John Shrimpton
Salisbury UK

SUMMARY

An expert in atomizer design, turbulent multiphase flow. Trained initially as an experimentalist and experienced in rig and atomizer design, measurement techniques, particularly optical methods. Deep knowledge of the appropriate numerical methods for computing multiphase flow in various regimes. Experienced in using commercial CFD packages such as FLUENT and Star-CD. Write my own CFD codes, including a fully featured parallelised 3D block structured finite volume code and some other more specialist ones. Track record of working with large and small companies to understand the physics at hand, devise the best way to measure or model it, arrive at a design solution and deliver a final product.

KEY ACHIEVEMENTS

- 3 books, 2 chapters, 83 journal publications, and 8 invited lectures. Publications in quality journals.
- World authority on charge injection systems.
- Professor at 46, Adjunct Professor : University of Illinois at Chicago. EPSRC Advanced Fellow (2003-2008).
- Commercialised my PhD work with Spraying Systems Inc. Proven track record of developing signature novel products for clients.
- Successful consultancy business (Cuesta Ltd.) with long term relationships.

EDUCATION

- DSc, University of Manchester, Manchester, UK (2013)
- Ph.D, Mechanical Engineering, University of Manchester, Manchester, UK (1995)
- B.Eng(hons), Chemical Engineering, Birmingham University, UK (1991)

EMPLOYMENT

- Emeritus Professor (Southampton) : (10/22 - ….)
- Professor (Southampton) (8/13-9/22)
- Director (Cuesta Ltd.) (10/14- ...)
- Reader (Southampton) (3/10-7/13)
- Senior Lecturer (Southampton) (12/07-2/10)
- Lecturer (Imperial College London) (4/98-11/07)
- Research Associate (University of Manchester) (1/96-4/98)
- Research Assistant/PhD Student (University of Manchester) (10/92-12/95)
- Design Engineer (wind powered waste water treatment) (self employed) (10/91-9/92)

AWARDS

- Adjunct Professor : Dept. of Mechanical and Industrial Engineering, University of Illinois at Chicago, Chicago, USA (2008-2015)
- Erskine Teaching Fellowship, University of Canterbury, New Zealand (2014)
- Fellow I.MechE. (2011-2020)

- EPSRC Advanced Fellow (2003-2008)
- Member I.Mech.E. (1999-2010)
- Chartered Engineer Status (1999-2015)

KEY LEADERSHIP ROLES

- Head of Aerodynamics and Flight Mechanics Research Group : 4 year post throughout the COVID lockdowns. Line managed 15 academics and a problematic professor who was finally persuaded to retire gracefully.
- Programme Director : Aeronautical Engineering and Astronautics : 3 year post. Responsible for the delivery of all of the undergraduate and postgraduate taught aerodynamics and astronautics degree programmes. Quality control for the courses, the wellbeing of approximately 800 students and 50 academic staff. Reported to internal university faculty and also to external quality control, such as the external examiners and accreditation bodies.
- Delivery of the faculty 1st year thermofluids module. 7 laboratories, 5 courseworks, one final exam. Student cohort ~450 pa.
- Laboratory management. The most challenging one probably the propulsion lab at Southampton. This contained a rocket, and ramjet, a “small” gas turbine laboratory, and any dangerous student design project needed to be set up and run in this lab.
- Maintaining a research group of several PhD students over 20+ years, guiding student design projects and collaborating with industry to support research grants to sustain the research output.
- Advising industry on design, experiments and computational methods for multiphase flow. Expert Witness role. Running a successful consultancy business for 8 years.

CONSULTANCY

Examples of contracts undertaken highlighting experimental, computational, code extension, design and also legal advice provided.

- Techniques of micro-atomization of liquids for application in metered dose inhalers (GSK)
- Development of a model of low/medium fire hazards (Wormald)
- Fuel additive effects on atomization and spray structure (Esso)
- Modelling of obscured 3d choked flows (GSK)
- User subroutines for Electrostatics in FLUENT (Fraunhofer IPA+Brunel)
- Orbital Air-Assisted Injector Characterisation (BMW)
- Visualization of the disk device (GSK)
- CFD course for Supersonic Flow (Northrupp Grumman)
- Measurement of Multihole Charge Injection Systems (Lotus)
- Oxygen enhanced e-cigarette replacement device : scoping study (Kind Consumer)
- Design Support for air-assist showers (Kelda Technology)
- Particle Separation Technology advice (Aquavitrum)
- EHD Fuel Injector for small UAVs (US Army)
- Next generation Sub-micron separation Technology (Dyson)
- Industrial Coating Atomizer Design (Spraying Systems Inc.)
- Particle Dispersion in atmospheric boundary Layers (DSTL)
- Expert Witness : e-cigarette patent infringement (Simmons+Simmons)
- Legal advice w.r.t. patent submission (Kind,Kelda)
- User subroutines for a simple aerosol model in FLUENT (Dyson)

TECHNICAL SKILLS

The detail is within the PUBLICATIONS section (next) and they are listed as B2,J2,C2 for the 2nd book, journal and conference paper. My technical skills are listed by subject and section below, and relevant publications are listed. I have only used a conference paper if needed.

Atomizer Design

- Electrohydrodynamic atomizer for dielectrics (oils) : J10,J13-4,J20,J33+J74 (food), J39 (multi-orifice),J40,J42+J47 (pulsed), J52 (high pressure), J56, J66
- Pressure Swirl :J9,J22,J25
- Air Assist : J25,C18 (Electrohydrodynamic)
- Dry Powder : J28,J62
- Flash Atomization : J37,J49-50

Optical Diagnostics

- Laser Doppler Anemometry (LDA) : J11
- Phase Doppler Anemometry (PDA) : J4-7,J13,J31,J34
- Direct Particle Imaging Sizing/Velocity: J15-16,J55,J75-78,J83
- Laser Diffraction : J27,J49-50
- Particle Image Velocimetry (PIV) : J75-78,J83

Experimental Design

- High Pressure Injectors (>200bar) : J5
- Pressurised continuum fluid : J9
- Combustion : J7,J61, J67, J11 (optical internal combustion engines)
- Separation : J8,J18, J71,J82,C38,C40
- Powder characterization : J54,J60
- “Lab on a chip” for single cell manipulation : J65,J79
- Optical Fibre Manufacture/Design : J69-70

Numerical Methods (mainly specific to multiphase)

- Point Particle Lagrange-Euler Finite Volume : J13,J17,J24,J63
- High order numerical methods : J30 (convective schemes), J48,J53,J75
- Maximum Entropy closure :J32
- Discrete Element Method (particles in continuous contact) :J43,J51,J64
- Two Fluid Model based on a PDF closure : J44,B2
- Fully resolved particles : J45,J59,J68
- PANDORA : Multiphase Pseudo-spectral DNS : J53,J75 : (https://eprints.soton.ac.uk/467298/, https://www.archer.ac.uk/community/eCSE/eCSE11-01/eCSE11-01.php)

Fundamental Physics

- Secondary Atomization : J19,J29
- Primary Atomization : J26
- Low pressure plasma : J30

- Particle-Turbulence Interactions : J32,J34-5,J53,J75,J80,J81
- Electrohydrodynamic Turbulence : J36,J41,J46,J72,J73
- Non-spherical particles : J75-78,J83

PUBLICATIONS

Books (Bx)

1. Shrimpton, JS, 2009, Charge Injection Systems – Physical Principles, Experimental and Theoretical Work, 1st Edition, Germany, Springer, ISBN 978-3-642-00293-9,
2. Shrimpton, JS, 2013, An Introduction to Engineering Thermofluids, UK, Pnume Publishing, ISBN 978-09926650-0-5, 138 pages
3. Shrimpton, JS, Heari S, Scott, SJ, 2014, 'Statistical treatment of turbulent polydisperse particle systems : A non-sectional approach', 1st Edition, Germany, Springer, ISBN: 978-1-4471-6343-5 (Print) 978-1-4471-6344-2 (Online)

Book Chapters (BCx)

1. Daniel J. L Brett, Anthony R. Kucernak, Stephen Atkins, Robert Blewitt, Nigel P. Brandon, Bradley Ladewig, Shrimpton, JS, Velicia Vesovica, Nikos Vasileiadis, 2007, Developing and experimental functional map of polymer electrolyte fuel cell performance, chapter in Progress in Fuel Cell Research, Nova Science, Editor : Petr V. Alemo ISSN: 1-60021-698-6.
2. Agissilaos Kourmatzis, Shrimpton JS, 2009, Downsizing Direct Injection Spark Ignition Engines: A Timescale Analysis, chapter in Traffic Related Air Pollution and Internal Combustion Engines, editors Sergey Demidov and Jacques Bonnet,. Nova Science, 2009 ISBN: 978-1-60741-145—1

Journal Papers (Jx)

1. Shrimpton JS, AJ Yule, AP Watkins, W Balachandran and D Hu, 1995, Electrostatically atomized hydrocarbon sprays, *Fuel J*., Vol 74, pp.1094-1103.
2. Shrimpton JS, D Hu, W Balachandran, A.J Yule and AP Watkins, 1996, Electrostatic atomization of insulating oils and the associated charge injection mechanism, *Inst. Phys. Conf. Series*, No.143, pp.205-210.
3. Shrimpton JS, AJ Yule AP Watkins, 1997, A turbulent transient charged spray model, *International Journal of Fluid Mechanics Research*, vol 24, no 4-6, p.757-768, ISSN 1064-2277, Begell house.
4. Shrimpton JS, AJ Yule, 1998, Drop size and velocity measurements in an electrostatically produced hydrocarbon spray., *Journal of Fluids Engineering, Transactions of ASME*, Vol 120, no 3, pp. 580-585.
5. Shrimpton JS, AJ Yule, P. Akhtar, T. Wagner, DJ Rickeard, JLC Duff, 1998, PDA measurements of fuel effects on atomization and spray structure from a diesel engine injector, *SAE paper 98FL-466*, Fall Fuel & Lubricants Conf, San Francisco, ISSN0148-7191.
6. Shrimpton JS, AJ Yule, 1999, Characterisation of charged hydrocarbon sprays for application to combustion systems, *Experiments in Fluids*, 26, 4, pp. 315-323.
7. Shrimpton JS, AJ Yule, 2001, Atomization, combustion and control of charged hydrocarbon sprays, *Atomization and Sprays*, 11, pp. 1-32.
8. Shrimpton JS, RI Crane, 2001, Small Electrocyclone Performance, *Chem. Eng. Technol.* 24, 9, pp. 951.

9. Shrimpton JS, JT Kashdan, 2002, CA Arcoumanis, Dynamic structure of direct-injection gasoline engine sprays: Air flow and density effects, *Atomization and Sprays*, vol 12, no. 4, pp.539-557.
10. Shrimpton JS, AJ Yule, 2003, Electrohydrodynamics of charge injection atomization : Regimes and fundamental limits, *Atomization and Sprays*, vol. 13, pp. 173-190.
11. H.Lienemann and Shrimpton JS, 2003, In-Cylinder tumble Flow Characteristics and Implications for Fuel/Air Mixing in Direct Injection Gasoline Engines. *SAE Paper 03FFL-78*, Pittsburgh, USA.
12. Shrimpton, JS, 2003, Pulsed Charged Sprays : Application to DISI Engines during Early Injection, *International Journal for Numerical Methods in Engineering*, vol 58, pp. 523-536
13. Shrimpton JS, MCY Wong, 2004, Drop – Charge correlations for polydisperse electrostatically atomized liquid sprays, *IEEE Trans. Dielectrics and Electrical Insulation*, vol 11, no. 2, pp. 362-368.
14. Shrimpton JS, AJ Yule, 2004, Design issues concerning charge injection atomizers, *Atomization and Sprays*, vol. 14, pp. 127-142.
15. JT Kashdan, A Whybrew and Shrimpton JS, 2004, Two phase flow characterisation by automated Digital Image Analysis, Part 1: Fundamentals Principles and Calibration of the technique, *Particle and Particle Systems Characterization*, 20, 6, pp 387-397.
16. JT Kashdan, A Whybrew and Shrimpton JS, 2004, Two phase flow characterisation by automated Digital Image Analysis, Part 2 : Application of PDIA for Sizing Sprays. *Particle and Particle Systems Characterization*, 21, pp. 15-23.
17. Rigit ARH and Shrimpton JS 2005, Characteristics of charged sprays of insulating hydrocarbon liquids *Journal of Solid State Science and Technology*, vol 12,1, pp. 166-176, ISSN 0128-8393
18. L Rubino, RI Crane, C Arcoumanis and Shrimpton JS, 2006, An electrostatic trap for control of ultrafine particle emissions from gasoline-engined vehicles, *I.Mech.E. Proceedings Part D: Journal of Automobile Engineering*, vol 219, p 535-546.
19. Shrimpton, JS, 2006, Dielectric Charged Drop Break up at Sub-Rayleigh Limit Conditions, *IEEE Trans. Dielectrics and Electrical Insulation*,. Vol.12, n 3, pp.573-578.
20. ARH Rigit and Shrimpton JS, 2006, Electrical performance of charge injection atomizers, *Atomization and Sprays*, 16, 4, p.401-419
21. ARH Rigit and Shrimpton JS, 2006, Spray characteristics of charge injection atomizers with small orifice diameters, *Atomization and Sprays*, 16, 4, p421-442
22. JT Kashdan and Shrimpton JS, 2006, Characteristics of Transient, Swirl-Generated, Hollow-Cone Sprays, *Atomization and Sprays*, Volume 16, p. 493-510, ISSN 1045-5110
23. JT Kashdan, A Whybrew and Shrimpton JS, 2006, A digital image analysis technique for quantitative characterisation of high speed sprays, *Optics and Lasers in Engineering*, 45, p.106-115.
24. Y Laoonual and Shrimpton JS, 2006, Dynamics of Electrically-Charged transient evaporating sprays, *International journal for Numerical Methods in Engineering*, 67, 8, p.1063-1081.
25. H. Lienemann and J.T. Kashdan and Shrimpton JS, 2007, Single Fluid and Dual Fluid Atomisation Methods: Local and Global Spray Quantities, *Atomization and Sprays*, vol 17, pp.1-29.
26. H. Lienemann and E. Fernandes and Shrimpton JS, 2007, A Study on the Aerodynamic Instability of Attenuating Liquid Sheets, *Experiments in Fluids*, 42, 2, p 241-258.
27. N Stevens, M Palmer, D Prime, B Johal and Shrimpton JS, 2007, Accuracy Assessments for Laser Diffraction Measurements of Pharmaceutical Lactose, *Measurement Science and Technology*, 18, pp. 3697-3706.
28. R Tuley, MD Jones, R Price, M Palmer, D Prime and Shrimpton JS, 2008, Experimental Observations of Dry Powder Inhaler Dose Fluidisation, *International Journal of Pharmaceutics*, Volume 358, Issues 1-2, 24, Pages 238-247

29. Shrimpton, JS, Modelling Dielectric Charged Drop Break up Using an Energy Conservation Method, 2008, *IEEE Transactions on Dielectrics and Electrical Insulation*, 15,5, p.1471-1477.
30. M. Davoudabadi, F. Mashayek and Shrimpton JS, 2009, On Accuracy and Performance of High-Order Finite Volume Methods in Local Mean Energy Model of Non-thermal Plasmas, *Journal of Computational Physics*, 228, 2468–2479, doi:10.1016/j.jcp.2008.12.015
31. ARH Rigit and Shrimpton JS, 2009, Estimation of the diameter–charge distribution in polydisperse electrically charged sprays of electrically insulating liquids, *Experiments in Fluids*, 46:1159–1171, DOI 10.1007/s00348-009-0626-5,
32. SJ Scott and Shrimpton JS, 2009, Experimental Investigation of a Maximum Entropy Assumption for Acceleration Terms within a Poly-disperse Moment Framework, *Int. J. Numer. Meth. Fluids*; 60:669–689, DOI: 10.1002/fld.1908
33. Al-Ahmad G., Ergene E. L., Mashayek F and Shrimpton JS, 2009, Electrical Performance of viscous liquid organic oils using the charge injection method, *Atomization and Sprays*, 19, 6, p.547-566
34. Lewis SJ and Shrimpton JS, 2009, Dispersion of a polydisperse Particle population falling Through a shear layer : Raw data, *Atomization and Sprays*, 19(7):679–700, 2009
35. SJ Scott, AU Karnik and Shrimpton JS, 2009, On the quantification of preferential accumulation, *International Journal of Heat and Fluid Flow*, 30, 789–795
36. Agissilaos Kourmatzis and Shrimpton JS, 2009, Electrohydrodynamics and charge Injection atomizers : A review of the Governing equations and Turbulence, *Atomization and Sprays*, 19 (11) : pp. 1045–1063
37. Ju, D and Hearn, A and Shrimpton JS, 2010, The effect of reduction of propellant mass fraction on the injection profile of metered dose inhalers, *International Journal of Pharmaceutics*, 391, pp.221-229
38. Tuley, R, Danby, M, Palmer, M and Shrimpton JS, 2010, On the Optimal Numerical Time Integration for Lagrangian DEM within Implicit Flow Solvers, *Computers and Chemical Engineering*, 34, 886-899
39. A Kourmatzis, J Allen and Shrimpton JS, 2010, Electrical And Spray Characteristics Of A Multi-orifice Charge-Injection Atomizer For Electrically Insulating Liquids, *Atomization and Sprays*, 20(4), 269-180.
40. EL Ergene, G Malkawi, F Mashayek and Shrimpton JS, 2010, Charge Injection with Multiple Blade-plane Configurations in a Quiescent Dielectric Liquid, *IEEE Transactions on Dielectrics and Electrical Insulation*, 17, 6, pp. 1846-1852,
41. A Kourmatzis and Shrimpton JS, 2010, Direct Numerical Simulation of Forced Flow Dielectric EHD within Charge Injection Atomizers, *IEEE Trans. Dielectrics and Electrical Insulation*, 17, 6, pp. 1838-1845,
42. A. Kourmatzis and Shrimpton JS 2011, Electrical and transient atomization characteristics of a pulsed charge injection atomizer using electrically insulating liquids, *J Electrostatics*, vol 69, iss 3, p. 157-167
43. G Jasion, M Danby; K Takeda and Shrimpton JS, 2011, Performance of numerical integrators on tangential motion of DEM within implicit flow solvers, *Computers and Chemical Engineering*, vol 35, pp. 2218-2226
44. S. Haeri and Shrimpton JS, 2011, A mesoscopic description of polydispersed particle laden turbulent flows, *Progress in Energy and Combustion Science*, vol 37, pp. 716-740
45. S. Haeri and Shrimpton JS, 2012, On the application of Immersed Boundary, Fictitious Domain and body conformal mesh methods to many particle multiphase flows, *International Journal of Multiphase Flow*, 40, 38–55.
46. A. Kourmatzis and Shrimpton JS, 2012, On the three dimensional dielectric electrohydrodynamic (EHD) convection between two plates, *Journal of Fluid Mechanics*, volume 696, pp. 228-262

47. A. Kourmatzis and Shrimpton JS, 2012, Design and charge injection characteristics of an electrostatic dielectric liquid pulsed atomizer, *J. Electrostatics*, Volume 70, Issue 3, June 2012, Pages 249–257
48. Haeri, S and Shrimpton JS, 2012, Closure of non-integer moments arising in multiphase flow phenomena, *Chemical Engineering Science*, 75 (2012) 424–434
49. D Ju, M Bowdrey, A Hearn and Shrimpton JS, 2012, Effect of expansion chamber geometry on atomization and spray dispersion characters of a flashing mixture containing inerts. Part I. Numerical predictions and dual laser measurements, *International Journal of Pharmaceutics*, 432 23–31
50. D Ju, M Bowdrey, A Hearn and Shrimpton JS, 2012, Effect of expansion chamber geometry on atomization and spray dispersion characters of a flashing mixture containing inerts. Part II. High speed imaging measurements, *International Journal of Pharmaceutics*, 432 32–41 10.1016/j.ijpharm.2012.04.064
51. M Danby and Shrimpton JS, 2012, Effect of poly-dispersity on the stability of agglomerates subjected to simple fluid strain fields, *Powder Technology*, 228, 241–249
52. A Kourmatzis, E.L. Ergene, D. C. Kyritsis, F. Mashayek, M. Huo and Shrimpton JS, 2012, Combined aerodynamic and electrostatic atomization of dielectric liquid jets, *Experiments in Fluids*, 53:221-235.
53. A. Karnik and Shrimpton JS, 2012, Mitigation of preferential concentration of small inertial particles in stationary isotropic turbulence using electrical and gravitational body forces, *Physics of Fluids*, 24, 073301, 10.1063/1.4732540
54. M Danby and Shrimpton JS, 2012, Probe Indentation : A mesoscale approach to characterise powder systems : Experimental investigation of monomodel and bimodal diameter distributions of glass spheres, *Particle and Particle Systems Characterization*, 29, 144-155,
55. D Ju , A Hearn and Shrimpton JS, 2012 A multi-thresholding algorithm for sizing out of focus particles, *Particle and Particle Systems Characterization*, 29, 78-92.
56. A. Kourmatzis and Shrimpton JS, 2012, Primary Atomization And Drop Size Characteristics Of An Electrostatic Dielectric Liquid Pulsed Atomizer, *Atomization and Sprays*, 22 (4): 351–370
57. Jasion G and Shrimpton JS, 2012, Prediction of Brownout Inception Beneath a Full Scale Helicopter Downwash, *Journal of the American Helicopter Society*, 57, 042006.
58. Sina Haeri and Shrimpton JS, 2013, A correlation for the calculation of the local Nusselt number around circular cylinders in the range 10<Re<250 and 0:1 <Pr <40, *International Journal of Heat and Mass Transfer*, 59, 219–229.
59. Sina Haeri and Shrimpton JS, 2013, A new implicit fictitious domain method for the simulation of flow in complex geometries with heat transfer, *Journal of Computational Physics* 237, 21–45,
60. GT Jasion, M Danby and Shrimpton JS, 2013, Suitability of Parameters and Models in the Discrete Element Method for Simulation of Mesoscale Powder Indentation Experiments, *Computers & Chemical Engineering*, Volume 56, Pages 89–100
61. RJ Koopmans, GT Roberts, AJ. Musker and Shrimpton JS, 2013, A one-dimensional multi-component two-fluid model of a reacting packed bed including mass, momentum and energy inter-phase transfer *International Journal of Multiphase Flow*, 57, 10–28.
62. GT. Jasion, S Li, S Yang and Shrimpton JS, 2013, On the bridging mechanism in vibration controlled dispensing of pharmaceutical powders from a micro hopper, *Powder Technology*, 249, 24–37
63. G Amine-Eddine and Shrimpton JS, 2013, On simulations investigating droplet diameter-charge distributions in electrostatically atomized dielectric liquid sprays, *International Journal For Numerical Methods In Fluids*, Volume 72, Issue 10, pages 1051–1075
64. M Danby J Shrimpton, M Palmer, 2013, On the optimal numerical time integration for DEM using Hertzian force models, *Computer and Chemical Engineering*, Volume 58, 11, Pages 211–222

65. Chiang, Ya-Yu, Haeri, Sina, Gizewski, Carsten, Stewart, Joanna D., Ehrhard, Peter, Shrimpton, John, Janasek, Dirk and West, Jonathan (2013) Whole cell quenched flow analysis. *Analytical Chemistry*, 85, (23), 11560-11567
66. Kourmatsiz A and Shrimpton JS, (2014) Electrohydrodynamic inter-electrode flow and liquid jet characteristics in charge injection atomizers, *Experiments in Fluids* 55: 1688.
67. R.-J. Koopmans, J. S. Shrimpton, G. T. Roberts, and A. J. Musker, Dependence of Pellet Shape and Size on Pressure Drop in H2O2 Thrusters, *Journal of Propulsion and Power*, (2014), volume 30, issue 3 on pages 775-789
68. Sina Haeri and Shrimpton JS, 2014, "Fully resolved simulation of particle deposition and heat transfer in a differentially heated cavity" *Int. J. Heat Fluid Flow.*
69. G. T. Jasion, J. S. Shrimpton, Y. Chen, T. Bradley, D. J. Richardson, and F. Poletti, 2015, "MicroStructure Element Method (MSEM): Viscous Flow Model for the Virtual Draw of Microstructured Optical Fibers, *Optics Express* Vol. 23, Iss. 1, pp. 312–329 (2015)
70. G. T. Jasion, E. N. Fokoua J.S. Shrimpton, D.J. Richardson, F. Poletti, 2015,Studying the limits of production rate and yield for the volume manufacturing of hollow core photonic band gap fibers,*Optics Express* Vol. 25, Iss. 25, pp. 312–329 (2015)
71. L.B. Esteban, J.S. Shrimpton, P. Rogers & R. Ingram, Three Clean Products From Co-Mingled Waste Using A Novel Hydrodynamic Separator *Int. J. Sus. Dev. Plann*. Vol. 11, No. 5 (2016)
72. Agisilaos Kourmatzis and John S Shrimpton, Characteristics of electrohydrodynamic roll structures in laminar planar Couette flow, *J. Phys. D: Appl. Phys*. 49 (2016) 045503 (13pp)
73. A. Kourmatzis , J.S. Shrimpton, Turbulence closure models for free electroconvection, *International Journal of Heat and Fluid Flow*, Volume 71, June 2018, Pages 153–159
74. PW Vesely, RJ Schick, JS Shrimpton, F Mashayek, Energy efficient primary atomization of viscous food oils using an electrostatic method, *Journal of Food Engineering* Volume 237, November 2018, Pages 27-32, 2018
75. Thorsten Wittemeier, John S. Shrimpton, Explanation of differences in experimental and computational results for the preferential concentration of inertial particles, *Computers and Fluids* 173 (2018) 37–41
76. Luis Blay Esteban, John Shrimpton, and Bharathram Ganapathisubramani, Edge effects on the fluttering characteristics of freely falling planar particles, *Physical Review Fluids* 3, 064302 (2018)
77. Luis Blay Esteban, J. Shrimpton, B. Ganapathisubramani, Study of the circularity effect on drag of disk-like particles, *International Journal of Multiphase Flow* 110 (2018) 189–197
78. Luis Blay Esteban, John Shrimpton, Bharathram Ganapathisubramani, Three dimensional wakes of freely falling planar polygons, *Experiments in Fluids*, 60:114, (2019)
79. Simon I. R. Lane, Jonathan Butement Jack Harrington, Tim Underwood, John Shrimpton Jonathan West, Perpetual sedimentation for the continuous delivery of particulate suspensions, *Lab Chip*, 2019, 19, 3771
80. Wittemeier, T., Foat, T. G., Herring, S., Shrimpton, J. S., & Xie, Z. T. (2019). Technical note: a new method for the evaluation of puff dispersion field experiments for the validation of time-resolved dispersion simulations. Atmospheric Environment, 210, 171-176.
81. Blay Esteban, L., Shrimpton, J., & Ganapathisubramani, B. (2019). Laboratory experiments on the temporal decay of homogeneous anisotropic turbulence. Journal of Fluid Mechanics, 862.
82. A. G. Titov & J. Shrimpton, (2020), 3D Modeling of Electrocyclones with Various Flow Swirling Devices, *Chemical and Petroleum Engineering*.
83. Timothy T. K. Chan, Luis Blay Esteban, Sander G. Huisman, John S. Shrimpton and Bharathram Ganapathisubramani, 2021, Settling behaviour of thin curved particles in quiescent fluid and turbulence, *Journal Fluid Mechanics*

Refereed Conference Publications (Cx)

1. Shrimpton, JS, Balachandran, D Hu, AJ Yule and AP Watkins, ‘Electrostatically produced fuel sprays for combustion applications’, ICLASS-94, Rouen, France, pp 994-1001, July 1994.
2. Shrimpton, JS, AJ Yule, AP Watkins, ‘Performance data of an electrostatic atomizer for highly resistive liquids’, Proc. ICLASS-97, vol 1, pp. 625-632, August 18-22, 1997, Seoul, South Korea.
3. Shrimpton, JS, AJ Yule, AP Watkins, ‘A turbulent, transient charged spray model’, Proc. ICLASS-97, vol 2, pp. 820-827, August 18-22, 1997, Seoul, South Korea.
4. Shrimpton, JS, ‘Pulsed charged fuel sprays’, Proc. ICLASS 2000, 16-20 July 2000, Pasadena, California.
5. Shrimpton, JS, ‘Prediction of space charge transport in dielectric fluid flows’, Proc. ICLASS 2000, 16-20 July 2000, Pasadena, California.
6. Shrimpton, JS, GCS Nhumaio, AP Watkins, ‘Application of Electrostatic sprays in Gasoline Direct Injection Engines’, Proc. ICLASS 2000, 16-20 July 2000, Pasadena, California, USA
7. Shrimpton, JS, H. Lienemann, J.T. Kashdan, ‘Spray quality at elevated gas densities via swirl and air-assisted atomisation methods’, Proc. ICLASS 2003, 13-17 July 2000, Sorrento, Italy
8. Shrimpton, JS, Y Laoonual, N Stevens, Dynamics of Electrically Charged Evaporating Sprays, Proc. ICLASS 2003, 13-17 July 2003, Sorrento, Italy.
9. Shrimpton, JS, S.J. Scott, Reconstructing Poly–dispersed Multi–Phase Flow Joint Probability Density Functions Using The Maximum Entropy Method, Proc. ICLASS 2003, 13-17 July 2003, Sorrento, Italy.
10. Shrimpton, JS, SJ Scott Approximating PDFs for Multiphase Flows Using the Maximum Entropy Method 5th International Conference on Multiphase Flow, ICMF’04 Yokohama, Japan, May 30-June 4, 2004 Paper No.396
11. Shrimpton, JS, SJ Scott, A Possible turbulence Limit for Preferential Accumulation, 6th International Conference on Multiphase flow, Leipzig, Germany, July 9-13th, 2007.
12. Shrimpton, JS, SJ Scott, SJ Lewis, The use of the maximum entropy assumption to provide realizable closure models for Eulerian Multiphase Models, 6th International Conference on Multiphase flow, Leipzig, Germany, July 9-13th, 2007.
13. Gregory T. Jasion, Seyed Reza Sandoghchi, Yong Chen, Natalie V. Wheeler, Tom Bradley, Naveen Baddela, John Hayes, Marco Petrovich, David J. Richardson, John S. Shrimpton and Francesco Poletti , Novel Fluid Dynamics Model to Predict Draw of Hollow Core Photonic Band-Gap Fibres, Optical Communications (ECOC), 2042 40th European Conference and Exhibition on , Th. 2.4.3, Cannes, France, 21 – 25 Sep. 2014.
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PERSONAL INFORMATION

- UK national, DoB 11/1968.
- Interests : Low impact living and communities, trekking, canoeing and cycling, travelling, ski-touring, old Sci-fi books, electronic music, modular synthesizers.
- Some French and Spanish spoken, clean UK driving licence.