# Veit Elser

## List of Publications by Year in Descending Order



| | | | |
|---|---|---|---|
| 80 papers | 6,488 citations | 33 h-index | 80 g-index |
| 86 ext. papers | 7,112 ext. citations | 6 avg, IF | 6 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 80 | Learning without loss **2021**, 2021, | | 2 |
| 79 | Charge-order-enhanced capacitance in semiconductor moiré superlattices. *Nature Nanotechnology*, **2021**, 16, 1068-1072 | 28.7 | 9 |
| 78 | Reconstructing cellular automata rules from observations at nonconsecutive times. *Physical Review E*, **2021**, 104, 034301 | 2.4 | 0 |
| 77 | An enhanced formulation for solving graph coloring problems with the Douglas–Rachford algorithm. *Journal of Global Optimization*, **2020**, 77, 383-403 | 1.5 | 3 |
| 76 | Correlated insulating states at fractional fillings of moiré superlattices. *Nature*, **2020**, 587, 214-218 | 50.4 | 82 |
| 75 | Phase Imaging beyond the Diffraction Limit with Electron Ptychography. *Microscopy and Microanalysis*, **2019**, 25, 6-7 | 0.5 | 1 |
| 74 | Electron ptychography of 2D materials to deep sub-ångström resolution. *Nature*, **2018**, 559, 343-349 | 50.4 | 269 |
| 73 | The Complexity of Bit Retrieval. *IEEE Transactions on Information Theory*, **2018**, 64, 412-428 | 2.8 | 8 |
| 72 | Solving protein structure from sparse serial microcrystal diffraction data at a storage-ring synchrotron source. *IUCrJ*, **2018**, 5, 548-558 | 4.7 | 10 |
| 71 | Breaking the Rayleigh Limit in Thick Samples with Multi-slice Ptychography. *Microscopy and Microanalysis*, **2018**, 24, 192-193 | 0.5 | 3 |
| 70 | Benchmark Problems for Phase Retrieval. *SIAM Journal on Imaging Sciences*, **2018**, 11, 2429-2455 | 1.9 | 15 |
| 69 | Enhanced Resolution from Full-Field Ptychography with an Electron Microscope Pixel Array Detector. *Microscopy and Microanalysis*, **2017**, 23, 438-439 | 0.5 | |
| 68 | Theory and Practice of Diffractometry on Single Tungsten Atoms using Electron Microscope Pixel Array Detectors. *Microscopy and Microanalysis*, **2017**, 23, 444-445 | 0.5 | 1 |
| 67 | Formation pathways of mesoporous silica nanoparticles with dodecagonal tiling. *Nature Communications*, **2017**, 8, 252 | 17.4 | 31 |
| 66 | Matrix product constraints by projection methods. *Journal of Global Optimization*, **2017**, 68, 329-355 | 1.5 | 9 |
| 65 | Reconstructing three-dimensional protein crystal intensities from sparse unoriented two-axis X-ray diffraction patterns. *Journal of Applied Crystallography*, **2017**, 50, 985-993 | 3.8 | 3 |
| 64 | Protein crystal structure from non-oriented, single-axis sparse X-ray data. *IUCrJ*, **2016**, 3, 43-50 | 4.7 | 6 |

| | | | |
|---|---|---|---|
| 63 | Quantitative Information from Cryo Electron Tomography of Energy Materials. *Microscopy and Microanalysis*, **2016**, 22, 1284-1285 | 0.5 | |
| 62 | Coherent diffraction of single Rice Dwarf virus particles using hard X-rays at the Linac Coherent Light Source. *Scientific Data*, **2016**, 3, 160064 | 8.2 | 53 |
| 61 | : an implementation of the expand-maximize-compress algorithm for single-particle imaging. *Journal of Applied Crystallography*, **2016**, 49, 1320-1335 | 3.8 | 37 |
| 60 | Exotic Self-trapped States of an Electron in Superfluid Helium. *Journal of Low Temperature Physics*, **2015**, 180, 363-376 | 1.3 | 4 |
| 59 | Determination of crystallographic intensities from sparse data. *IUCrJ*, **2015**, 2, 29-34 | 4.7 | 20 |
| 58 | Quantitative Structural Analysis of Fuel Cell Catalysts and Carbon Supports by TEM and Cryo-STEM Tomography. *Microscopy and Microanalysis*, **2015**, 21, 799-800 | 0.5 | |
| 57 | Breaking the Crowther limit: combining depth-sectioning and tilt tomography for high-resolution, wide-field 3D reconstructions. *Ultramicroscopy*, **2014**, 140, 26-31 | 3.1 | 32 |
| 56 | Compressed Sensing, Sparsity, and the Reliability of Tomographic Reconstructions. *Microscopy and Microanalysis*, **2014**, 20, 796-797 | 0.5 | 3 |
| 55 | Real-Space x-ray tomographic reconstruction of randomly oriented objects with sparse data frames. *Optics Express*, **2014**, 22, 2403-13 | 3.3 | 37 |
| 54 | Phonon contribution to the entropy of hard-sphere crystals. *Physical Review E*, **2014**, 89, 052404 | 2.4 | 8 |
| 53 | Hierarchical porous polymer scaffolds from block copolymers. *Science*, **2013**, 341, 530-4 | 33.3 | 214 |
| 52 | Toward unsupervised single-shot diffractive imaging of heterogeneous particles using X-ray free-electron lasers. *Optics Express*, **2013**, 21, 28729-42 | 3.3 | 17 |
| 51 | Direct phasing of nanocrystal diffraction. *Acta Crystallographica Section A: Foundations and Advances*, **2013**, 69, 559-69 | | 23 |
| 50 | Self-terminating diffraction gates femtosecond X-ray nanocrystallography measurements. *Nature Photonics*, **2012**, 6, 35-40 | 33.9 | 266 |
| 49 | Solving structure with sparse, randomly-oriented x-ray data. *Optics Express*, **2012**, 20, 13129-37 | 3.3 | 33 |
| 48 | Time-resolved protein nanocrystallography using an X-ray free-electron laser. *Optics Express*, **2012**, 20, 2706-16 | 3.3 | 190 |
| 47 | Upper Bound on the Packing Density of Regular Tetrahedra and Octahedra. *Discrete and Computational Geometry*, **2011**, 46, 799-818 | 0.6 | 13 |
| 46 | Strategies for processing diffraction data from randomly oriented particles. *Ultramicroscopy*, **2011**, 111, 788-92 | 3.1 | 30 |

| | | | |
|---|---|---|---|
| 45 | Three-dimensional structure from intensity correlations. *New Journal of Physics*, **2011**, 13, 123014 | 2.9 | 22 |
| 44 | X-Ray Diffraction Microscopy. *Annual Review of Condensed Matter Physics*, **2010**, 1, 237-255 | 19.7 | 63 |
| 43 | Method for dense packing discovery. *Physical Review E*, **2010**, 82, 056707 | 2.4 | 10 |
| 42 | Recovering magnetization distributions from their noisy diffraction data. *Physical Review E*, **2010**, 82, 061128 | 2.4 | 13 |
| 41 | Laminating Lattices with Symmetrical Glue. *Discrete and Computational Geometry*, **2010**, 43, 363-374 | 0.6 | 2 |
| 40 | Dense Periodic Packings of Tetrahedra with Small Repeating Units. *Discrete and Computational Geometry*, **2010**, 44, 245-252 | 0.6 | 44 |
| 39 | Reconstruction algorithm for single-particle diffraction imaging experiments. *Physical Review E*, **2009**, 80, 026705 | 2.4 | 203 |
| 38 | Noise Limits on Reconstructing Diffraction Signals From Random Tomographs. *IEEE Transactions on Information Theory*, **2009**, 55, 4715-4722 | 2.8 | 21 |
| 37 | Divide and concur: a general approach to constraint satisfaction. *Physical Review E*, **2008**, 78, 036706 | 2.4 | 40 |
| 36 | Reconstruction of an object from its symmetry-averaged diffraction pattern. *Acta Crystallographica Section A: Foundations and Advances*, **2008**, 64, 273-9 | | 64 |
| 35 | Searching with iterated maps. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 418-23 | 11.5 | 122 |
| 34 | Sloppy-model universality class and the Vandermonde matrix. *Physical Review Letters*, **2006**, 97, 150601 | 7.4 | 82 |
| 33 | Deconstructing the energy landscape: constraint-based algorithms for folding heteropolymers. *Physical Review E*, **2006**, 73, 026702 | 2.4 | 12 |
| 32 | Biological imaging by soft x-ray diffraction microscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **2005**, 102, 15343-6 | 11.5 | 441 |
| 31 | Random projections and the optimization of an algorithm for phase retrieval. *Journal of Physics A*, **2003**, 36, 2995-3007 | | 25 |
| 30 | The Mermin Fixed Point. *Foundations of Physics*, **2003**, 33, 1691-1698 | 1.2 | 3 |
| 29 | Solution of the crystallographic phase problem by iterated projections. *Acta Crystallographica Section A: Foundations and Advances*, **2003**, 59, 201-9 | | 79 |
| 28 | Phase retrieval by iterated projections. *Journal of the Optical Society of America A: Optics and Image Science, and Vision*, **2003**, 20, 40-55 | 1.8 | 445 |

| | | | |
|---|---|---|---|
| 27 | Dynamics of immersed molecules in superfluids. *Journal of Chemical Physics*, **2002**, 117, 3878-3885 | 3.9 | 4 |
| 26 | Indivisibility of Electron Bubbles in Helium. *Journal of Low Temperature Physics*, **2001**, 123, 7-23 | 1.3 | 11 |
| 25 | Ab initio based modeling of i-AlPdMn. *Physical Review B*, **2000**, 61, 9336-9344 | 3.3 | 27 |
| 24 | X-ray phase determination by the principle of minimum charge. *Acta Crystallographica Section A: Foundations and Advances*, **1999**, 55, 489-499 | | 12 |
| 23 | A Model of Quasicrystal Growth. *Physical Review Letters*, **1997**, 79, 1066-1069 | 7.4 | 40 |
| 22 | Quantum dimer calculations on the spin-1/2 kagome-acute Heisenberg antiferromagnet. *Physical Review B*, **1995**, 51, 8318-8324 | 3.3 | 109 |
| 21 | Equations of motion for superfluids. *Physical Review E*, **1995**, 51, 5688-5694 | 2.4 | 10 |
| 20 | Thermal evolution of spin-polarons. *Physical Review Letters*, **1995**, 75, 4083-4085 | 7.4 | 3 |
| 19 | Quasicrystalline minimal surfaces. *Physical Review B*, **1994**, 49, 9977-9980 | 3.3 | 6 |
| 18 | Kagome-acute spin-1/2 antiferromagnets in the hyperbolic plane. *Physical Review B*, **1993**, 48, 13647-13653 | 3.3 | 38 |
| 17 | Numerical studies of a 36-site kagome-acute antiferromagnet. *Physical Review B*, **1993**, 47, 5459-5462 | 3.3 | 151 |
| 16 | High resolution electron microscopy of Al-Cu-Fe quasicrystals: Atomic structure and modeling. *Journal of Materials Research*, **1993**, 8, 24-37 | 2.5 | 7 |
| 15 | Colliding waves on a relativistic string. *American Journal of Physics*, **1992**, 60, 726-732 | 0.7 | 4 |
| 14 | Energetics of point defects in the two-dimensional Wigner crystal. *Physical Review B*, **1991**, 43, 623-629 | 3.3 | 34 |
| 13 | Long-range order in a three-dimensional random-tiling quasicrystal. *Physical Review B*, **1991**, 43, 3423-3433 | 3.3 | 59 |
| 12 | Infinite Ud,Up ground state of the extended Hubbard model. *Physical Review B*, **1990**, 41, 2557-2559 | 3.3 | 20 |
| 11 | Ground state of a mobile vacancy in a quantum antiferromagnet: Small-cluster study. *Physical Review B*, **1990**, 41, 6715-6723 | 3.3 | 66 |
| 10 | Stability of the ferromagnetic state with respect to a single spin flip: Variational calculations for the U=. *Physical Review B*, **1990**, 41, 4842-4845 | 3.3 | 48 |

| | | | |
|---|---|---|---|
| 9 | Numerical studies of antiferromagnetism on a Kagomé net. *Physical Review B*, **1990**, 42, 8436-8444 | 3.3 | 189 |
| 8 | Nuclear antiferromagnetism in a registered 3He solid. *Physical Review Letters*, **1989**, 62, 2405-2408 | 7.4 | 262 |
| 7 | Simple variational wave functions for two-dimensional Heisenberg spin-(1/2 antiferromagnets. *Physical Review Letters*, **1988**, 60, 2531-2534 | 7.4 | 438 |
| 6 | Spinning "snowballs" in superfluid 4He. *Physical Review Letters*, **1988**, 61, 177-179 | 7.4 | 11 |
| 5 | Strain accumulation in quasicrystalline solids. *Physical Review Letters*, **1988**, 61, 2774-2777 | 7.4 | 25 |
| 4 | Quasicrystal structure of (Al, Zn)49Mg32. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **1986**, 53, L59-L66 | | 319 |
| 3 | Crystal and quasicrystal structures in Al-Mn-Si alloys. *Physical Review Letters*, **1985**, 55, 2883-2886 | 7.4 | 778 |
| 2 | Indexing problems in quasicrystal diffraction. *Physical Review B*, **1985**, 32, 4892-4898 | 3.3 | 686 |
| 1 | A model for the pseudorotation of cycloheptane. *Chemical Physics Letters*, **1983**, 96, 276-278 | 2.5 | 8 |