

Mattia Butta

List of Publications by Year in descending order

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| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | 1-pT Noise Fluxgate Magnetometer for Geomagnetic Measurements and Unshielded Magnetocardiography. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 2552-2560. | 4.7 | 43 |
| 2 | Reduction of Noise in Fundamental Mode Orthogonal Fluxgates by Optimization of Excitation Current. IEEE Transactions on Magnetics, 2011, 47, 3748-3751. | 2.1 | 37 |
| 3 | Sources of Noise in a Magnetometer Based on Orthogonal Fluxgate Operated in Fundamental Mode. IEEE Transactions on Magnetics, 2012, 48, 1508-1511. | 2.1 | 31 |
| 4 | Orthogonal Fluxgate With Annealed Wire Core. IEEE Transactions on Magnetics, 2013, 49, 62-65. | 2.1 | 29 |
| 5 | Fluxgate effect in twisted magnetic wire. Journal of Magnetism and Magnetic Materials, 2008, 320, e974-e978. | 2.3 | 27 |
| 6 | Crossfield Sensitivity in AMR Sensors. IEEE Transactions on Magnetics, 2009, 45, 4514-4517. | 2.1 | 22 |
| 7 | Temperature Dependence of Offset and Sensitivity in Orthogonal Fluxgate Operated in Fundamental Mode. IEEE Transactions on Magnetics, 2012, 48, 4103-4106. | 2.1 | 20 |
| 8 | Low-Noise Orthogonal Fluxgate Using Flipped Current Joule Annealing. IEEE Transactions on Magnetics, 2019, 55, 1-6. | 2.1 | 18 |
| 9 | Method for Offset Suppression in Orthogonal Fluxgate with Annealed Wire Core. Sensor Letters, 2014, 12, 1295-1298. | 0.4 | 18 |
| 10 | M - H loop tracer based on digital signal processing for low frequency characterization of extremely thin magnetic wires. Review of Scientific Instruments, 2009, 80, 083906. | 1.3 | 17 |
| 11 | Sensitivity and Noise of Wire-Core Transverse Fluxgate. IEEE Transactions on Magnetics, 2010, 46, 654-657. | 2.1 | 15 |
| 12 | Magnetic Microwires With Field-Induced Helical Anisotropy for Coil-Less Fluxgate. IEEE Transactions on Magnetics, 2010, 46, 2562-2565. | 2.1 | 15 |
| 13 | Low Offset Driftâ€“Low-Noise Orthogonal Fluxgate With Synchronized Polarity Flipping. IEEE Transactions on Magnetics, 2017, 53, 1-6. | 2.1 | 14 |
| 14 | Bi-Metallic Magnetic Wire With Insulating Layer as Core for Orthogonal Fluxgate. IEEE Transactions on Magnetics, 2009, 45, 4443-4446. | 2.1 | 13 |
| 15 | Characterisation of magnetic wires for fluxgate cores. Sensors and Actuators A: Physical, 2008, 145-146, 23-28. | 4.1 | 12 |
| 16 | Fluxgate Offset Study. IEEE Transactions on Magnetics, 2014, 50, 1-4. | 2.1 | 12 |
| 17 | Influence of Magnetostriction of NiFe Electroplated Film on the Noise of Fluxgate. IEEE Transactions on Magnetics, 2014, 50, 1-4. | 2.1 | 11 |
| 18 | Effect of Terminations in Magnetic Wire on the Noise of Orthogonal Fluxgate Operated in Fundamental Mode. IEEE Transactions on Magnetics, 2012, 48, 1477-1480. | 2.1 | 10 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | Two-Domain Model for Orthogonal Fluxgate. IEEE Transactions on Magnetics, 2008, 44, 3992-3995. | 2.1 | 9 |
| 20 | Model for coil-less fluxgate. Sensors and Actuators A: Physical, 2009, 156, 269-273. | 4.1 | 9 |
| 21 | Electroplated FeNi ring cores for fluxgates with field induced radial anisotropy. Journal of Applied Physics, 2015, 117, 17A722. | 2.5 | 9 |
| 22 | Dependence of the noise of an orthogonal fluxgate on the composition of its amorphous wire-core. AIP Advances, 2020, 10, . | 1.3 | 9 |
| 23 | Double Coil-Less Fluxgate in Bridge Configuration. IEEE Transactions on Magnetics, 2010, 46, 532-535. | 2.1 | 8 |
| 24 | Very low frequency noise reduction in orthogonal fluxgate. AIP Advances, 2018, 8, . | 1.3 | 8 |
| 25 | Reduction of magnetic noise limits of orthogonal fluxgate sensor. AIP Advances, 2021, 11, . | 1.3 | 8 |
| 26 | Preface [Selected Papers from the 9th European Magnetic Sensors and Actuators Conference (EMSA) Tj ETQq0 0 0 rgBT /Overlock 10 Tf | 2.1 | 7 |
| 27 | Orthogonal Fluxgate Magnetometers. Smart Sensors, Measurement and Instrumentation, 2017, , 63-102. | 0.6 | 7 |
| 28 | Crossfield effect in magnetic sensors. , 2009, , . | | 6 |
| 29 | Two sources of cross-field error in racetrack fluxgate. Journal of Applied Physics, 2010, 107, . | 2.5 | 6 |
| 30 | Noise correlation in fundamental mode orthogonal fluxgate. Journal of Applied Physics, 2012, 111, 07E517. | 2.5 | 6 |
| 31 | Magnetostriction Offset of Fluxgate Sensors. IEEE Transactions on Magnetics, 2015, 51, 1-4. | 2.1 | 6 |
| 32 | Microwire Electroplated Under Torsion as Core for Coil-Less Fluxgate. Sensor Letters, 2013, 11, 50-52. | 0.4 | 6 |
| 33 | Magnetic Anisotropy and Giant Magnetoimpedance in NiFe Electroplated on Cu Wires. Sensor Letters, 2013, 11, 53-55. | 0.4 | 6 |
| 34 | Temperature Stability of AMR Sensors. Sensor Letters, 2013, 11, 74-77. | 0.4 | 6 |
| 35 | Linearity of Pulse Excited Coil-Less Fluxgate. IEEE Transactions on Magnetics, 2009, 45, 4455-4458. | 2.1 | 5 |
| 36 | Effect of Amorphous Wire Core Diameter on the Noise of an Orthogonal Fluxgate. IEEE Transactions on Magnetics, 2018, 54, 1-5. | 2.1 | 5 |

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|----|---|-----|-----------|
| 37 | Characterisation of Magnetic Wires for Fluxgate Cores. , 2007, , . | | 4 |
| 38 | Pulse excitation of coil-less fluxgate. , 2008, , . | | 3 |
| 39 | Effect of Stress-Induced Anisotropy on the Noise of Ring-Core Fluxgate. IEEE Transactions on Magnetics, 2015, 51, 1-4. | 2.1 | 3 |
| 40 | Orthogonal Fluxgate Gradiometer With Multiple Coil Pairs. IEEE Transactions on Magnetics, 2018, 54, 1-5. | 2.1 | 3 |
| 41 | 1 pT-noise fluxgate magnetometer design and its performance in geomagnetic measurements. , 2019, , . | | 3 |
| 42 | Coil-less fluxgate operated in feedback mode by means of dc current. , 2010, , . | | 2 |
| 43 | Stress-Induced Anisotropy in Electroplated FeNi Racetrack Fluxgate Cores. IEEE Transactions on Magnetics, 2014, 50, 1-4. | 2.1 | 2 |
| 44 | Magnetic gradiometer with self compensation of offset drift. , 2016, , . | | 2 |
| 45 | Towards digital fundamental mode orthogonal fluxgate. , 2016, , . | | 2 |
| 46 | Effect of Saccharin in Electroplated NiFe Alloy on the Noise of Fluxgate. IEEE Transactions on Magnetics, 2016, 52, 1-4. | 2.1 | 2 |
| 47 | Algorithm for Noise Reduction in Output Signal of Race-track Core Fluxgate. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2007, 3, 1307-1310. | 0.4 | 2 |
| 48 | Origin of the Crossfield Effect in AMR Sensors. Sensor Letters, 2009, 7, 259-262. | 0.4 | 2 |
| 49 | Offset drift in orthogonal fluxgate and importance of closed-loop operation. Sensors and Actuators A: Physical, 2022, 342, 113583. | 4.1 | 2 |
| 50 | Magnetic microwires for orthogonal fluxgates electroplated with pulse current. Procedia Engineering, 2010, 5, 985-988. | 1.2 | 1 |
| 51 | Noise dependence on temperature in fluxgates with electroplated core. Sensors and Actuators A: Physical, 2016, 244, 310-313. | 4.1 | 1 |
| 52 | Effect of Electroplated Ni _x Fe _{1-x} Composition on the Field-Induced Anisotropy. IEEE Transactions on Magnetics, 2016, 52, 1-4. | 2.1 | 1 |
| 53 | Effect of Thickness of Electroplated NiFe Cores on the Noise of Fluxgates. Acta Physica Polonica A, 2017, 131, 756-758. | 0.5 | 1 |
| 54 | Race-track fluxgate sensor scaling versus noise. , 2021, , . | | 1 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 55 | An Improved Composition of CoFeSiB Alloy for Orthogonal Fluxgates. <i>Sensors</i> , 2022, 22, 2162. | 3.8 | 1 |
| 56 | Orthogonal Fluxgates. , 0, , . | | 0 |
| 57 | Electroplated Multi-ring Core Planar Fluxgate. <i>Procedia Engineering</i> , 2014, 87, 1176-1179. | 1.2 | 0 |
| 58 | Fine Smoothing of Conductive Substrate for Permalloy Layer Electroplating. <i>Acta Physica Polonica A</i> , 2014, 126, 150-151. | 0.5 | 0 |
| 59 | Noise Dependence on Temperature in Fluxgates with Electroplated Core. <i>Procedia Engineering</i> , 2015, 120, 1221-1224. | 1.2 | 0 |
| 60 | Orthogonal fluxgates based on magnetic microwires. , 2020, , 869-888. | | 0 |
| 61 | Investigation of Crossfield Effect in AMR Sensors. <i>Sensor Letters</i> , 2009, 7, 322-324. | 0.4 | 0 |
| 62 | Orthogonal fluxgate sensor noise depends on annealing-induced magnetostriction of the core. , 2021, , . | | 0 |