, 63, 459-469	4.1	7
59	. *IEEE Sensors Journal*, **2015**, 15, 2947-2950	4	8
58	Electrothermal Characteristics of Electroplated Ni-Based Tunable MEMS Inductor on High-Resistivity Substrate With Displacement Actuator. *IEEE Magnetics Letters*, **2015**, 6, 1-4	1.6	1
57	Ultra-Low Level Detection of L-Histidine Using Solution-Processed ZnO Nanorod on Flexible Substrate. *IEEE Transactions on Nanobioscience*, **2015**, 14, 634-40	3.4	10

56	Efficient design technique for pulse swallow based fractional-N frequency divider **2015**,		5
55	Design, fabrication and characterization of high performance SOI MEMS piezoresistive accelerometers. *Microsystem Technologies*, **2015**, 21, 55-63	1.7	16
54	Spur reduction in frequency synthesizer with an array of switched capacitors. *International Journal of Circuit Theory and Applications*, **2015**, 43, 1815-1831	2	
53	Synthesis of ZnO nanosphere for picomolar level detection of bovine serum albumin. *IEEE Transactions on Nanobioscience*, **2015**, 14, 129-37	3.4	18
52	Prediction of reference spur in frequency synthesisers. *IET Circuits, Devices and Systems*, **2015**, 9, 131-139	1.1	2
51	Theoretical analysis and simulation of SU-8 microneedles for effective skin penetration and drug delivery **2015**,		8
50	Design, modeling and FEM-based simulations of a 1-DoF MEMS bulk micromachined piezoresistive accelerometer. *Microsystem Technologies*, **2015**, 21, 2241-2258	1.7	13
49	. *IEEE Transactions on Electron Devices*, **2014**, 61, 400-407	2.9	6
48	Design of PID controller for ultra-sensitive Nano-g resolution MEMS tunneling accelerometer **2014**,		3
47	Spur reducing architecture of frequency synthesiser using switched capacitors. *IET Circuits, Devices and Systems*, **2014**, 8, 237-245	1.1	2
46	Selective Detection of Hg(II) Over Cd(II) and Pb(II) Ions by DNA Functionalized CNT. *IEEE Sensors Journal*, **2014**, 1-1	4	4
45	Implementation of dynamic element matching DAC and its use for noise cancellation in fractional-N PLL **2014**,		1
44	Electro-thermal analysis of an embedded boron diffused microheater for thruster applications. *Microsystem Technologies*, **2014**, 20, 23-33	1.7	4
43	MEMS Piezoresistive Accelerometers. *Springer Tracts in Mechanical Engineering*, **2014**, 19-34	0.3	2
42	A high o/p resistance, wide swing and perfect current matching charge pump having switching circuit for PLL. *Microelectronics Journal*, **2013**, 44, 649-657	1.8	15
41	Electroplated nickel based micro-machined disk resonators for high frequency applications. *Microsystem Technologies*, **2013**, 19, 525-535	1.7	6
40	Microelectromechanical system cantilever-based frequency doublers. *Journal of Intelligent Material Systems and Structures*, **2013**, 24, 240-246	2.3	7
39	$hbox{MnO}_{2}$ Nanowire Embedded Hydrogen Peroxide Monopropellant MEMS Thruster. *Journal of Microelectromechanical Systems*, **2013**, 22, 406-417	2.5	15

38	Deoxyribonucleic Acid Functionalized Carbon Nanotube Network as Humidity Sensors. *IEEE Sensors Journal*, **2013**, 13, 1806-1816	4	19
37	Parasitic aware impedance matching techniques for RF amplifiers. *Analog Integrated Circuits and Signal Processing*, **2012**, 70, 91-102	1.2	5
36	A 55-mW 300MS/s 8-bit CMOS Parallel Pipeline ADC **2012**,		1
35	Position Mutated Hierarchical Particle Swarm Optimization and its Application in Synthesis of Unequally Spaced Antenna Arrays. *IEEE Transactions on Antennas and Propagation*, **2012**, 60, 3174-3181	4.9	47
34	Spur suppression in frequency synthesizer using switched capacitor array **2012**,		3
33	Analysis of the Pull-In Phenomenon in Microelectromechanical Varactors **2012**,		7
32	A High Speed, Low Jitter and Fast Acquisition CMOS Phase Frequency Detector for Charge Pump PLL. *Lecture Notes in Computer Science*, **2012**, 166-171	0.9	2
31	Influence of flow rate on different properties of diamond-like nanocomposite thin films grown by PECVD. *AIP Advances*, **2012**, 2, 022132	1.5	22
30	Synthesis of thinned uniformly-excited time- modulated linear arrays using an improved invasive weed optimization algorithm **2012**,		3
29	Low Offset, Low Noise, Variable Gain Interfacing Circuit with a Novel Scheme for Sensor Sensitivity and Offset Compensation for MEMS Based, Wheatstone Bridge Type, Resistive Smart Sensor **2011**,		2
28	Design of a Low Power, High Speed Complementary Input Folded Regulated Cascode OTA for a Parallel Pipeline ADC **2011**,		7
27	A comparative study between a micromechanical cantilever resonator and MEMS-based passives for band-pass filtering application **2011**,		1
26	A CMOS bandgap reference with high PSRR and improved temperature stability for system-on-chip applications **2011**,		1
25	Design of low power parallel pipeline ADC in 180nm standard CMOS process **2011**,		1
24	Low power 120 KSPS 12bit SAR ADC with a novel switch control method for internal CDAC **2011**,		4
23	Design of a CMOS Bandgap Reference with Low Temperature Coefficient and High Power Supply Rejection Performance. *International Journal of VLSI Design & Communication Systems*, **2011**, 2, 139-150	0.3	2
22	Comparative analysis of a variety of high-Q capacitively transduced bulk-mode microelectromechanical resonator geometries. *Microsystem Technologies*, **2011**, 17, 1361-1371	1.7	2
21	Microelectromechanical resonators for radio frequency communication applications. *Microsystem Technologies*, **2011**, 17, 1557-1580	1.7	40

20	A top-down design methodology of MEMS varactor for RF applications based on a substrate-induced capacitive model. *Microsystem Technologies*, **2011**, 17, 1589-1598	1.7	
19	Pseudo Concurrent Quad-Band LNA Operating in 900 MHz/1.8 GHz and 900 MHz/2.4 GHz Bands for Multi-standard Wireless Receiver **2011**,		3
18	Optimized Stage Ratio of Tapered CMOS Inverters for Minimum Power and Mismatch Jitter Product **2010**,		3
17	A monopropellant hydrazine MEMS thruster for attitude control of nanosatellites **2010**,		1
16	Characterization of diamond-like nanocomposite thin films grown by plasma enhanced chemical vapor deposition. *Journal of Applied Physics*, **2010**, 107, 124320	2.5	46
15	Fully Concurrent Dual-Band LNA Operating in 900 MHz/2.4 GHz Bands for Multi-standard Wireless Receiver with Sub-2dB Noise Figure **2010**,		6
14	PSO-based output matching network for concurrent dual-band LNA **2010**,		7
13	The evolution of graphene-based electronic devices. *International Journal of Smart and Nano Materials*, **2010**, 1, 201-223	3.6	29
12	A concurrent low-area dual band 0.9/2.4 GHz LNA in 0.13μm RF CMOS technology for multi-band wireless receiver **2010**,		4
11	A gain boosted fully concurrent dual-band interstage matched LNA operating in 900 MHz/2.4 GHz with sub-2dB Noise Figure **2010**,		4
10	Pseudo Concurrent Quad-Band LNA Operating in 900 MHz/1.8 GHz and 900 MHz/2.4 GHz Bands for Multi-standard Wireless Receiver **2010**,		2
9	Micromechanical radial-contour mode disk resonator for a CMOS-MEMS oscillator **2010**,		2
8	Highly sensitive tunneling accelerometer for low actuation voltage operation **2010**,		2
7	A technique to improve the linearization of frequency–voltage characteristic of LC-VCO. *Analog Integrated Circuits and Signal Processing*, **2010**, 62, 253-257	1.2	3
6	An experimental analysis of electrostatically vibrated array of polysilicon cantilevers. *Microsystem Technologies*, **2010**, 16, 2131-2145	1.7	5
5	Use of TSK type fuzzy system based fitness function approximation for efficient optimization of low-profile wideband diversity PIFA by PSO **2009**,		1
4	A Nonlinear Transient Analysis of Regenerative Frequency Dividers. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2007**, 54, 2646-2660	3.9	8
3	Broad band behavioral modeling of on-chip RF inductors and transformers. *Microwave and Optical Technology Letters*, **2007**, 49, 2212-2216	1.2	1

2	7.95mW 2.4GHz Fully-Integrated CMOS Integer N Frequency Synthesizer **2007**,	6
1	Synthesis of BSA-Conjugated ZnO Nanoparticle for Pb2+ Sensing Applications. *IETE Journal of Research*,1-5	0.9