

# Susan Vierra

## List of Publications by Year in descending order

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Version: 2024-02-01

39  
papers

2,455  
citations

279798

23  
h-index

302126

39  
g-index

40  
all docs

40  
docs citations

40  
times ranked

1248  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | Ion thermal transport in the H-mode edge transport barrier on DIII-D. <i>Physics of Plasmas</i> , 2022, 29, .  | 1.9 | 9         |
| 2  | Interpreting radial correlation Doppler reflectometry using gyrokinetic simulations. <i>Plasma Physics and Controlled Fusion</i> , 2022, 64, 055019.   | 2.1 | 9         |
| 3  | Testing predictions of electron scale turbulent pedestal transport in two DIII-D ELMy H-modes. <i>Nuclear Fusion</i> , 2021, 61, 056005.   | 3.5 | 30        |
| 4  | Spectral treatment of gyrokinetic profile curvature. <i>Plasma Physics and Controlled Fusion</i> , 2020, 62, 042001.   | 2.1 | 10        |
| 5  | Quantitative comparisons of electron-scale turbulence measurements in NSTX via synthetic diagnostics for high- $k$ scattering. <i>Plasma Physics and Controlled Fusion</i> , 2020, 62, 075001.                                 | 2.1 | 7         |
| 6  | Validation of gyrokinetic simulations in NSTX and projections for high- $k$ turbulence measurements in NSTX-U. <i>Physics of Plasmas</i> , 2020, 27, 122505.   | 1.9 | 4         |
| 7  | Validation of gyrokinetic simulations of a National Spherical Torus eXperiment H-mode plasma and comparisons with a high- $k$ scattering synthetic diagnostic. <i>Plasma Physics and Controlled Fusion</i> , 2019, 61, 115015. | 2.1 | 6         |
| 8  | Multiscale-optimized plasma turbulence simulation on petascale architectures. <i>Computers and Fluids</i> , 2019, 188, 125-135.  | 2.5 | 9         |
| 9  | Role of Microtearing Turbulence in DIII-D High Bootstrap Current Fraction Plasmas. <i>Physical Review Letters</i> , 2019, 123, 225002.   | 7.8 | 26        |
| 10 | Impact of centrifugal drifts on ion turbulent transport. <i>Physics of Plasmas</i> , 2018, 25, 032301.   | 1.9 | 20        |
| 11 | Spectral treatment of gyrokinetic shear flow. <i>Journal of Computational Physics</i> , 2018, 356, 448-457.  | 3.8 | 13        |
| 12 | CGYRO Performance on Power9 CPUs and Volta GPUs. <i>Lecture Notes in Computer Science</i> , 2018, , 365-372.   | 1.3 | 0         |
| 13 | Implications of advanced collision operators for gyrokinetic simulation. <i>Plasma Physics and Controlled Fusion</i> , 2017, 59, 045005.   | 2.1 | 25        |
| 14 | Validation of nonlinear gyrokinetic simulations of L- and I-mode plasmas on Alcator C-Mod. <i>Physics of Plasmas</i> , 2017, 24, .   | 1.9 | 21        |
| 15 | Gradient-driven flux-tube simulations of ion temperature gradient turbulence close to the non-linear threshold. <i>Physics of Plasmas</i> , 2016, 23, .  | 1.9 | 21        |
| 16 | The role of zonal flows in the saturation of multi-scale gyrokinetic turbulence. <i>Physics of Plasmas</i> , 2016, 23, .   | 1.9 | 91        |
| 17 | Fluid moments of the nonlinear Landau collision operator. <i>Physics of Plasmas</i> , 2016, 23, .  | 1.9 | 8         |
| 18 | Multi-scale gyrokinetic simulations: Comparison with experiment and implications for predicting turbulence and transport. <i>Physics of Plasmas</i> , 2016, 23, .  | 1.9 | 59        |

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|----|--|-----|-----------|
| 19 | A high-accuracy Eulerian gyrokinetic solver for collisional plasmas. Journal of Computational Physics, 2016, 324, 73-93.   | 3.8 | 112       |
| 20 | Multi-scale gyrokinetic simulation of tokamak plasmas: enhanced heat loss due to cross-scale coupling of plasma turbulence. Nuclear Fusion, 2016, 56, 014004.  | 3.5 | 100       |
| 21 | Nonlinear gyrokinetic simulations of the I-mode high confinement regime and comparisons with   | 1.9 | 16        |
| 22 | The Gaussian radial basis function method for plasma kinetic theory. Physics Letters, Section A: General, Atomic and Solid State Physics, 2015, 379, 2735-2739.                                      | 2.1 | 5         |
| 23 | Synergistic cross-scale coupling of turbulence in a tokamak plasma. Physics of Plasmas, 2014, 21, .  | 1.9 | 52        |
| 24 | 20 years of research on the Alcator C-Mod tokamak. Physics of Plasmas, 2014, 21, .   | 1.9 | 88        |
| 25 | Multi-scale gyrokinetic simulation of Alcator C-Mod tokamak discharges. Physics of Plasmas, 2014, 21, .  | 1.9 | 29        |
| 26 | Progress in simulating turbulent electron thermal transport in NSTX. Nuclear Fusion, 2013, 53, 093022.   | 3.5 | 67        |
| 27 | Testing gyrokinetic simulations of electron turbulence. Nuclear Fusion, 2012, 52, 063028.  | 3.5 | 15        |
| 28 | Quantitative comparison of experimental impurity transport with nonlinear gyrokinetic simulation in an Alcator C-Mod L-mode plasma. Nuclear Fusion, 2012, 52, 063002.                                | 3.5 | 60        |
| 29 | Full linearized Fokker-Planck collisions in neoclassical transport simulations. Plasma Physics and Controlled Fusion, 2012, 54, 015015.  | 2.1 | 154       |
| 30 | Electromagnetic Transport from Microtearing Mode Turbulence. Physical Review Letters, 2011, 106, 155004.   | 7.8 | 118       |
| 31 | Resolving electron scale turbulence in spherical tokamaks with flow shear. Physics of Plasmas, 2011, 18, .   | 1.9 | 40        |
| 32 | Implementation and application of two synthetic diagnostics for validating simulations of core tokamak turbulence. Physics of Plasmas, 2009, 16, .   | 1.9 | 119       |
| 33 | An Eulerian method for the solution of the multi-species drift-kinetic equation. Plasma Physics and Controlled Fusion, 2009, 51, 075018.   | 2.1 | 68        |
| 34 | Studies of turbulence and transport in Alcator C-Mod ohmic plasmas with phase contrast imaging and comparisons with gyrokinetic simulations. Plasma Physics and Controlled Fusion, 2009, 51, 065006. | 2.1 | 34        |
| 35 | A unified method for operator evaluation in local Grad-Shafranov plasma equilibria. Plasma Physics and Controlled Fusion, 2009, 51, 105009.  | 2.1 | 70        |
| 36 | Kinetic calculation of neoclassical transport including self-consistent electron and impurity dynamics. Plasma Physics and Controlled Fusion, 2008, 50, 095010.                                      | 2.1 | 277       |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 37 | Gyrokinetic theory and simulation of angular momentum transport. <i>Physics of Plasmas</i> , 2007, 14, 122507.   | 1.9 | 80        |
| 38 | Velocity-space resolution, entropy production, and upwind dissipation in Eulerian gyrokinetic simulations. <i>Physics of Plasmas</i> , 2006, 13, 032310. | 1.9 | 39        |
| 39 | An Eulerian gyrokinetic-Maxwell solver. <i>Journal of Computational Physics</i> , 2003, 186, 545-581.  | 3.8 | 543       |