

Alexander V Fedorov

List of Publications by Year in descending order

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71
papers

2,380
citations

394421

19
h-index

477307

29
g-index

73
all docs

73
docs citations

73
times ranked

455
citing authors

#	ARTICLE	IF	CITATIONS
1	Transition and Stability of High-Speed Boundary Layers. Annual Review of Fluid Mechanics, 2011, 43, 79-95.	25.0	480
2	Stabilization of Hypersonic Boundary Layers by Porous Coatings. AIAA Journal, 2001, 39, 605-610.	2.6	216
3	Receptivity of a high-speed boundary layer to acoustic disturbances. Journal of Fluid Mechanics, 2003, 491, 101-129.	3.4	173
4	Prehistory of Instability in a Hypersonic Boundary Layer. Theoretical and Computational Fluid Dynamics, 2001, 14, 359-375.	2.2	167
5	High-Speed Boundary-Layer Instability: Old Terminology and a New Framework. AIAA Journal, 2011, 49, 1647-1657.	2.6	143
6	The extended GrtlerHmmerlin model for linear instability of three-dimensional incompressible swept attachment-line boundary layer flow. Journal of Fluid Mechanics, 2003, 487, 271-313.	3.4	85
7	Stabilization of a Hypersonic Boundary Layer Using a Wavy Surface. AIAA Journal, 2013, 51, 1203-1210.	2.6	82
8	Second-mode attenuation and cancellation by porous coatings in a high-speed boundary layer. Journal of Fluid Mechanics, 2013, 726, 312-337.	3.4	71
9	Problems in high speed flow prediction relevant to control. , 1998, , .		69
10	Initial-Value Problem for Hypersonic Boundary-Layer Flows. AIAA Journal, 2003, 41, 379-389.	2.6	63
11	Acoustic properties of rarefied gases inside pores of simple geometries. Journal of the Acoustical Society of America, 2005, 117, 3402-3411.	1.1	63
12	Spontaneous radiation of sound by instability of a highly cooled hypersonic boundary layer. Journal of Fluid Mechanics, 2016, 805, 188-206.	3.4	54
13	Receptivity of a supersonic boundary layer to solid particulates. Journal of Fluid Mechanics, 2013, 737, 105-131.	3.4	53
14	High-Speed Boundary-Layer Stability on a Cone with Localized Wall Heating or Cooling. AIAA Journal, 2015, 53, 2512-2524.	2.6	52
15	Acoustic Properties of Porous Coatings for Hypersonic Boundary-Layer Control. AIAA Journal, 2010, 48, 267-274.	2.6	46
16	Evolution of Disturbances in Entropy Layer on Blunted Plate in Supersonic Flow. AIAA Journal, 2004, 42, 89-94.	2.6	44
17	Direct Numerical Simulation of Wave Packets in Hypersonic Compression-Corner Flow. AIAA Journal, 2016, 54, 2034-2050.	2.6	40
18	Stabilization of a hypersonic boundary layer using a wavy surface. , 2012, , .		39

#	ARTICLE	IF	CITATIONS
19	Numerical modelling of supersonic boundary-layer receptivity to solid particulates. Journal of Fluid Mechanics, 2019, 859, 949-971.	3.4	34
20	Hypersonic Laminar Flow Control Using a Porous Coating of Random Microstructure. , 2006, , .		27
21	Receptivity of high-speed boundary layer to solid particulates. , 2011, , .		24
22	Receptivity of High-Speed Boundary Layers to Kinetic Fluctuations. AIAA Journal, 2017, 55, 2335-2348.	2.6	23
23	Receptivity of Hypersonic Boundary Layer to Acoustic Disturbances Scattered by Surface Roughness. , 2003, , .		22
24	Prediction and Control of Laminar-turbulent Transition in High-speed Boundary-Layer Flows. Procedia IUTAM, 2015, 14, 3-14.	1.2	22
25	Stability of Hypersonic Boundary Layer on Porous Wall with Regular Microstructure. , 2003, , .		19
26	Instability of Hypersonic Boundary Layer on a Wall with Resonating Micro-Cavities. , 2011, , .		19
27	Numerical simulation of turbulent spots generated by unstable wave packets in a hypersonic boundary layer. Computers and Fluids, 2018, 162, 26-38.	2.5	18
28	Stability analysis of high-speed boundary-layer flow with gas injection. , 2014, , .		16
29	Direct Numerical Simulation of Supersonic Boundary-Layer Stabilization by Porous Coatings. , 2007, , .		15
30	Stability of Temporally Evolving Supersonic Boundary Layers over Micro-Cavities for Ultrasonic Absorptive Coatings. , 2008, , .		15
31	Branching of Discrete Modes in High-Speed Boundary Layers and Terminology Issues. , 2010, , .		15
32	Temporal Stability of Hypersonic Boundary Layer on Porous Wall: Comparison of Theory with DNS. , 2010, , .		13
33	Interaction of Acoustic Disturbances with Micro-Cavities for Ultrasonic Absorptive Coatings. , 2008, , .		12
34	Plasma Control of Forebody Nose Vortex Symmetry Breaking. , 2003, , .		11
35	Parametric Studies of Hypersonic Laminar Flow Control Using a Porous Coating of Regular Microstructure. , 2008, , .		11
36	Alternate Designs of Ultrasonic Absorptive Coatings for Hypersonic Boundary Layer Control. , 2009, , .		10

#	ARTICLE	IF	CITATIONS
37	Receptivity of High Speed Boundary Layer to Acoustic Disturbances (Invited). , 2002, , .		9
38	Reflection of Acoustic Disturbances from a Porous Coating of Regular Microstructure. , 2008, , .		9
39	Experimental Study of Transition in Hypersonic Boundary Layer on Ultrasonically Absorptive Coating with Random Porosity. , 2008, , .		8
40	Stabilization of a hypersonic boundary layer by ultrasound-absorbing coatings with a regular microstructure. Doklady Physics, 2004, 49, 763-767.	0.7	7
41	Direct Numerical Simulation of supersonic Boundary Layer Stabilization Using Grooved Wavy Surface. , 2010, , .		7
42	Investigations of laminar-turbulent transition on a sharp cone with localized heating or cooling in high-speed flow. , 2013, , .		6
43	Spontaneous radiation of sound by instability of a highly cooled hypersonic boundary layer. , 2016, , .		6
44	The Mack's amplitude method revisited. Theoretical and Computational Fluid Dynamics, 0, , 1.	2.2	6
45	Evolution of Disturbances in Entropy Layer on a Blunted Plate in Supersonic Flow. , 2002, , .		5
46	Receptivity of Supersonic Boundary Layer on a Blunt Plate to Acoustic Disturbances. , 2004, , .		5
47	Stabilization of High-Speed Boundary Layer Using Porous Coatings of Various Thicknesses. , 2010, , .		5
48	Analytical Modeling of Transonic Store Separation from a Cavity. , 2003, , .		4
49	Theoretical Modeling of Two-Body Interaction in Supersonic Flow. AIAA Journal, 2010, 48, 258-266.	2.6	4
50	Effects of injection on heat transfer and the boundary-layer instability for a hypersonic blunt body configuration. International Journal of Heat and Mass Transfer, 2020, 149, 119197.	4.8	4
51	Theoretical modeling of TS-dominated transition induced by solid particulates. , 2013, , .		3
52	Modeling of Aerodynamic Forcing Induced by Surface Dielectric Barrier Discharge. , 2011, , .		2
53	Prediction of cross-flow dominated transition on a supersonic swept wing. , 2012, , .		2
54	Numerical simulation of the effect of local volume energy supply on high-speed boundary layer stability. Computers and Fluids, 2014, 100, 130-137.	2.5	2

#	ARTICLE	IF	CITATIONS
55	The Mack's amplitude method revisited. , 2021, , .		2
56	Thin Shock Layer Model for a Jet in a Hypersonic Cross Flow. , 2005, , .		1
57	Conical Navier-Stokes Modeling of Forebody Vortex Symmetry Plasma Control. , 2007, , .		1
58	Modeling of Plasma Flow Control Over a High-Speed Delta Wing. , 2009, , .		1
59	Theoretical Fluid Mechanics. AIAA Journal, 2010, 48, 257-257.	2.6	1
60	Numerical and theoretical modeling of supersonic boundary-layer receptivity to temperature spottiness. , 2011, , .		1
61	DNS and the theory of receptivity of a supersonic boundary layer to free-stream disturbances. Journal of Physics: Conference Series, 2011, 318, 032020.	0.4	1
62	Numerical Simulation of Three-Dimensional Wave Packet in Supersonic Flow over a Compression Corner. , 2015, , .		1
63	Receptivity of High-Speed Boundary Layers to Kinetic Fluctuations. , 2016, , .		1
64	Numerical Simulation of Gas Injection Effect on Boundary Layer Instability for Space Vehicles. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2022, , 107-115.	0.2	1
65	Instability of the attachment line boundary layer in a supersonic swept flow. Journal of Fluid Mechanics, 2022, 933, .	3.4	1
66	On Numerical Prediction of the Stability of Hypersonic Boundary-Layer Flow Over a Row of Microcavities. , 2003, , 1793.		0
67	Theoretical Analysis of Acoustic Instability in Hypersonic Shock Layer over a Porous Wall. , 2004, , .		0
68	Theoretical Modeling of Two-Body Interaction in Supersonic Flow. , 2008, , .		0
69	Effect of local volume energy supply on high-speed boundary layer stability. , 2013, , .		0
70	Numerical Study of Wave Trains in Supersonic Flow over a Compression Corner. , 2016, , .		0
71	Numerical Study of Crossflow Jet Generated Instabilities in a High-Speed Boundary Layer. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2022, , 621-630.	0.2	0