

# Martien A Hulsen

## List of Publications by Year in descending order

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95  
papers

2,562  
citations

186265

28  
h-index

214800

47  
g-index

99  
all docs

99  
docs citations

99  
times ranked

1690  
citing authors

#	ARTICLE	IF	CITATIONS
1	Three-Dimensional Finite Element Modeling Of A Viscous Fluid Flowing Through An External Gear Pump. <i>Macromolecular Theory and Simulations</i> , 2022, 31, 2100046.	1.4	1
2	Constitutive framework for rheologically complex interfaces with an application to elastoviscoplasticity. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2022, 301, 104726.	2.4	6
3	Numerical Modeling of the Blend Morphology Evolution in Twin-Screw Extruders. <i>Macromolecular Theory and Simulations</i> , 2022, 31, .	1.4	0
4	The effect of non-Newtonian behavior on contact formation in an external gear pump. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2022, , 104818.	2.4	1
5	Numerical simulations of cell sorting through inertial microfluidics. <i>Physics of Fluids</i> , 2022, 34, .	4.0	9
6	Finite Element Modeling of a Viscous Fluid Flowing through an External Gear Pump. <i>Macromolecular Theory and Simulations</i> , 2021, 30, 2000060.	1.4	5
7	A 2D hysteretic DEM model for arbitrarily shaped polygonal particles. <i>Powder Technology</i> , 2021, 378, 327-338.	4.2	5
8	Numerical simulations of the polydisperse droplet size distribution of disperse blends in complex flow. <i>Rheologica Acta</i> , 2021, 60, 187-207.	2.4	4
9	Die shape optimization for extrudate swell using feedback control. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2021, 293, 104552.	2.4	7
10	Numerical stability of four positive (semi-)definite reformulations for viscoelastic fluid models in benchmark flows. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2021, 297, 104666.	2.4	1
11	Numerical Study of the Effect of Thixotropy on Extrudate Swell. <i>Polymers</i> , 2021, 13, 4383.	4.5	7
12	On the validity of 2D analysis of non-isothermal sintering in SLS. <i>Chemical Engineering Science</i> , 2020, 213, 115365.	3.8	8
13	Behavior of viscoelastic models with thermal fluctuations. <i>European Physical Journal E</i> , 2020, 43, 24.	1.6	6
14	Benchmark solutions for flows with rheologically complex interfaces. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2020, 286, 104436.	2.4	12
15	Computational analysis of the extrudate shape of three-dimensional viscoelastic, non-isothermal extrusion flows. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2020, 282, 104310.	2.4	18
16	Numerical analysis of the crystallization kinetics in SLS. <i>Additive Manufacturing</i> , 2020, 33, 101126.	3.0	6
17	Viscoelastic fluid flow simulation using the contravariant deformation formulation. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2019, 270, 23-35.	2.4	14
18	A numerical model for the development of the morphology of disperse blends in complex flow. <i>Rheologica Acta</i> , 2019, 58, 79-95.	2.4	4

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19	Numerical simulations of viscoelastic film stretching and retraction. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2019, 266, 118-126.	2.4	5
20	Fully implicit interface tracking for a viscous drop under simple shear. <i>Computers and Fluids</i> , 2019, 184, 91-98.	2.5	2
21	A Numerical Study of Particle Migration and Sedimentation in Viscoelastic Couette Flow. <i>Fluids</i> , 2019, 4, 25.	1.7	6
22	Simulation of bubble growth during the foaming process and mechanics of the solid foam. <i>Rheologica Acta</i> , 2019, 58, 131-144.	2.4	13
23	Numerical simulations on the dynamics of a spheroid in a viscoelastic liquid in a wide-slit microchannel. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2019, 263, 33-41.	2.4	27
24	The deformation fields method revisited: Stable simulation of instationary viscoelastic fluid flow using integral models. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2018, 262, 68-78.	2.4	6
25	Fluid Flow and Distributive Mixing Analysis in the Cavity Transfer Mixer. <i>Macromolecular Theory and Simulations</i> , 2018, 27, 1700075.	1.4	3
26	Shear-Induced Migration of Rigid Particles near an Interface between a Newtonian and a Viscoelastic Fluid. <i>Langmuir</i> , 2018, 34, 1795-1806.	3.5	15
27	Temperature-dependent sintering of two viscous particles. <i>Additive Manufacturing</i> , 2018, 24, 528-542.	3.0	21
28	Fluctuating viscoelasticity. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2018, 256, 42-56.	2.4	15
29	Bubble impingement in the presence of a solid particle: A computational study. <i>Computers and Fluids</i> , 2018, 170, 349-356.	2.5	2
30	Modeling and simulation of viscoelastic film retraction. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2017, 249, 26-35.	2.4	10
31	Direct numerical simulation of a bubble suspension in small amplitude oscillatory shear flow. <i>Rheologica Acta</i> , 2017, 56, 555-565.	2.4	9
32	Sintering of Two Viscoelastic Particles: A Computational Approach. <i>Applied Sciences (Switzerland)</i> , 2017, 7, 516.	2.5	19
33	Modeling of complex interfaces for pendant drop experiments. <i>Rheologica Acta</i> , 2016, 55, 801-822.	2.4	13
34	The effect of wall slip on the dynamics of a spherical particle in Newtonian and viscoelastic fluids subjected to shear and Poiseuille flows. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 236, 123-131.	2.4	6
35	Magnetic interaction of Janus magnetic particles suspended in a viscous fluid. <i>Physical Review E</i> , 2016, 93, 022607.	2.1	4
36	Numerical simulations of deformable particle lateral migration in tube flow of Newtonian and viscoelastic media. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 234, 105-113.	2.4	36

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37	Numerical simulations of the separation of elastic particles in a T-shaped bifurcation. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 233, 75-84.	2.4	6
38	Numerical simulations of the dynamics of a slippery particle in Newtonian and viscoelastic fluids subjected to shear and Poiseuille flows. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 228, 46-54.	2.4	13
39	Modeling flow-induced crystallization in isotactic polypropylene at high shear rates. <i>Journal of Rheology</i> , 2015, 59, 613-642.	2.6	35
40	Separation of particles in non-Newtonian fluids flowing in T-shaped microchannels. <i>Advanced Modeling and Simulation in Engineering Sciences</i> , 2015, 2, .	1.7	7
41	Strong vortical flows generated by the collective motion of magnetic particle chains rotating in a fluid cell. <i>Lab on A Chip</i> , 2015, 15, 351-360.	6.0	19
42	Numerical simulations of the competition between the effects of inertia and viscoelasticity on particle migration in Poiseuille flow. <i>Computers and Fluids</i> , 2015, 107, 214-223.	2.5	26
43	An extended finite element method for a diffuse-interface model. <i>Journal of Computational and Applied Mathematics</i> , 2014, 272, 25-40.	2.0	3
44	Transient modeling of fiber spinning with filament pull-out. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2014, 208-209, 72-87.	2.4	4
45	Numerical simulations of linear viscoelasticity of monodisperse emulsions of Newtonian drops in a Newtonian fluid from dilute to concentrated regime. <i>Rheologica Acta</i> , 2014, 53, 401-416.	2.4	4
46	Simulations of an elastic particle in Newtonian and viscoelastic fluids subjected to confined shear flow. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2014, 210, 47-55.	2.4	27
47	Accurate quantification of magnetic particle properties by intra-pair magnetophoresis for nanobiotechnology. <i>Applied Physics Letters</i> , 2013, 103, 043704.	3.3	11
48	Direct simulation of the dynamics of two spherical particles actuated magnetically in a viscous fluid. <i>Computers and Fluids</i> , 2013, 86, 569-581.	2.5	17
49	Particle motion in square channel flow of a viscoelastic liquid: Migration vs. secondary flows. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2013, 195, 1-8.	2.4	96
50	Disaggregation of microparticle clusters by induced magnetic dipole-dipole repulsion near a surface. <i>Lab on A Chip</i> , 2013, 13, 1394.	6.0	50
51	Alignment of particles in a confined shear flow of a viscoelastic fluid. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2012, 175-176, 89-103.	2.4	28
52	Dynamics of magnetic chains in a shear flow under the influence of a uniform magnetic field. <i>Physics of Fluids</i> , 2012, 24, .	4.0	28
53	Tools to Simulate Distributive Mixing in Twin-Screw Extruders. <i>Macromolecular Theory and Simulations</i> , 2012, 21, 217-240.	1.4	32
54	Extended finite element method for viscous flow inside complex three-dimensional geometries with moving internal boundaries. <i>International Journal for Numerical Methods in Fluids</i> , 2012, 70, 775-792.	1.6	13

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55	Simulation of the flow of a viscoelastic fluid around a stationary cylinder using an extended finite element method. <i>Computers and Fluids</i> , 2012, 57, 183-194.	2.5	30
56	Simulations of viscoelasticity-induced focusing of particles in pressure-driven micro-slit flow. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2011, 166, 1396-1405.	2.4	54
57	Simulation of extrudate swell using an extended finite element method. <i>Korea Australia Rheology Journal</i> , 2011, 23, 147-154.	1.7	19
58	Structure Formation of Non-€Colloidal Particles in Viscoelastic Fluids Subjected to Simple Shear Flow. <i>Macromolecular Materials and Engineering</i> , 2011, 296, 321-330.	3.6	28
59	Numerical simulations of particle migration in a viscoelastic fluid subjected to Poiseuille flow. <i>Computers and Fluids</i> , 2011, 42, 82-91.	2.5	31
60	Effect of viscoelasticity on the rotation of a sphere in shear flow. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2011, 166, 363-372.	2.4	57
61	Rheology of a Dilute Suspension of Spheres in a Viscoelastic Fluid Under Large Amplitude Oscillations. <i>Journal of Computational and Theoretical Nanoscience</i> , 2010, 7, 780-786.	0.4	2
62	Viscoelasticity-induced migration of a rigid sphere in confined shear flow. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2010, 165, 466-474.	2.4	96
63	An extended finite element method for the simulation of particulate viscoelastic flows. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2010, 165, 607-624.	2.4	53
64	Numerical simulation of the fountain flow instability in injection molding. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2010, 165, 631-640.	2.4	30
65	Anisotropy parameter restrictions for the eXtended Pom-Pom model. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2010, 165, 1047-1054.	2.4	15
66	Effects of confinement on the motion of a single sphere in a sheared viscoelastic liquid. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009, 157, 101-107.	2.4	28
67	Numerical stability of the method of Brownian configuration fields. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009, 157, 188-196.	2.4	15
68	Effect of viscoelasticity on drop dynamics in 5:1:5 contraction/expansion microchannel flow. <i>Chemical Engineering Science</i> , 2009, 64, 4515-4524.	3.8	28
69	Rotation of a sphere in a viscoelastic liquid subjected to shear flow. Part II. Experimental results. <i>Journal of Rheology</i> , 2009, 53, 459-480.	2.6	50
70	A direct simulation method for flows with suspended paramagnetic particles. <i>Journal of Computational Physics</i> , 2008, 227, 4441-4458.	3.8	50
71	Numerical simulation of planar elongational flow of concentrated rigid particle suspensions in a viscoelastic fluid. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2008, 150, 65-79.	2.4	29
72	Numerical study on the effect of viscoelasticity on drop deformation in simple shear and 5:1:5 planar contraction/expansion microchannel. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2008, 155, 80-93.	2.4	41

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73	Rotation of a sphere in a viscoelastic liquid subjected to shear flow. Part I: Simulation results. <i>Journal of Rheology</i> , 2008, 52, 1331-1346.	2.6	77
74	Effect of Viscoelasticity on Drop Deformation in 5:1:5 Contraction-Expansion Micro-Channel Flow. AIP Conference Proceedings, 2008, . .	0.4	0
75	Chaotic mixing induced by a magnetic chain in a rotating magnetic field. <i>Physical Review E</i> , 2007, 76, 066303.	2.1	87
76	A numerical method for simulating concentrated rigid particle suspensions in an elongational flow using a fixed grid. <i>Journal of Computational Physics</i> , 2007, 226, 688-711.	3.8	20
77	Chaotic advection using passive and externally actuated particles in a serpentine channel flow. <i>Chemical Engineering Science</i> , 2007, 62, 6677-6686.	3.8	29
78	Modeling of Flow-Induced Crystallization of Particle-Filled Polymers. <i>Macromolecules</i> , 2006, 39, 8389-8398.	4.8	61
79	Direct numerical simulations of hard particle suspensions in planar elongational flow. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2006, 136, 167-178.	2.4	22
80	On the streamfunction-vorticity formulation in sliding bi-period frames: Application to bulk behavior for polymer blends. <i>Journal of Computational Physics</i> , 2006, 212, 268-287.	3.8	10
81	Flow of viscoelastic fluids past a cylinder at high Weissenberg number: Stabilized simulations using matrix logarithms. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2005, 127, 27-39.	2.4	298
82	Chaotic advection in a cavity flow with rigid particles. <i>Physics of Fluids</i> , 2005, 17, 043602.	4.0	20
83	Direct simulation of particle suspensions in sliding bi-periodic frames. <i>Journal of Computational Physics</i> , 2004, 194, 742-772.	3.8	71
84	Direct simulations of particle suspensions in a viscoelastic fluid in sliding bi-periodic frames. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2004, 121, 15-33.	2.4	114
85	Stability analysis of injection molding flows. <i>Journal of Rheology</i> , 2004, 48, 765-785.	2.6	62
86	Time dependent finite element analysis of the linear stability of viscoelastic flows with interfaces. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2003, 116, 33-54.	2.4	18
87	Thermodynamics of viscoelastic fluids: The temperature equation. <i>Journal of Rheology</i> , 1998, 42, 999-1019.	2.6	66
88	Brownian configuration fields: A new method for simulating viscoelastic fluid flow. <i>Macromolecular Symposia</i> , 1997, 121, 205-217.	0.7	2
89	A lower bound for the invariants of the configuration tensor for some well-known differential models. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 1995, 60, 349-355.	2.4	8
90	Numerical simulation of the divergent flow regime in a circular contraction flow of a viscoelastic fluid. <i>Theoretical and Computational Fluid Dynamics</i> , 1993, 5, 33-48.	2.2	8

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91	Numerical simulation of contraction flows using a multi-mode Giesekus model. Journal of Non-Newtonian Fluid Mechanics, 1991, 38, 183-221.	2.4	40
92	A sufficient condition for a positive definite configuration tensor in differential models. Journal of Non-Newtonian Fluid Mechanics, 1990, 38, 93-100.	2.4	80
93	Some properties and analytical expressions for plane flow of leonov and giesekus models. Journal of Non-Newtonian Fluid Mechanics, 1988, 30, 85-92.	2.4	23
94	Mathematical and physical requirements for successful computations with viscoelastic fluid models. Journal of Non-Newtonian Fluid Mechanics, 1988, 29, 93-117.	2.4	31
95	Numerical Study of Residual Stresses Due to External Cooling in Extruded Polymer Profiles. Macromolecular Theory and Simulations, 0, , 2100074.	1.4	1