

Frantz Martinache

List of Publications by Year in descending order

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71
papers

2,047
citations

304743

22
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265206

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71
docs citations

71
times ranked

1440
citing authors

#	ARTICLE	IF	CITATIONS
1	The Subaru Coronagraphic Extreme Adaptive Optics System: Enabling High-Contrast Imaging on Solar-System Scales. Publications of the Astronomical Society of the Pacific, 2015, 127, 890-910.	3.1	279
2	MAPPING THE SHORES OF THE BROWN DWARF DESERT. II. MULTIPLE STAR FORMATION IN TAURUS-AURIGA. Astrophysical Journal, 2011, 731, 8.	4.5	260
3	Mapping the Shores of the Brown Dwarf Desert. I. Upper Scorpius. Astrophysical Journal, 2008, 679, 762-782.	4.5	176
4	KERNEL PHASE IN FIZEAU INTERFEROMETRY. Astrophysical Journal, 2010, 724, 464-469.	4.5	90
5	On-Sky Speckle Nulling Demonstration at Small Angular Separation with SCExAO. Publications of the Astronomical Society of the Pacific, 2014, 126, 565-572.	3.1	70
6	No Clear, Direct Evidence for Multiple Protoplanets Orbiting LkCa 15: LkCa 15 bcd are Likely Inner Disk Signals. Astrophysical Journal Letters, 2019, 877, L3.	8.3	67
7	Images of embedded Jovian planet formation at a wide separation around AB Aurigae. Nature Astronomy, 2022, 6, 751-759.	10.1	63
8	Efficient injection from large telescopes into single-mode fibres: Enabling the era of ultra-precision astronomy. Astronomy and Astrophysics, 2017, 604, A122.	5.1	61
9	The Asymmetric Pupil Fourier Wavefront Sensor. Publications of the Astronomical Society of the Pacific, 2013, 125, 422-430.	3.1	57
10	The VAMPIRES instrument: imaging the innermost regions of protoplanetary discs with polarimetric interferometry. Monthly Notices of the Royal Astronomical Society, 2015, 447, 2894-2906.	4.4	44
11	Sparse-aperture adaptive optics. , 2006, , .		40
12	SCExAO/CHARIS Near-infrared Direct Imaging, Spectroscopy, and Forward-Modeling of ϵ And b: A Likely Young, Low-gravity Superjovian Companion. Astronomical Journal, 2018, 156, 291.	4.7	39
13	Speckle Control with a Remapped-Pupil PIAA Coronagraph. Publications of the Astronomical Society of the Pacific, 2012, 124, 1288-1294.	3.1	38
14	ARTIFICIAL INCOHERENT SPECKLES ENABLE PRECISION ASTROMETRY AND PHOTOMETRY IN HIGH-CONTRAST IMAGING. Astrophysical Journal Letters, 2015, 813, L24.	8.3	38
15	Precision Masses of the Low-Mass Binary System GJ 623. Astrophysical Journal, 2007, 661, 496-501.	4.5	33
16	SCExAO/CHARIS Direct Imaging Discovery of a 20 au Separation, Low-mass Ratio Brown Dwarf Companion to an Accelerating Sun-like Star κ^1 . Astrophysical Journal Letters, 2020, 904, L25.	8.3	33
17	The MKID Exoplanet Camera for Subaru SCExAO. Publications of the Astronomical Society of the Pacific, 2020, 132, 125005.	3.1	32
18	On-Sky Demonstration of Low-Order Wavefront Sensing and Control with Focal Plane Phase Mask Coronagraphs. Publications of the Astronomical Society of the Pacific, 2015, 127, 857-869.	3.1	27

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19	ESTABLISHING $\hat{\pm}$ Oph AS A PROTOTYPE ROTATOR: IMPROVED ASTROMETRIC ORBIT. <i>Astrophysical Journal</i> , 2011, 726, 104.	4.5	25
20	DANCING IN THE DARK: NEW BROWN DWARF BINARIES FROM KERNEL PHASE INTERFEROMETRY. <i>Astrophysical Journal</i> , 2013, 767, 110.	4.5	25
21	VISUAL ORBIT OF THE LOW-MASS BINARY GJ 164 AB. <i>Astrophysical Journal</i> , 2009, 695, 1183-1190.	4.5	24
22	Conceptual design of the Coronagraphic High Angular Resolution Imaging Spectrograph (CHARIS) for the Subaru telescope. <i>Proceedings of SPIE</i> , 2012, , .	0.8	24
23	A demonstration of wavefront sensing and mirror phasing from the image domain. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 440, 125-133.	4.4	24
24	Calibration of the island effect: Experimental validation of closed-loop focal plane wavefront control on Subaru/SCEXAO. <i>Astronomy and Astrophysics</i> , 2018, 610, A18.	5.1	23
25	Multi-epoch Direct Imaging and Time-variable Scattered Light Morphology of the HD 163296 Protoplanetary Disk. <i>Astrophysical Journal</i> , 2019, 875, 38.	4.5	23
26	SCEXAO, an instrument with a dual purpose: perform cutting-edge science and develop new technologies. , 2018, , .		23
27	Kernel-nulling for a robust direct interferometric detection of extrasolar planets. <i>Astronomy and Astrophysics</i> , 2018, 619, A87.	5.1	20
28	Isochronal age-mass discrepancy of young stars: SCEXAO/CHARIS integral field spectroscopy of the HIP 79124 triple system. <i>Astronomy and Astrophysics</i> , 2019, 622, A42.	5.1	20
29	Phase-Induced Amplitude Apodization on Centrally Obscured Pupils: Design and First Laboratory Demonstration for the Subaru Telescope Pupil. <i>Publications of the Astronomical Society of the Pacific</i> , 2009, 121, 1232-1244.	3.1	19
30	Closed-loop focal plane wavefront control with the SCEXAO instrument. <i>Astronomy and Astrophysics</i> , 2016, 593, A33.	5.1	18
31	Kernel phase imaging with VLT/NACO: high-contrast detection of new candidate low-mass stellar companions at the diffraction limit. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 486, 639-654.	4.4	18
32	SCEXAO/CHARIS Near-IR High-contrast Imaging and Integral Field Spectroscopy of the HIP 79977 Debris Disk. <i>Astronomical Journal</i> , 2018, 156, 279.	4.7	17
33	SCEXAO/MEC and CHARIS Discovery of a Low-mass, 6 au Separation Companion to HIP 109427 Using Stochastic Speckle Discrimination and High-contrast Spectroscopy*. <i>Astronomical Journal</i> , 2021, 162, 44.	4.7	17
34	On-sky verification of Fast and Furious focal-plane wavefront sensing: Moving forward toward controlling the island effect at Subaru/SCEXAO. <i>Astronomy and Astrophysics</i> , 2020, 639, A52.	5.1	17
35	Laboratory and On-sky Validation of the Shaped Pupil Coronagraph's Sensitivity to Low-order Aberrations With Active Wavefront Control. <i>Publications of the Astronomical Society of the Pacific</i> , 2018, 130, 044505.	3.1	16
36	Focal-plane wavefront sensing with the vector-Apodizing Phase Plate. <i>Astronomy and Astrophysics</i> , 2019, 632, A48.	5.1	16

#	ARTICLE	IF	CITATIONS
37	SCEXAO/CHARIS High-contrast Imaging of Spirals and Darkening Features in the HD 34700 A Protoplanetary Disk. <i>Astrophysical Journal</i> , 2020, 900, 135.	4.5	15
38	Visible and Near-infrared Laboratory Demonstration of a Simplified Pyramid Wavefront Sensor. <i>Publications of the Astronomical Society of the Pacific</i> , 2019, 131, 044503.	3.1	14
39	The Palomar kernel-phase experiment: testing kernel phase interferometry for ground-based astronomical observations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 455, 1647-1653.	4.4	13
40	SCEXAO/CHARIS Near-infrared Integral Field Spectroscopy of the HD 15115 Debris Disk. <i>Astronomical Journal</i> , 2020, 160, 163.	4.7	12
41	On-sky performance and recent results from the Subaru coronagraphic extreme adaptive optics system. , 2020, , .		11
42	A High-precision Technique to Correct for Residual Atmospheric Dispersion in High-contrast Imaging Systems. <i>Publications of the Astronomical Society of the Pacific</i> , 2016, 128, 124404.	3.1	10
43	An H-band Vector Vortex Coronagraph for the Subaru Coronagraphic Extreme Adaptive Optics System. <i>Publications of the Astronomical Society of the Pacific</i> , 2018, 130, 035001.	3.1	10
44	The compute and control for adaptive optics (CACAO) real-time control software package. , 2018, , .		10
45	The SCEXAO high contrast imager: transitioning from commissioning to science. <i>Proceedings of SPIE</i> , 2016, , .	0.8	9
46	Kernel-phase detection limits. <i>Astronomy and Astrophysics</i> , 2019, 630, A120.	5.1	9
47	Precision Photometric and Astrometric Calibration Using Alternating Satellite Speckles. <i>Astronomical Journal</i> , 2020, 159, 250.	4.7	9
48	Construction and status of the CHARIS high contrast imaging spectrograph. <i>Proceedings of SPIE</i> , 2014, , .	0.8	8
49	Kernel-phase analysis: Aperture modeling prescriptions that minimize calibration errors. <i>Astronomy and Astrophysics</i> , 2020, 636, A72.	5.1	8
50	Recovering saturated images for high dynamic kernel-phase analysis. <i>Astronomy and Astrophysics</i> , 2019, 623, A164.	5.1	7
51	High-resolution survey for planetary companions to young stars in the Taurus molecular cloud. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 498, 1382-1396.	4.4	7
52	Kernel nullers for an arbitrary number of apertures. <i>Astronomy and Astrophysics</i> , 2020, 642, A202.	5.1	7
53	Design of the CHARIS integral field spectrograph for exoplanet imaging. <i>Proceedings of SPIE</i> , 2013, , .	0.8	6
54	Measurements of Speckle Lifetimes in Near-infrared Extreme Adaptive Optics Images for Optimizing Focal Plane Wavefront Control. <i>Publications of the Astronomical Society of the Pacific</i> , 2018, 130, 104502.	3.1	6

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55	A Chromaticity Analysis and PSF Subtraction Techniques for SCExAO/CHARIS Data. <i>Astronomical Journal</i> , 2019, 158, 36.	4.7	6
56	First on-sky demonstration of spatial Linear Dark Field Control with the vector-Apodizing Phase Plate at Subaru/SCExAO. <i>Astronomy and Astrophysics</i> , 2021, 653, A42.	5.1	6
57	Spectrally dispersed Fourier-phase analysis for redundant apertures. <i>Proceedings of SPIE</i> , 2016, , .	0.8	5
58	Subaru Near-infrared Imaging Polarimetry of Misaligned Disks around the SR 24 Hierarchical Triple System*. <i>Astronomical Journal</i> , 2020, 159, 12.	4.7	5
59	Angular differential kernel phases. <i>Astronomy and Astrophysics</i> , 2020, 636, A21.	5.1	5
60	Performance and early science with the Subaru Coronagraphic Extreme Adaptive Optics project. , 2019, , .		5
61	Multiband Imaging of the HD 36546 Debris Disk: A Refined View from SCExAO/CHARIS*. <i>Astronomical Journal</i> , 2021, 162, 293.	4.7	5
62	On-sky speckle nulling with the Subaru Coronagraphic Extreme AO (SCExAO) instrument. <i>Proceedings of SPIE</i> , 2014, , .	0.8	4
63	Atmospheric Characterization and Further Orbital Modeling of $\hat{\rho}$ Andromeda b. <i>Astronomical Journal</i> , 2020, 159, 40.	4.7	4
64	SCExAO: a testbed for developing high-contrast imaging technologies for ELTs. , 2021, , .		3
65	High-resolution Near-infrared Polarimetry and Submillimeter Imaging of FS Tau A: Possible Streamers in Misaligned Circumbinary Disk System. <i>Astrophysical Journal</i> , 2020, 889, 140.	4.5	3
66	On-sky Closed-loop Correction of Atmospheric Dispersion for High-contrast Coronagraphy and Astrometry. <i>Publications of the Astronomical Society of the Pacific</i> , 2018, 130, 025004.	3.1	2
67	Mid-infrared photometry of the T Tauri triple system with kernel phase interferometry. <i>Astronomy and Astrophysics</i> , 2021, 646, A36.	5.1	2
68	Subaru Coronagraphic Extreme-AO (SCExAO) wavefront control: current status and ongoing developments. , 2018, , .		2
69	Image-plane fringe tracker for adaptive-optics assisted long baseline interferometry. , 2018, , .		2
70	First on-sky closed loop measurement and correction of atmospheric dispersion. <i>Proceedings of SPIE</i> , 2016, , .	0.8	1
71	Wavefront sensing using non-redundant aperture masking interferometry: tests and validation on Subaru/SCExAO. , 2021, , .		0