# Nikolai Gorelenkov

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 66 papers | 1,990 citations | 201674 27 h-index | 254184 43 g-index |
| 66 all docs | 66 docs citations | 66 times ranked | 866 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Energetic particle physics in fusion research in preparation for burning plasma experiments. Nuclear Fusion, 2014, 54, 125001. | 3.5 | 200 |
| 2 | Fast particle finite orbit width and Larmor radius effects on low-n toroidicity induced AlfvÃ©n eigenmode excitation. Physics of Plasmas, 1999, 6, 2802-2807. | 1.9 | 99 |
| 3 | AlfvÃ©n eigenmodes driven by AlfvÃ©nic beam ions in JT-60U. Nuclear Fusion, 2001, 41, 603-612. | 3.5 | 93 |
| 4 | Collective fast ion instability-induced losses in National Spherical Tokamak Experiment. Physics of Plasmas, 2006, 13, 056109. | 1.9 | 89 |
| 5 | On the collisional damping of TAE-modes on trapped electrons in tokamaks. Physica Scripta, 1992, 45, 163-166. | 2.5 | 81 |
| 6 | Alfven cyclotron instability and ion cyclotron emission. Nuclear Fusion, 1995, 35, 1743-1752. | 3.5 | 77 |
| 7 | Beam anisotropy effect on AlfvÃ©n eigenmode stability in ITER-like plasmas. Nuclear Fusion, 2005, 45, 226-237. | 3.5 | 68 |
| 8 | Modeling fast-ion transport during toroidal AlfvÃ©n eigenmode avalanches in National Spherical Torus Experiment. Physics of Plasmas, 2009, 16, 122505. | 1.9 | 59 |
| 9 | Excitation of AlfvÃ©n cyclotron instability by charged fusion products in tokamaks. Physics of Plasmas, 1995, 2, 1961-1971. | 1.9 | 58 |
| 10 | Self-consistent equilibrium model of low aspect-ratio toroidal plasma with energetic beam ions. Physics of Plasmas, 2003, 10, 3240-3251. | 1.9 | 53 |
| 11 | Theory and observations of high frequency AlfvÂn eigenmodes in low aspect ratio plasmas. Nuclear Fusion, 2003, 43, 228-233. | 3.5 | 53 |
| 12 | High spatial sampling global mode structure measurements via multichannel reflectometry in NSTX. Plasma Physics and Controlled Fusion, 2011, 53, 105001. | 2.1 | 48 |
| 13 | Electron cyclotron heating can drastically alter reversed shear AlfvÃ©n eigenmode activity in DIII-D through finite pressure effects. Nuclear Fusion, 2016, 56, 112007. | 3.5 | 47 |
| 14 | Energetic ion transport by abrupt large-amplitude event induced by negative-ion-based neutral beam injection in the JT-60U. Nuclear Fusion, 2005, 45, 1474-1480. | 3.5 | 44 |
| 15 | Compressional AlfvÃ©n eigenmode instability in NSTX. Nuclear Fusion, 2002, 42, 977-985. | 3.5 | 42 |
| 16 | Observation of compressional AlfvÃ©n eigenmodes (CAE) in a conventional tokamak. Nuclear Fusion, 2006, 46, 324-334. | 3.5 | 42 |
| 17 | Fast ion loss in a â€˜sea-of-TAEâ€™. Nuclear Fusion, 2006, 46, S926-S932. | 3.5 | 42 |
| 18 | Computation of AlfvÃ¨n eigenmode stability and saturation through a reduced fast ion transport model in the TRANSP tokamak transport code. Plasma Physics and Controlled Fusion, 2017, 59, 095008. | 2.1 | 41 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Prediction of nonlinear evolution character of energetic-particle-driven instabilities. Nuclear Fusion, 2017, 57, 054001. | 3.5 | 40 |
| 20 | Verification and validation of integrated simulation of energetic particles in fusion plasmas. Nuclear Fusion, 2019, 59, 066006. | 3.5 | 40 |
| 21 | Fast-ion energy loss during TAE avalanches in the National Spherical Torus Experiment. Nuclear Fusion, 2013, 53, 013006. | 3.5 | 36 |
| 22 | Coupling of Neutral-Beam-Driven Compressional AlfvÃ©n Eigenmodes to Kinetic AlfvÃ©n Waves in NSTX Tokamak and Energy Channeling. Physical Review Letters, 2015, 115, 015001. | 7.8 | 36 |
| 23 | Interpretation of the finite pressure gradient effects in the reversed shear AlfvÃ©n eigenmode theory. Plasma Physics and Controlled Fusion, 2006, 48, 1255-1269. | 2.1 | 33 |
| 24 | Study of chirping toroidicity-induced AlfvÃ©n eigenmodes in the National Spherical Torus Experiment. Nuclear Fusion, 2012, 52, 094001. | 3.5 | 33 |
| 25 | Suppression of AlfvÃ©n Modes on the National Spherical Torus Experiment Upgrade with Outboard Beam Injection. Physical Review Letters, 2017, 118, 265001. | 7.8 | 31 |
| 26 | Phenomenology of compressional AlfvÃ©n eigenmodes. Physics of Plasmas, 2004, 11, 3653-3659. | 1.9 | 28 |
| 27 | Internal amplitude, structure and identification of compressional and global AlfvÃ©n eigenmodes in NSTX. Nuclear Fusion, 2013, 53, 043017. | 3.5 | 28 |
| 28 | Anomalous electron transport due to multiple high frequency beam ion driven AlfvÃ©n eigenmodes. Nuclear Fusion, 2010, 50, 084012. | 3.5 | 25 |
| 29 | Observation of global AlfvÃ©n eigenmode avalanche events on the National Spherical Torus Experiment. Nuclear Fusion, 2012, 52, 043001. | 3.5 | 25 |
| 30 | Emission in the ion cyclotron range of frequencies (ICE) on NSTX and NSTX-U. Physics of Plasmas, 2019, 26, . | 1.9 | 23 |
| 31 | Discrete compressional AlfvÃ©n eigenmode spectrum in tokamaks. Nuclear Fusion, 2006, 46, S933-S941. | 3.5 | 22 |
| 32 | Nonlinear simulations of beam-driven compressional AlfvÃ©n eigenmodes in NSTX. Physics of Plasmas, 2017, 24, . | 1.9 | 22 |
| 33 | Theory and observation of the onset of nonlinear structures due to eigenmode destabilization by fast ions in tokamaks. Physics of Plasmas, 2017, 24, 122508. | 1.9 | 20 |
| 34 | Compressional AlfvÃ©n eigenmode dispersion in low aspect ratio plasmas. Physics of Plasmas, 2002, 9, 3483-3488. | 1.9 | 19 |
| 35 | Non-linear modulation of short wavelength compressional AlfvÃ©n eigenmodes. Physics of Plasmas, 2013, 20, 042112. | 1.9 | 18 |
| 36 | Resonance broadened quasi-linear (RBQ) model for fast ion distribution relaxation due to AlfvÃ©nic eigenmodes. Nuclear Fusion, 2018, 58, 082016. | 3.5 | 18 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Parametric dependence of fast-ion transport events on the National Spherical Torus Experiment. Nuclear Fusion, 2014, 54, 093007. | 3.5 | 17 |
| 38 | Resonance frequency broadening of wave-particle interaction in tokamaks due to AlfvÃ©nic eigenmode. Nuclear Fusion, 2018, 58, 082017. | 3.5 | 16 |
| 39 | Effects of energetic particle phase space modifications by instabilities on integrated modeling. Nuclear Fusion, 2016, 56, 112005. | 3.5 | 15 |
| 40 | Comparing the line broadened quasilinear model to Vlasov code. Physics of Plasmas, 2014, 21, 032119. | 1.9 | 14 |
| 41 | Analytical nonlinear collisional dynamics of near-threshold eigenmodes. Nuclear Fusion, 2019, 59, 044003. | 3.5 | 14 |
| 42 | Resonances between high energy particles and ideal magnetohydrodynamic modes in tokamaks. Physics of Plasmas, 2018, 25, . | 1.9 | 13 |
| 43 | Stochastic orbit loss of neutral beam ions from NSTX due to toroidal AlfvÃ©n eigenmode avalanches. Nuclear Fusion, 2013, 53, 013009. | 3.5 | 12 |
| 44 | Reduced energetic particle transport models enable comprehensive time-dependent tokamak simulations. Nuclear Fusion, 2019, 59, 106013. | 3.5 | 12 |
| 45 | Validating predictive models for fast ion profile relaxation in burning plasmas. Nuclear Fusion, 2016, 56, 112015. | 3.5 | 10 |
| 46 | Study of the likelihood of AlfvÃ©nic mode bifurcation in NSTX and predictions for ITER baseline scenarios. Nuclear Fusion, 2018, 58, 082013. | 3.5 | 10 |
| 47 | Collisional resonance function in discrete-resonance quasilinear plasma systems. Physics of Plasmas, 2019, 26, . | 1.9 | 10 |
| 48 | Analytic stability boundaries for compressional and global AlfvÃ©n eigenmodes driven by fast ions. I. Interaction via ordinary and anomalous cyclotron resonances. Physics of Plasmas, 2020, 27, 022513. | 1.9 | 10 |
| 49 | Saturation of AlfvÃ©n modes in tokamaks. Plasma Physics and Controlled Fusion, 2016, 58, 115007. | 2.1 | 9 |
| 50 | Global AlfvÃ©n eigenmode scaling and suppression: experiment and theory. Nuclear Fusion, 2018, 58, 082022. | 3.5 | 9 |
| 51 | Magnetosonic eigenmodes near the magnetic field well in a spherical torus. Physics of Plasmas, 1998, 5, 4104-4106. | 1.9 | 8 |
| 52 | Energetic-particle-modified global AlfvÃ©n eigenmodes. Physics of Plasmas, 2018, 25, . | 1.9 | 8 |
| 53 | Modeling of chirping toroidal AlfvÃ©n eigenmodes in NSTX. Physics of Plasmas, 2019, 26, 092103. | 1.9 | 8 |
| 54 | Collisional enhancement of energetic particle AlfvÃ©nic resonance width in tokamaks. Physics of Plasmas, 2019, 26, 032508. | 1.9 | 8 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Simulation of AlfvÃ©nic avalanche onset in NSTX. Physics of Plasmas, 2020, 27, 022117. | 1.9 | 8 |
| 56 | Microturbulence-mediated route for energetic ion transport and AlfvÃ©nic mode amplitude oscillations in tokamaks. Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 386, 126944. | 2.1 | 8 |
| 57 | Verification and application of resonance broadened quasi-linear (RBQ) model with multiple AlfvÃ©nic instabilities. Physics of Plasmas, 2019, 26, 072507. | 1.9 | 7 |
| 58 | Phase-space dynamics of AlfvÃ©n mode chirping. Physics of Plasmas, 2020, 27, 052108. | 1.9 | 7 |
| 59 | Analytic stability boundaries for compressional and global AlfvÃ©n eigenmodes driven by fast ions. II. Interaction via Landau resonance. Physics of Plasmas, 2020, 27, 022512. | 1.9 | 5 |
| 60 | Hybrid simulations of sub-cyclotron compressional and global AlfvÃ©n eigenmode stability in spherical tokamaks. Nuclear Fusion, 2021, 61, 086016. | 3.5 | 5 |
| 61 | Stochastic effects on phase-space holes and clumps in kinetic systems near marginal stability. Nuclear Fusion, 2018, 58, 082015. | 3.5 | 4 |
| 62 | Plasma equilibrium with fast ion orbit width, pressure anisotropy, and toroidal flow effects. Nuclear Fusion, 2018, 58, 082031. | 3.5 | 4 |
| 63 | Simulating energetic particle losses in JET plasmas with a reverse integration biasing scheme. Nuclear Fusion, 2022, 62, 026026. | 3.5 | 3 |
| 64 | On properties of compressional AlfvÂn eigenmode instability driven by superAlfvÂnic ions. Nuclear Fusion, 2002, 42, 1216-1220. | 3.5 | 2 |
| 65 | Instability in the Frequency Range of Alfvén Eigenmodes Driven by Negative-Ion-Based Neutral Beams in JT-60U. Journal of Plasma and Fusion Research, 2005, 81, 547-552. | 0.4 | 1 |
| 66 | Magnetic Confinement Fusionâ€”Plasma Theory: Energetic Particle Physics. , 2021, , 459-478. | | 0 |