

PUBLICATIONS

A. Books:

1. Sazhin, S.S. (1982) *Natural Radio Emissions in the Earth's Magnetosphere*. Moscow: Nauka (in Russian).
2. Sazhin, S.S. (1993) *Whistler-mode Waves in a Hot Plasma*. Cambridge University Press.
3. Sazhin, S.S. (2014) *Droplets and Sprays*. Springer ISBN: 978-1-4471-6385-5.

B. Editor of:

1. Sazhin, S.S. (Editor) *Geomagnetic Research* No. 27. Soviet Geophysical Committee, 1980 (in Russian).
2. Sazhin, S.S. (Editor). Liperovsky V.A. and Pudovkin M.I.: *Anomalous Resistivity and Double Layers in the Magnetosphere*, Moscow, Nauka, 1983 (in Russian).
3. de Sercey, G. and Sazhin, S.S. (Editors) (2016) *27th European Conference on Liquid Atomization and Spray Systems*. Book of Abstracts, pp. 1-388. ISBN 978-1-910172-09-4.
4. Zeidan, D., Saghir, M.Z., Sazhin, S. S., Darwash, M. (Guest Editors) (2017) The special issue of a selection of papers representative of the Eighth International Conference on Thermal Engineering Theory and Applications – ICTEA 2015, held in Amman, Jordan, 18-21 May, 2015, *International Journal of Engineering Systems Modelling and Simulation*. *SPECIAL ISSUE: THERMAL ENGINEERING THEORY AND APPLICATIONS* **9**(1).

C. Book chapters:

1. Sazhin, S.S. (1977) Substorm in geomagnetic pulsations and VLF emissions. In *Physical foundation of forecasting of magnetospheric disturbances* (Authors M.I. Pudovkin, V.P. Kozelov, L.L. Lazutin, O.A. Troshichev, A.D. Chertkov. Editor: S.I. Isaev), Section 5.2.7, pages 265-270, Nauka Publishing House, Leningrad (in Russian).
2. Sazhin, S.S., Walker, S.N. and Woolliscroft, L.J.C. (1991) Observations and theory of whistler-mode waves in the vicinity of the Earth's magnetopause. In *Advances in Space Research*, v. 11(9), pp. 33-36.
3. Sazhin, S.S. (1993) Whistler-mode waves in the Earth's magnetosphere (theory and observations). In 'Reviews of Radio Science, 1990-1992', Ed. W.R. Stone, Oxford University Press, pp. 621-630.
4. Sazhin, S.S., Sumner, A.E. and Temme, N.M. (1995) Are relativistic effects significant for the analysis of whistler-mode waves in the Earth's magnetosphere. In *Space Plasmas: coupling between small and medium scale processes*. Geophysical Monograph 86. Editors: M Ashour-Abdalla, T Chang and P Dusenbery. Pages 139-142. Published by the American Geophysical Union.
5. Bykov, V., Goldfarb, I., Gol'dshtein, V., Sazhin, S., Sazhina, E. (2006) Dynamic decomposition of ODE systems: application to modelling of diesel fuel sprays. In 'Model Reduction and Coarse-Graining Approaches for Multiscale Phenomena', ed. by A.N. Gorban, N. Kazantzis, Y.G. Kevrekidis, H.C. Ottinger, C. Theodoropoulos. Springer, Berlin–Heidelberg–New York, pp. 81-97.
6. Sazhin, S.S., Elwardany, A., Gusev, I.G., Shishkova, I.N. and Heikal, M. (2010) Modelling of fuel droplet heating and evaporation: recent results and unsolved problems. *Engineering Research Anniversary volume honouring Amalia and Miklos Ivanyi, Pollack Mihaly Faculty of Engineering, University of Pecs, October 25-26*, pp. B:197-B:209.
7. Sazhin, S.S. (2012) Memoirs of a student, junior researcher and private scientist, Memoirs of the graduates of the faculty of physics, St Petersburg State University, Issue 1, Edited by A. Lavrov and V. Fedorov, pp. 497-501. Published by FGBU 'PIYaF', ISBN 978-5-86763-305-9.

D. Papers (refereed international journals):

1. Sazhin, S.S. (1974) Interpretation of the resonant interaction of charged particles with an elliptically polarized plasma wave, *Geomagnetism and Aeronomy* (English translation), **14**(3), 460-462.
2. Sazhin, S.S. (1976) Electrostatic wave trapping in the magnetosphere of the Earth, *Geomagnetism and Aeronomy* (English translation), **16**(3), 337-338.
3. Sazhin, S.S. (1976) Effect of an external transverse electric field on the character of whistler-mode polarization, *Geomagnetism and Aeronomy* (English translation), **16**(6), 582-583.
4. Sazhin, S.S. (1977) Non resonant interaction of whistlers with electrons, *Soviet Physics. Technical Physics*, **22**(1), 142-144.
5. Sazhin, S.S. (1977) Magnetospheric capture of electrostatic waves at frequencies below the proton plasma frequency, *Radiophysics and Quantum Electronics*, **20**(6), 652-653.
6. Ponyavin, D.I., Pudovkin, M.I. and Sazhin, S.S. (1977) Self-consistent parallel electric field in the magnetosphere of the Earth, *Geomagnetism and Aeronomy* (English translation), **17**(3), 323-325.

7. Sazhin, S.S. and Titova, E.E. (1977) Dynamic spectrum of VLF chorus events calculated from the data recorded at Lovozero station data, *Cosmic Research* (English translation), **15**(5), 684-685.
8. Pudovkin, M.I. and Sazhin, S.S. (1977) Estimation of the large scale magnetospheric electric field from the character of the dynamic spectrum of VLF chorus, *Cosmic Research* (English translation), **15**(6), 813-814.
9. Sazhin, S.S. (1978) A model of quasiperiodic VLF emissions, *Planet. Space Sci.*, **26**(5), 399-401.
10. Sazhin, S.S. (1978) On the conductivity of the solar wind plasma, *Letters to the Astronomical J.*, **4**(7), 321-322 (in Russian).
11. Sazhin, S.S. and Vershinina, N.I. (1978) Estimation of the large scale magnetospheric electric field from the frequency drift of bursts of VLF emissions, *Cosmic Research* (English translation), **16**(3), 376-377.
12. Ponyavin, D.I. and Sazhin, S.S. (1978) Development of whistler cyclotron instability in a magnetospheric plasma with allowance for the self-consistent parallel electric field, *Geomagnetism and Aeronomy* (English translation), **18**(4), 503-4.
13. Sazhin, S.S. (1979) Spontaneous polarization of a turbulent magnetized plasma, *Soviet Physics. Technical Physics*, **24**(3), 371-373.
14. Ponyavin, D.I. and Sazhin, S.S. (1979) Whistler damping near the electron gyrofrequency in a plasma with components at different temperatures, *Soviet Physics. Technical Physics*, **24**(4), 515-516.
15. Pudovkin, M.I. and Sazhin, S.S. (1979) Pedersen conductivity of the magnetospheric plasma, *Geomagnetism and Aeronomy* (English translation), **19**(1), 55-56.
16. Sazhin, S.S., Ponyavin D.I. and Varshavskii, S.P. (1979) Some features of whistler propagation in magnetospheric plasma. *Radiophysics and Quantum Electronics*, **22**(7), 547-550.
17. Likhter, Ja.I. and Sazhin, S.S. (1980) On the frequency shift in modulated VLF emissions. *J. Atmos. Terr. Physics*, **42**(4), 381-384.
18. Sazhin, S.S., Sizova, L.Z. and Larkina, V.I. (1980) Latitude dependence of the intensity of VLF emissions, *Geomagnetism and Aeronomy* (English translation), **20**(2), 239-240.
19. Sazhin, S.S. (1981) Some studies of whistler-mode propagation in the magnetospheric plasma, *J. Atmos. Terr. Physics*, **43**(2), 139-146 (Errata p. 373).
20. Sazhin, S.S., Kobeleva, O.A., Sazhina, E.M. and Varshavskii, S.P. (1981) Propagation of whistlers at a small angle to the magnetic field in hot anisotropic plasma. *Radiophysics and Quantum Electronics*, **24**(8), 628-634.
21. Sazhin, S.S. (1982) A physical model for oblique whistler-mode instabilities, *Ann. Geophysique*, **38**(2), 111-118.
22. Sazhin, S.S. (1982) Oblique ordinary-mode propagation in the magnetospheric plasma, *J. Atmos. Terr. Physics*, **44**(1), 31-36.
23. Sazhin, S.S. and Sazhina, E.M. (1982) Oblique whistler-mode propagation in a hot anisotropic plasma, *J. Plasma Physics*, **27**(2), 199-204.
24. Sazhin, S.S. and Varshavski, S.P. (1982) Whistler trapping in the vicinity of the plasmopause, *Geomagnetism and Aeronomy* (English translation), **22**(2), 192-195.
25. Sazhin, S.S. (1983) Whistler-mode propagation at frequencies near the electron gyrofrequency, *J. Plasma Physics*, **29**(2), 217-222.
26. Kobelev, V.V. and Sazhin, S.S. (1983) Estimate of the temperature of magnetospheric electrons temperature from the shape of whistler spectrograms, *Soviet Technical Physics Letters*, **9**(7), 369-370.
27. Kobelev, V.V. and Sazhin, S.S. (1983) Trapping of whistlers in magnetospheric ducts, *Geomagnetism and Aeronomy* (English translation), **23**(5), 654-657.
28. Sazhin, S.S. (1984) On whistler-mode trapping in the magnetospheric ducts. *J. Plasma Physics*, **31**(3), 487-493.
29. Sazhin, S.S. (1984) A model for hiss-type mid-latitude VLF emissions, *Planet. Space Science*, **32**(10), 1263-1271.
30. Majewski, M. and Sazhin, S.S. (1984) Oblique extraordinary mode propagation in the magnetospheric plasma, *J. Atmos. Terr. Physics*, **46**(10), 937-944.
31. Kobelev, V.V. and Sazhin, S.S. (1984) Quasilongitudinal whistler-mode propagation in a rarefied plasma, *Geophysical Journal*, **6**(2), 69-74 (in Russian).
32. Sazhin, S.S. (1985) Almost parallel electromagnetic wave propagation in a hot anisotropic plasma, *J. Atmos. Terr. Physics*, **47**(6), 517-522.
33. Sazhin, S.S. (1985) Whistler-mode polarization in a hot anisotropic plasma, *J. Plasma Physics*, **34**(2), 213-226.
34. Sazhin, S.S. and Sazhina, E.M. (1985) Quasielectrostatic whistler-mode propagation, *Planet. Space Science*, **33**(3), 295-303.
35. Sazhin, S.S., Hayakawa, M. and Tanaka, Y. (1985) On the fine structure of the ground-based VLF chorus as an indicator of the wave-particle interaction processes in the magnetospheric plasma, *Planet. Space Science*,

- 33**(4), 385-386.
36. Sazhin, S.S. (1986) On whistler-mode group velocity, *Annales Geophysicae*, **4**(A2), 155-160.
37. Sazhin, S.S. (1986) Quasielectrostatic wave propagation in a hot anisotropic plasma. *Planet. Space Sci.*, **34**(6), 497-509.
38. Sazhin, S.S. (1986) Electrostatic wave trapping near the magnetospheric equator, *Annales Geophysicae*, **4**(A5), 385-390.
39. Hayakawa, M., Tanaka, Y., Sazhin, S.S., Okada T. and Kurita, K. (1986) Characteristics of dawnside mid-latitude VLF emissions associated with substorms as deduced from the two-stationed direction finding measurement. *Planet. Space Science*, **34**(2), 225-243.
40. Liperovski, V.A., Pudovkin, M.I., Sazhin, S.S. and Shalimov, S.L. (1986) Transverse currents in the auroral magnetosphere, *Cosmic Research* (English translation), **24**(5), 585-589.
41. Sazhin, S.S. (1987) An approximate theory of electromagnetic wave propagation in a weakly relativistic plasma. *J. Plasma Phys.*, **37**(2), 209-30.
42. Sazhin, S.S. (1987) Almost perpendicular electromagnetic wave transformation in a weakly relativistic plasma. *Ibid.*, pp. 231-9.
43. Sazhin, S.S. (1987) A model of day-time ELF emissions. *Planet. Space Sci.* **35**(2), 139-43.
44. Sazhin, S.S. (1987) Quasilinear models of oblique whistler-mode instabilities. *Planet. Space Sci.*, **35**(6), 753-8.
45. Sazhin, S.S. (1987) Electrostatic waves at electron gyrofrequency. *Planet. Space Sci.*, **35**(7), 867-70.
46. Sazhin, S.S. (1987) An analytical model of quasiperiodic ELF-VLF emissions. *Planet. Space Sci.*, **35**(10), 1267-74.
47. Sazhin, S.S. (1987) The guidance of oblique whistler-mode waves along magnetospheric field lines. *Astrophys. Space Sci.*, **136**(2), 221-4.
48. Sazhin, S.S. (1987) A kinetic model of parallel electric field in the magnetosphere. *Annales Geophysicae*, **5A**(5), 273-80 (Err.: v. **6A**(1), 139; 1988).
49. Sazhin, S.S. (1987) Electrostatic waves at frequencies close to the harmonics of electron gyrofrequency. *Astrophys. Space Sci.*, **138**(1), 99-103.
50. Sazhin, S.S. (1987) A physical model of parallel whistler-mode propagation in a weakly relativistic plasma. *J. Plasma Phys.*, **38**(2), 301-7.
51. Sazhin, S.S. (1988) Nonrelativistic and relativistic approaches to the problem of plasma wave propagation. *J. Atmos. Terr. Phys.*, **50**(1), 51-5.
52. Sazhin, S.S. (1988) An improved quasielectrostatic approximation. *Planet. Space Sci.*, **36**(2), 123-4.
53. Sazhin, S.S. (1988) On the polarization of quasielectrostatic whistler-mode waves in the magnetospheric plasma. *Annales Geophysicae*, **6**(2), 177-9.
54. Sazhin, S.S. (1988) Oblique whistler-mode growth and damping in a hot anisotropic plasma. *Planet. Space Sci.*, **36**(7), 663-7.
55. Sazhin, S.S. (1988) Almost-parallel electromagnetic wave propagation at frequencies near the electron plasma frequency. *Astrophys. Space Sci.*, **145**, 377-80.
56. Sazhin, S.S. (1988) An extrapolation of the solution of parallel whistler-mode dispersion equation. *Astrophys. Space Sci.*, **145**, 163-6.
57. Sazhin, S.S. (1988) An improved quasilongitudinal approximation for whistler-mode waves. *Planet. Space Sci.*, **36**(11), 1111-9.
58. Sazhin, S.S. and Sazhina, E.M. (1988) Some particular cases of oblique whistler-mode propagation in a hot anisotropic plasma. *J. Plasma Phys.*, **40**(1), 69-85.
59. Hayakawa, M., Tanaka, Y., Sazhin, S.S., Tixier, M. and Okada, T. (1988) Substorm-associated VLF emissions with frequency drift observed in the premidnight sector. *J. Geophys. Res.*, **93**(A6), 5685-700.
60. Sazhin, S.S. and Walker, S. (1989) Marginal stability of oblique whistler-mode waves. *Planet. Space Sci.*, **37**(2), 223-7.
61. Sazhin, S.S. (1989) On quasilongitudinal approximation for whistler-mode waves in a hot plasma. *Planet. Space Sci.*, **37**(3), 295.
62. Sazhin, S.S. (1989) Approximate methods of the solution of parallel whistler-mode dispersion equation. *Planet. Space Sci.*, **37**(3), 311-4.
63. Sazhin, S.S. and Strangeways, H.J. (1989) Ray tracing in inhomogeneous plasma. *Planet. Space Sci.*, **37**(6), 739-47.
64. Sazhin, S.S. (1989) Parallel whistler-mode propagation in a weakly relativistic plasma. *Physica Scripta*, **40**(1), 114-6.
65. Sazhin, S.S. (1989) Effects of ions and finite electron density on quasi-electrostatic whistler-mode propagation. *Astrophys. Space Science*, **158**, 107-15.

66. Sazhin, S.S. (1989) Improved quasilinear models of parallel whistler-mode instability. *Planet. Space Sci.*, **37**(6), 633-47.
67. Sazhin, S.S. (1989) A physical model of quasi-electrostatic whistler-mode propagation. *Astrophys. Space Science*, **161**, 171-174.
68. Horne, R.B. and Sazhin, S.S. (1990) Quasielectrostatic and electrostatic approximations for whistler-mode waves in the magnetospheric plasma. *Planet. Space Sci.*, **38**(2), 311-8.
69. Sazhin, S.S. (1990) Storey angle for whistler-mode waves. *Planet. Space Sci.*, **38**(3), 327-31.
70. Sazhin, S.S., Smith, A.J. and Sazhina, E.M. (1990) Can magnetospheric electron temperature be inferred from whistler dispersion measurements? *Annales Geophysicae*, **8**(4), 273-85.
71. Sazhin, S.S., Walker, S.N. and Woolliscroft, L.J.C. (1990) On spin-modulation diagnostics of whistler-mode wave normal angles in the vicinity of the Earth's magnetopause. *Planet. Space Sci.*, **38**(3), 333-9.
72. Sazhin, S.S. and Temme, N.M. (1990) Relativistic effects on parallel whistler-mode propagation and instability. *Astrophys. Space Sci.*, **166**, 301-13.
73. Sazhin, S.S., Walker, S.N. and Woolliscroft, L.J.C. (1990) Oblique whistler-mode waves in the presence of electron beams. *Planet. Space Sci.*, **38**(6), 791-805.
74. Sazhin, S.S. (1990) A new approximate solution of parallel whistler-mode dispersion equation. *Astrophys. Space Sci.*, **172**, 235-47.
75. Sazhin, S.S., Walker, S.N. and Woolliscroft, L.J.C. (1990) On whistler-mode trapping in the vicinity of the Earth's magnetopause. *Annales Geophysicae*, **8**(9), 583-9.
76. Sazhin, S.S. and Horne, R.B. (1990) Quasilongitudinal approximation for whistler-mode waves in the magnetospheric plasma. *Planet. Space Sci.*, **38**(12), 1551-3.
77. Sazhin, S.S., Bullough, K., Smith, A.J. and Saxton, J.M. (1991) On the influence of the ring current on whistler group delay time in the magnetosphere. *Annales Geophysicae*, **9**(1), 21-9.
78. Sazhin, S.S. and Temme, N.M. (1991) The threshold of parallel whistler-mode instability. *Annales Geophysicae*, **9**(1), 30-3.
79. Sazhin, S.S. (1991) Whistler-mode polarization in a rarefied plasma. *Planet. Space Sci.*, **39**(5), 725-8.
80. Sazhin, S.S. and Temme, N.M. (1991) Marginal stability of parallel whistler-mode waves (asymptotic analysis). *Annales Geophysicae*, **9**(5), 304-308. (Erratum: **9**(7), p. 500.).
81. Nunn, D. and Sazhin, S.S. (1991) On the generation mechanism of hiss-triggered chorus. *Annales Geophysicae*, **9**(9), 603-13.
82. Sazhin, S.S. (1991) Landau damping of low frequency whistler-mode waves. *Annales Geophysicae*, **9**(10), 690-5.
83. Sazhin, S.S. (1991) Is electron diffusion at low L shells always weak? *Indian J. of Radio and Space Physics.*, **20**, 446.
84. Sazhin, S.S., Smith, A.J., Bullough, K., Clilverd, M.A., Saxton, J.M., Strangeways, H.J. and Tarcsai, Gy. (1992) Group delay times of whistler-mode signals from VLF transmitters observed at Faraday, Antarctica. *J. Atmosph. Terr. Physics*, **54**(1), 99-107.
85. Sazhin, S.S. and Temme, N.M. (1992) A relativistic theory of the R wave cut-off. *Planet. Space Sci.*, **40**(4), 433-7 (Erratum: No. 6, p. 891).
86. Sazhin, S.S., Balmforth, H.F., Moffett, R.J. and Rippeth, Y. (1992) Modified models of electron distribution in the magnetosphere at $L = 2.3$. *Planet. Space Sci.*, **40**(5), 671-9.
87. Sazhin, S.S. and Hayakawa, M. (1992) Magnetospheric chorus emissions: a review. *Planet. Space Sci.*, **40**(5), 681-97.
88. Sazhin, S.S., Hayakawa, M. and Bullough, K. (1992) Whistler diagnostics of magnetospheric parameters: a review. *Ann. Geophysicae*, **10**(5), 293-308.
89. Sazhin, S.S., Sumner, A.E. and Temme, N.M. (1992) Relativistic and nonrelativistic analysis of whistler-mode waves in a hot anisotropic plasma. *J. Plasma Phys.*, **47**(1), 163-74.
90. Sazhin, S.S. (1992) The propagation of damped or growing whistler-mode waves. *Planet. Space Sci.*, **40**(7), 985-8.
91. Temme, N.M., Sumner, A.E. and Sazhin, S.S. (1992) Analytical and numerical analysis of the generalized Shkarofsky function. *Astr. Space Sci.*, **194**, 173-196.
92. Hayakawa, M. and Sazhin, S.S. (1992) Mid-latitude and plasmaspheric hiss emissions. *Planet. Space Sci.*, **40**(10), 1325-1338.
93. Shklyar, D.R., Nunn, D., Smith, A.J. and Sazhin, S.S. (1992) An investigation into the nonlinear frequency shift in magnetospherically propagated VLF pulses. *J. Geophys. Res.*, **97**(A12), 19,389-19,402.
94. Sazhin, S.S., Sumner, A.E., Temme, N.M. and Gugic, F. (1993) An approximate solution of the parallel whistler-mode dispersion equation in a weakly relativistic plasma. *Plasma Phys. and Controlled Fusion*, **35**(1), 117-126.
95. Sazhin, S.S., Bullough K. and Hayakawa M. (1993) Auroral hiss: a review. *Planet. Space Sci.*, **41**, 153-166.

96. Sazhin, S.S., Bognár P., Smith A.J. and Tarcsai Gy. (1993) Magnetospheric electron temperature inferred from whistler dispersion measurements. *Annales Geophysicae*, **11**, 619-623.
97. Sazhin, S.S. (1993) Small group teaching in Russian universities. *Higher Education Review*, **25** (3), 66-73.
98. Sazhin, S.S. (1993) A relativistic theory of plasma cut-offs. *Astr. Space Sci.*, **203**, 317-327.
99. Sazhin, S.S., Wild, P., Leys, C., Toebaert, D. and Sazhina, E.M. (1993) The three temperature model for the fast-axial-flow CO₂ laser. *J Physics D: Applied Physics*, **26**, 1872-1883.
100. Makhlof, M., Sazhin, S.S., Leys, C., Toebaert, D. and Wild, P. (1993) Numerical analysis of the electron energy distribution function in a CO₂ laser discharge. *Infrared Physics and Technology*, **34** (5), 525-532.
101. Sazhin, S.S., Makhlof M., Toebaert D. and Leys, C. (1994) The Boltzmann equation for the electron energy distribution function in CO₂ laser discharges. *Physics Letters A*, **185** (1), 99-102.
102. Sazhin S.S. and Hayakawa M. (1994) Periodic and quasiperiodic VLF emissions. *J Atm. Terr. Phys.*, **56** (6), 735-753.
103. Sazhin, S.S., Wild, P., Sazhina, E.M., Makhlof, M., Leys, C., and Toebaert, D. (1994) The three dimensional modelling of the processes in the fast-axial-flow CO₂ laser. *J Physics D: Applied Physics*, **27** (3), 464-469.
104. Sazhin, S.S. (1994) Assessment in Russian Universities. *Higher Education Review*, **26**(2), 9-16.
105. Spiridonov, M., Leys, C., Toebaert, D., Sazhin, S., Desoppere, Wild, P. and McKenna-Lawlor, S.M.P. (1994) Investigation of the active medium of a DC-excited fast axial-flow CO₂ laser using a tunable diode laser. *J Physics D: Applied Physics*, **27** (5), 962-969.
106. Sazhin, S.S., Wild, P., Sazhina, E.M., Makhlof M., Leys, C. and Toebaert, D. (1994) A new approach to computational gas laser dynamics. *Optics and Laser Technology*, **26** (3), 191-194.
107. Sazhin, S.S., Makhlof, M., Leys, C., Toebaert, D., Vasquez-Malebran, S. and Wild, P. (1994) Electron diffusion in the fast-axial-flow CO₂ laser. *J Physics D: Applied Physics*, **27**, 1107-1113.
108. Sazhin, S.S., Makhlof, M., Toebaert, D. and Leys, C. (1994) An approximation for the electron energy distribution function in CO₂ laser discharges. *Infrared Physics*, **35** (5), 733-738.
109. Sazhin S.S., Makhlof, M. and Ishii T. (1995) Solutions of magnetohydrodynamic (MHD) problems based on a conventional computational fluid dynamics (CFD) code. *International J for Numerical Methods in Fluids*, **21**(5), 433-442.
110. Sazhin, S.S. and Rycroft, M.J. (1995) Ken Bullough: a scientist and a friend. *J Atm. Terr. Phys.*, **57**(13), 1525-1531.
111. Sazhin, S.S., Sazhina, E.M., Faltsi-Saravelou, O. and Wild, P. (1996) The P-1 model for thermal radiation transfer (advantages and limitations). *Fuel*, **75**(3) 289-294.
112. Ishii T., Sazhin, S.S. and Makhlof, M. (1996) Numerical prediction of magnetohydrodynamic (MHD) flow in continuous casting process. *Ironmaking and Steelmaking*, **23** (3), 267-272.
113. Sazhin, S.S. and Sazhina, E.M. (1996) The effective emissivity approximation for the thermal radiation transfer problem. *Fuel*, **75** (14), 1646-1654.
114. Sazhin, S.S. and Serikov, V.V. (1997) Rarefied gas flows: hydrodynamic versus Monte Carlo modelling, *Planetary and Space Science*, **45**(3) 361-368.
115. Faltsi-Saravelou, O., Wild, P., Sazhin, S.S. and Michel, J.E. (1997) Detailed modelling of a swirling flame. *Combustion Science and Technology*, **123**, 1-22.
116. Sazhin, S.S. and Jeapes, A.P. (1997) The analytical and numerical study of the fluorination of uranium dioxide particles. *Journal of Nuclear Materials*, **249**, 207-222.
117. Sazhin, S.S. (1998) Teaching mathematics to engineering students. *The International Journal of Engineering Education*, **14**(2), 145-152.
118. Sazhin, S.S., Sazhina, E.M., Heikal, M.R., Marooney, C. and Mikhalovsky, S.V. (1999) The Shell autoignition model: a new mathematical formulation. *Combustion and Flame*, **117**(3), 529-540.
119. Sazhina, E.M., Sazhin, S.S., Heikal, M.R. and Marooney, C. (1999) The Shell autoignition model: application to gasoline and Diesel fuels. *Fuel*, **78**(4), 389-401.
120. Sazhin, S.S. (1999) Comments on the paper by U P Singh and D P Singh entitled "Intense low latitude VLF emissions observed aboard Ariel 4". *J Geophysical Research*, **104**(A5), 10379.
121. Sazhin, S.S. and Jeapes, A.P.(1999) Fluorination of uranium dioxide particles: a review of physical and chemical properties of the compounds involved. *J Nuclear Materials*, **275**(3), 231-245.
122. Goldfarb, I., Goldshtein, V., Kuzmenko, G. and Sazhin, S.S. (1999) Thermal radiation effect on thermal explosion in gas containing fuel droplets. *Combustion Theory and Modelling*, **3**, 769-787.
123. Sazhin, S.S. (1999) Assessment of mathematical elements in engineering and science subjects. *The International Journal of Engineering Education*, **15**(6), 402-405.
124. Pavlov, A.N., Sazhin, S.S., Fedorenko, R.P. and Heikal, M.R. (2000) A conservative finite difference method and its application for the analysis of a transient flow around a square prism. *International Journal of Numerical Methods for Heat and Fluid Flow*, **10** (1), 6-46.

125. Sazhin, S.S., Sazhina, E.M. and Heikal, M.R. (2000). Modelling of the gas to fuel droplets radiative exchange. *Fuel*, **79**, 1843-1852.
126. Sazhina, E.M., Sazhin, S.S., Heikal, M.R., Babushok, V.I. and Johns, R. (2000). A detailed modelling of the spray ignition process in Diesel engines. *Combustion Science and Technology* **160**, 317-344.
127. Sazhin, S.S., Goldshtein, V. and Heikal, M.R. (2001). A transient formulation of Newton's cooling law for spherical bodies. *ASME J Heat Transfer* **123**(1), 63-64.
128. Sazhin, S.S., Feng, G., Heikal, M.R., Goldfarb, I., Goldshtein, V. and Kuzmenko, G. (2001) Thermal ignition analysis of a monodisperse spray with radiation. *Combustion and Flame* **124**(4), 684-701.
129. Dombrovsky, L.A., Sazhin, S.S., Sazhina, E.M., Feng, G., Heikal, M.R., Bardsley, M.E.A. and Mikhalovsky, S.V. (2001) Heating and evaporation of semi-transparent Diesel fuel droplets in the presence of thermal radiation. *Fuel*, **80**(11), 1535-1544.
130. Sazhin, S.S., Kaplanski, F., Feng, G., Heikal, M.R. and Bowen, P.J. (2001) A fuel spray induced vortex ring. *Fuel*, **80**(13), 1871-1883.
131. Sazhin, S.S., Feng, G. and Heikal, M.R., (2001) A model for fuel spray penetration. *Fuel*, **80**(15), 2171-2180.
132. El-Hawat, S.M., Heikal, M.R. and Sazhin, S.S. (2001) An improved three-dimensional numerical model of flow and heat transfer over louvered fin arrays. *International Journal of Heat Exchangers* **2**(1), 37-44.
133. Pozorski, J., Sazhin, S.S., Wacławczyk, M., Crua, C., Kennaird, D. and Heikal, M.R. (2002) Spray penetration in a turbulent flow. *Flow, Turbulence and Combustion* **68**(2), 153-165.
134. Dombrovsky, L.A., Sazhin, S.S., Mikhalovsky, S.V., Wood, R. and Heikal, M.R. (2003) Spectral properties of diesel fuel droplets. *Fuel*, **82**(1), 15-22.
135. Sazhin, S.S., Crua, C., Kennaird, D. and Heikal, M.R. (2003) The initial stage of fuel spray penetration. *Fuel*, **82**(8), 875-885.
136. Dombrovsky, L.A. and Sazhin, S.S. (2003) A parabolic temperature profile model for heating of droplets. *ASME J Heat Transfer*, **125**, 535-537.
137. Dombrovsky, L.A. and Sazhin, S.S. (2003) A simplified non-isothermal model for droplet heating and evaporation. *Int Communications in Heat and Mass Transfer*, **30**(6), 787-796.
138. Dombrovsky, L.A. and Sazhin, S.S. (2003) Absorption of thermal radiation in a semi-transparent spherical droplet: a simplified model. *International J of Heat and Fluid Flow* **24**(6), 919-927.
139. Sazhin, S.S., Abdelghaffar, W.A., Sazhina, E.M., Mikhalovsky, S.V., Meikle, S.T. and Bai, C. (2004) Radiative heating of semi-transparent diesel fuel droplets, *ASME J Heat Transfer* **126**, 105-109. Erratum (2004) **126** 490-491.
140. Kryukov, A.P., Levashov, V.Yu. and Sazhin, S.S. (2004) Evaporation of diesel fuel droplets: kinetic versus hydrodynamic models, *Int J Heat Mass Transfer* **47** (12-13), 2541-2549.
141. Dombrovsky, L.A. and Sazhin, S.S. (2004) Absorption of external thermal radiation in asymmetrically illuminated droplets, *J Quantitative Spectroscopy and Radiation Transfer* **87** (2), 119-135.
142. Sazhin, S.S., Krutitskii, P.A., Abdelghaffar, W.A., Sazhina, E.M., Mikhalovsky, S.V., Meikle, S.T. and Heikal, M.R. (2004) Transient heating of diesel fuel droplets, *Int J Heat Mass Transfer* **47**, 3327-3340.
143. Sazhin, S.S. (2004) Book review: 'Spray simulation: modelling and numerical simulation of sprayforming metals, Fritsching U., 2004', *Int J of Multiphase Flow* **30**, 711-712.
144. Crua, C., Kennaird, D.A., Sazhin, S.S., Heikal, M.R. and M.R. Gold (2004) Diesel autoignition at elevated in-cylinder pressures, *Int J Engine Research* **5** (4), 365-374.
145. Goldfarb, I., Sazhin, S. and Zinoviev, A. (2004) Delayed thermal explosion in flammable gas containing fuel droplets: asymptotic analysis, *Int J Engineering Mathematics* **50**, 399-414.
146. Abramzon, B. and Sazhin, S. (2005) Droplet vaporization model in the presence of thermal radiation, *Int J Heat Mass Transfer* **48**, 1868-1873.
147. Sazhin, S.S., Abdelghaffar, W.A., Sazhina, E.M. and Heikal, M.R. (2005) Models for droplet transient heating: effects on droplet evaporation, ignition, and break-up, *Int J Thermal Science* **44**, 610-622.
148. Kaplanski, F., Sazhin, S.S. and Rudi, U. (2005) Particle dynamics and mixing in oscillating viscous vortex pair, *Proceedings of the Estonian Academy of Sciences. Engineering* **11** (2), 140-153.
149. Sazhin, S., Crua, C., Hwang, J.-S., No, S.-Y. and Heikal, M. (2005) Models of fuel spray penetration, *Proceedings of the Estonian Academy of Sciences. Engineering* **11** (2), 154-160.
150. Sazhin, S.S., Abdelghaffar, W.A., Krutitskii, P.A., Sazhina, E.M. and Heikal, M.R. (2005) New approaches to numerical modelling of droplet transient heating and evaporation, *Int J Heat Mass Transfer* **48** (19-20), 4215-4228.
151. Abramzon, B. and Sazhin, S. (2006) Convective vaporization of fuel droplets with thermal radiation absorption, *Fuel* **85**(1), 32-46.
152. Sazhin, S.S. (2006) Advanced models of fuel droplet heating and evaporation, *Progress in Energy and Combustion Science* **32**(2), 162-214.

153. Sazhin, S.S., Kristyadi, T., Abdelghaffar, W.A. and Heikal, M.R. (2006) Models for fuel droplet heating and evaporation: comparative analysis, *Fuel* **85**(12-13), 1613-1630.
154. Shishkova, I.N. and Sazhin, S.S. (2006) A numerical algorithm for kinetic modelling of evaporation processes, *J Computational Physics* **218**(2), 635-653.
155. Bykov, V., Goldfarb, I., Gol'dshtein, V., Sazhin, S., Sazhina, E. (2007) System decomposition technique for spray modelling in CFD codes, *Computers and Fluids* **36**(3), 601-610.
156. Goldfarb, I., Gol'dshtein, V., Katz, D., Sazhin, S. (2007) Radiation effect on thermal explosion in a gas containing evaporating fuel droplets, *Int J Thermal Science* **46**(4), 358-370.
157. Sazhin, S.S., Krutitskii, P.A., Martynov, S.B., Mason, D., Heikal, M.R., Sazhina, E.M. (2007) Transient heating of a semitransparent spherical body, *Int J Thermal Science* **46**(5), 444-457.
158. Sazhin, S.S., Shishkova, I.N., Kryukov, A.P., Levashov, V.Yu., Heikal, M.R. (2007) Evaporation of droplets into a background gas: kinetic modelling, *Int J Heat Mass Transfer* **50**, 2675-2691.
159. Sazhin, S.S., Kristyadi T., Abdelghaffar, W.A., Begg, S., Heikal, M.R., Mikhalovsky, S.V., Meikle S.T., Al-Hanbali, O. (2007) Approximate analysis of thermal radiation absorption in fuel droplets, *ASME J Heat Transfer* **129** 1246-1255.
160. Sazhin S.S., Shakked, T., Sobolev, V., Katoshevski, D. (2008) Particle grouping in oscillating flows, *European J of Mechanics B/Fluids* **27** 131-149.
161. Katoshevski, D., Shakked, T., Sazhin, S.S., Crua, C., Heikal, M.R. (2008) Grouping and trapping of evaporating droplets in an oscillating gas flow, *International J of Heat and Fluid Flow* **29** 415-426.
162. Sazhin, S.S., Abdelghaffar, W.A., Krutitskii, P.A., Sazhina, E.M. and Heikal, M.R. (2008) Numerical modelling of droplet transient heating and evaporation, *Heat Transfer Research* **39** (1), 51-64.
163. Sazhin, S.S., Shishkova, I.N., Kristyadi, T., Martynov, S.P. and Heikal, M. (2008) Droplet heating and evaporation: hydrodynamic and kinetic models, *Heat Transfer Research* **39** (4), 293-303.
164. Sazhin, S.S., Martynov, S.B., Kristyadi, T., Crua, C., Heikal, M.R. (2008) Diesel fuel spray penetration, heating, evaporation and ignition: modelling versus experimentation, *International J of Engineering Systems Modelling and Simulation* **1**(1), 1-19.
165. Maqua, C., Castanet, G., Grisch, F., Lemoine, F., Kristyadi, T., Sazhin, S.S. (2008) Monodisperse droplet heating and evaporation: experimental study and modelling, *International J of Heat and Mass Transfer* **51**(15-16), 3932-3945.
166. Kaplanski, F., Sazhin, S.S., Fukumoto, Y., Begg, S., Heikal, M. (2009) A generalised vortex ring model, *J Fluid Mechanics* **622**, 233-258.
167. Sazhin, S.S., Shishkova, I.N. (2009) A kinetic algorithm for modelling the droplet evaporation process in the presence of heat flux and background gas, *Atomization and Sprays* **19**(5), 473-489.
168. Sazhin, S. (2009) Modelling of sprays using computational fluid dynamics codes, *Pollack Periodica* **4**(1) 5-16.
169. Begg, S., Kaplanski, F., Sazhin, S.S., Hindle, M., Heikal, M. (2009) Vortex ring-like structures in gasoline engines, *International J. of Engine Research* **10**, 195-214.
170. Kaplanski, F., Sazhin, S.S., Begg, S., Fukumoto, Y., Heikal, M. (2010) Dynamics of vortex rings and spray induced vortex ring-like structures, *European J of Mechanics B/Fluids* **29**(3), 208-216.
171. Sazhin, S.S., Krutitskii, P.A., Gusev, I.G., Heikal, M. (2010) Transient heating of an evaporating droplet, *International J of Heat and Mass Transfer* **53**(13-14), 2826-2836.
172. Sazhin, S.S., Shchepakina, E. and Sobolev, V. (2010) Order reduction of a non-Lipschitzian model of monodisperse spray ignition, *Mathematical and Computer Modelling* **52**, 529-537.
173. Sazhin, S.S., Elwardany, A., Krutitskii, P.A., Castanet, G., Lemoine, F., Sazhina E.M., Heikal, M.R. (2010) A simplified model for bi-component droplet heating and evaporation, *International J of Heat and Mass Transfer* **53**(21-22), 4495-4505.
174. Sazhin, S.S., Shishkova, I.N., Heikal, M. (2010) Kinetic modelling of fuel droplet heating and evaporation: calculations and approximations, *International J of Engineering Systems Modelling and Simulation* **2** (3), 169-176.
175. Katoshevski, D., Shakked, T., Sazhin, S.S. (2010) Particle grouping in standing and moving wave velocity fields, *International J of Engineering Systems Modelling and Simulation* **2** (3), 177-182.
176. Kristyadi, T., Deprédurand, V., Castanet, G., Lemoine, F., Sazhin, S.S., Elwardany, A., Sazhina E.M., Heikal, M.R. (2010) Monodisperse monocomponent fuel droplet heating and evaporation, *Fuel* **89**, 3995-4001.
177. Abdelghaffar, W.A., Elwardany, A.E., Sazhin, S.S. (2010) Modelling of the processes in Diesel engine-like conditions: effects of fuel heating and evaporation, *Atomization and Sprays* **20**(8), 1278-1288.
178. Sazhin, S.S., Krutitskii, P.A., Gusev, I.G., Heikal, M. (2011) Transient heating of an evaporating droplet with presumed time evolution of its radius, *International J of Heat and Mass Transfer* **54**(5-6), 1278-1288.
179. Turner, M.R., Healey, J.J., Sazhin, S.S., Piazzesi, R. (2011) Stability analysis and break-up length calculations for steady planar liquid jets, *J Fluid Mechanics* **668**, 384-411.

180. Sazhin, S.S., Elwardany, A., Krutitskii, P.A., Deprédurand, V., Castanet, G., Lemoine, F., Sazhina E.M., Heikal, M.R. (2011) Multi-component droplet heating and evaporation: numerical simulation versus experimental data, *International J of Thermal Science* **50**, 1164-1180.
181. Sazhin, S.S., Gusev, I.G., Krutitskii, P.A., Heikal, M. (2011) Transient heating of a semitransparent spherical body immersed into a gas with inhomogeneous temperature distribution, *International J of Thermal Science* **50**, 1215-1222.
182. Cao, B.-Y., Xie, J.-F., Sazhin, S.S. (2011) Molecular dynamics study on evaporation and condensation of n-dodecane at liquid-vapour phase equilibria, *Journal of Chemical Physics* **134**, 164309.
183. Mitchell, S.L., Vynnycky, M., Gusev, I.G., Sazhin, S.S. (2011) An accurate numerical solution for the transient heating of an evaporating spherical droplet, *Applied Mathematics and Computation* **217**, 9219-9233.
184. Sazhin, S.S., Elwardany, A., Sazhina E.M., Heikal, M.R. (2011) A quasi-discrete model for heating and evaporation of complex multicomponent hydrocarbon fuel droplets, *International J of Heat and Mass Transfer* **54**, 4325-4332.
185. Xie, J.-F., Sazhin, S.S., Cao, B.-Y. (2011) Molecular dynamics study of the processes in the vicinity of the n-dodecane vapour/liquid interface, *Physics of Fluids* **23** (11), 112104; doi:10.1063/1.3662004.
186. Elwardany, A.E, Gusev, I.G., Castanet, G., Lemoine, F., Sazhin, S.S. (2011) Mono- and multi-component droplet cooling/heating and evaporation: comparative analysis of numerical models, *Atomization and Sprays* **21**(11), 907-931.
187. Gusev, I.G., Krutitskii, P.A., Sazhin, S.S., Elwardany, A. (2012) A study of the species diffusion equation in the presence of the moving boundary, *International J of Heat and Mass Transfer* **55**, 2014-2021.
188. Turner, M.R., Healey, J.J., Sazhin, S.S., Piazzesi, R. (2012) Wave packet analysis and breakup length calculations for an accelerating planar liquid jet, *Fluid Dynamics Research* **44**(1), article number: 015503; DOI: 10.1088/0169-5983/44/1/015503.
189. Griffiths, J., Piazzesi, R., Sazhina, E.M., Sazhin, S.S., Glaude, P.A., Heikal, M.R. (2012) CFD modelling of cyclohexane auto-ignition in an RCM, *Fuel* **96** 192-203.
190. Turner, M.R., Sazhin, S.S., Healey, J.J., Crua, C., Martynov, S.B. (2012) A breakup model for transient Diesel fuel sprays, *Fuel* **97**, 288-305.
191. Elwardany, A.E, Sazhin, S.S. (2012) A quasi-discrete model for droplet heating and evaporation: application to Diesel and gasoline fuels *Fuel* **97**, 685-694.
192. Xie, J.-F., Sazhin, S.S., Cao, B.-Y. (2012) Molecular dynamics study of condensation/evaporation and velocity distribution of n-dodecane at liquid-vapour phase equilibria, *J. Therm. Sci. Tech.* **7** (1), 288-300.
193. Sazhin, S.S. (2012) Computational Fluid Dynamics: a tool for engineering research? *Irrigation & Drainage Systems Engineering*, **1**(4) 1:e110. doi:10.4172/2168-9768.1000e110.
194. Sazhin, S.S., Heikal, M.R. (2012) Droplet heating and evaporation - recent results and unsolved problems, *Computational Thermal Sciences* **4**(6), 485-496.
195. Shishkova, I.N., Sazhin, S.S., Xie, J.-F. (2013) A solution of the Boltzmann equation in the presence of inelastic collisions, *J Computational Physics* **232** 87-99, DOI: 10.1016/j.jcp.2012.07.007.
196. Sazhin, S.S., Xie, J.-F., Shishkova, I.N., Elwardany, A.E., Heikal, M.R. (2013) A kinetic model of droplet heating and evaporation: effects of inelastic collisions and a non-unity evaporation coefficient, *International J of Heat and Mass Transfer* **56**, 525-537.
197. Sazhin, S.S., Elwardany, A.E., Gusev, I.G., Xie, J.-F., Shishkova, I.N., Cao, B.-Y., Snegirev, A. Yu., Heikal, M.R. (2013) New models for droplet heating and evaporation, *Asian Journal of Scientific Research (AJSR)* **6**(2), 177-186, DOI: 10.3923/ajsr.2013.
198. Boronin, S.A., Healey, J.J., Sazhin, S.S. (2013) Nonmodal stability of round viscous jets, *J Fluid Mechanics* **716** 96-119.
199. Bykov, V., Griffiths, J., Piazzesi, R., Sazhin, S.S., Sazhina, E.M. (2013) The application of the global quasi-linearisation technique to the analysis of the cyclohexane/air mixture autoignition, *Applied Mathematics and Computation* **219** 7338-7347. DOI: 10.1016/j.amc.2012.12.042.
200. Lebedeva, N.A., Osiptsov, A.N, Sazhin, S.S. (2013) A combined fully Lagrangian approach to mesh-free modelling of transient two-phase flows. *Atomization and Sprays* **23**(1) 47-69.
201. Elwardany, A.E, Sazhin, S.S., Farooq, A. (2013) Modelling of heating and evaporation of gasoline fuel droplets: a comparative analysis of approximations, *Fuel* **111** 643-647.
202. Gun'ko, V.M., Nasiri, R., Sazhin, S.S., Lemoine, F., Grisch, F. (2013) A quantum chemical study of the processes during the evaporation of real-life Diesel fuel droplets, *Fluid Phase Equilibria* **356** 146-156.
203. Sazhin, S.S., Al Qubeissi, M., Kolodnytska, R., Elwardany, A., Nasiri, R., Heikal, M.R. (2014) Modelling of biodiesel fuel droplet heating and evaporation, *Fuel* **115** 559-572.
204. Shishkova, I.N., Sazhin, S.S. (2014) A solution of the Boltzmann equation in the presence of three components and inelastic collisions, *International J of Heat and Mass Transfer* **71** 26-34.

205. Gun'ko, V.M., Nasiri, R., Sazhin, S.S. (2014) A study of the evaporation and condensation of n-alkane clusters and nanodroplets using quantum chemical methods, *Fluid Phase Equilibria* **366** 99-107.
206. Sazhin, S.S., Al Qubeissi, M., Nasiri, R., Gunko, V.M., Elwardany, A.E., Lemoine, F., Grisch, F., Heikal, M.R. (2014) A multi-dimensional quasi-discrete model for the analysis of Diesel fuel droplet heating and evaporation, *Fuel* **129** 238-266.
207. Sazhin, S.S., Al Qubeissi, M., Xie, J.-F. (2014) Two approaches to modelling the heating of evaporated droplets, *Int. Comm. in Heat and Mass Transfer* **57** 353-356.
208. Sazhin, S.S., Shishkova, I.N., Al Qubeissi, M. (2014) Heating and evaporation of a two-component droplet: hydrodynamic and kinetic models, *International J of Heat and Mass Transfer* **79** 704-712.
209. Gun'ko, V.M., Nasiri, R., Sazhin, S.S. (2015) Effects of the surroundings and conformerisation of n-dodecane molecules on evaporation/condensation processes, *J Chemical Physics* **142**(3) 034502. DOI: 10.1063/1.4905496.
210. Petrovic, V., Bracanovic, Z., Branka, G., Petrovic, S., Sazhin, S.S. (2015) The design of a full flow dilution tunnel with a critical flow venturi for the measurement of Diesel engine particulate emission, *Faculty of Mechanical Engineering (FME) Transactions* **43** (2), 99-106.
211. Al Qubeissi, M., Sazhin, S.S., Crua, C., Turner, J., Heikal, M.R. (2015) Modelling of biodiesel fuel droplet heating and evaporation: effects of fuel composition, *Fuel* **154** 308-318.
212. Danaila, I., Kaplanski, F., Sazhin, S.S. (2015) Modelling of confined vortex rings *J. Fluid Mechanics* **774** 267-297.
213. Nasiri, R., Gun'ko, V.M., Sazhin, S.S. (2015) The effects of internal molecular dynamics on the evaporation/condensation of n-dodecane, *Theoretical Chemistry Accounts* **134** Issue 83. DOI 10.1007/s00214-015-1681-z.
214. Al Qubeissi, M., Sazhin, S.S., Turner, J., Begg, S., Crua, C., Heikal, M.R. (2015) Modelling of gasoline fuel droplets heating and evaporation, *Fuel* **159** 373-384. doi:10.1016/j.fuel.2015.06.028
215. Sazhin, S.S., Gun'ko, V.M., Nasiri, R. (2016) Quantum-chemical analysis of the processes at the surfaces of Diesel fuel droplets, *Fuel* **165** 405-412.
216. Sazhin, S.S., Shishkova, I.N., Al Qubeissi, M. (2016) A self-consistent kinetic model for droplet heating and evaporation, *International J of Heat and Mass Transfer* **93** 1206-1217. DOI information: 10.1016/j.ijheatmasstransfer.2015.10.039
217. Rybdylova, O., Osiptsov, A.N., Sazhin, S.S., Begg, S., Heikal, M. (2016) A combined viscous-vortex, thermal-blob and Lagrangian method for non-isothermal, two-phase flow modelling, *International J of Heat and Fluid Flow* **58** 93-102. <http://dx.doi.org/10.1016/j.ijheatfluidflow.2015.12.003>
218. Elwardany, A.E, Sazhin, S.S., Im, H. G. (2016) A new formulation of physical surrogates of FACE A gasoline fuel based on heating and evaporation characteristics, *Fuel* **176** 56-62. DOI: 10.1016/j.fuel.2016.02.041
219. Rybdylova, O., Al Qubeissi, M., Braun, M., Crua, C., Manin, J., Pickett, L.M., de Sercey, G., Sazhina, E.M., Sazhin, S.S., Heikal, M. (2016) A model for droplet heating and its implementation into ANSYS Fluent, *Int. Comm. in Heat and Mass Transfer* **76** 265-270.
220. Al Qubeissi, M., Sazhin, S.S., Elwardany, A.E. (2017) Modelling of blended Diesel and biodiesel fuel droplet heating and evaporation , *Fuel* **187** 349-355. DOI: <http://dx.doi.org/10.1016/j.fuel.2016.09.060>
221. Danaila, I., Kaplanski, F., Sazhin, S.S. (2017) A model for confined vortex rings with elliptical core vorticity distribution, *J. Fluid Mechanics* **811** 67-94. doi:10.1017/jfm.2016.752
222. Al Qubeissi, M., Sazhin, S.S. (2017) Models for droplet heating and evaporation: an application to biodiesel, Diesel and gasoline fuels, *International Journal of Engineering Systems Modelling and Simulation* **9**(1) 32-40.
223. Zubkov, V.S., Cossali, G.E., Tonini, S., Rybdylova, O., Crua, C., Heikal, M. and Sazhin, S.S (2017) Mathematical modelling of heating and evaporation of a spheroidal droplet, *International Journal of Heat and Mass Transfer* **108** 2181-2190. DOI: <http://dx.doi.org/10.1016/j.ijheatmasstransfer.2016.12.074>
224. Sazhin, S.S (2017) Modelling of fuel droplet heating and evaporation: recent results and unsolved problems, *Fuel* **196** 69-101. DOI: <http://dx.doi.org/10.1016/j.fuel.2017.01.048>.

E. Papers (refereed conference proceedings):

1. Sazhin, S.S. and Temme, N.M. (1992) R wave propagation near the cut-off frequency. In *Physics of Space Plasma (1992): Proceedings of the 1992 Cambridge Workshop in Geoplasma Physics on Controversial Issues and New Frontier Research in Geoplasmas*; Eds T. Chang and J.R. Jasperse, Scientific Publishers, Inc, pp. 591-596.
2. Sazhin, S.S., Wild, P., Leys, C., Toebaert, D. and Sazhina, E.M. (1993) Modelling of the processes in the fast-axial-flow CO₂ lasers. In 'Proceedings of the 21st International Conference on Phenomena in Ionized Gases'. Bochum, Germany, 1993, v2, pp. 104-105.
3. Sazhin, S.S. and Bullough, K. (1993) Theoretical studies of the inner magnetosphere based on whistler-mode wave data from the Antarctic stations. In 'University Research in Antarctica (1989-1992): Proceedings

of the British Antarctic Survey Antarctic Special Topic Award Scheme Round 2 Symposium 30 September – 1 October 1992'; Edited by R.B. Heywood. Published by British Antarctic Survey, pp. 5-16.

4. Sazhin, S.S. and Woolliscroft, L.J.C. (1993) Multipoint measurements for whistler-mode studies, ESA WPP-047 Proceedings of *Spatio-Temporal Analysis for Resolving Plasma Turbulence (START)*, Aussois, France, 31 January – 5 February 1993, pp. 255-257.

5. Sazhin, S.S. (1995) Modelling of plasma processes based on the commercial computational fluid dynamics (CFD) package FLUENT. In 'Proceedings of the 22st International Conference on Phenomena in Ionized Gases'. Stevens Institute of Technology; Contributed Papers, Vol. 4, pp. 211-212.

6. Sazhin, S.S., Sazhina, E.M., Heikal, M.R., and Ioannou, Y. (1997) Numerical analysis of thermal radiation transfer in grey and non-grey gases. *Numerical Methods in Thermal Problems*, **10**, pp. 45-56. Proceedings of the Tenth International Conference on Numerical Methods for Thermal Problems (Swansea, 21 – 25 July 1997). Pineridge Press, Swansea, UK.

7. Sazhin, S.S., Sazhina, E.M. and Heikal, M.R. (1999) The Shell autoignition model: application to a Diesel engine. In 'Proceedings of the Mediterranean Combustion Symposium', Antalya, Turkey, June 20–25, 1999, Ed F Beretta, Section 4, pp. 336–346.

8. Sazhin, S.S., Sazhina, E.M. and Heikal, M.R. (1999) Modelling of gas to droplets radiative exchange. In *Progress in Engineering Heat Transfer*, Eds. B Groshal, J Mikielewicz, B Sundén, IFFM Publishers, (Proceedings of 3rd Baltic Heat Transfer Conference. Gdańsk, Poland, September 22–24), pp. 79-86.

9. Achasov, O.V., Labuda, S.A., Begg, S.M., Heikal, M.R., Savich, S. and Sazhin, S.S. (1999) Gasdynamically controlled combustion in gas mixtures: application to internal combustion engines. In *Proceedings of the International Seminar "Conversion of Scientific Research in Belarus within the framework of ISTC Activity"*, Chief Scientific Editor A Voitovich, National Academy of Science of Belarus, Minsk.

10. Sazhin, S.S., Sazhina, E.M., Heikal, M.R., Dombrovsky, L.A., Krutitskii, P.A., Pozorski, J. and Petrovich, S. (2001) Modelling of fluid dynamics, heat transfer and combustion processes in diesel engines. In proceedings of *18th International Conference 'Science and Motor Vehicles '01'*, published by Yugoslav Society of Automotive Engineers, pp. 119-122.

11. Sazhin, S.S., Sazhina, E.M., Feng, G., Heikal, M.R., Goldfarb, I., Gol'dshtein, V. and Kuzmenko, G. (2001) Modelling of heat transfer and ignition processes in a diesel spray. In *CHT'01 Advances in Computational Heat Transfer II (Proceedings of a Symposium organized by the International Centre for Heat and Mass Transfer)*, Palm Cove, Queensland, Australia (20 – 25 May 2001); Eds G de Vahl Davis and E Leonardi, Begell House, New York, Wallington (UK), pp. 389-396.

12. El-Hawat, S.M., Heikal, M.R. and Sazhin, S.S. (2001) Three-dimensional numerical modelling of flow and heat transfer over louvered fin arrays. In *CHT'01 Advances in Computational Heat Transfer II (Proceedings of a Symposium organized by the International Centre for Heat and Mass Transfer)*, Palm Cove, Queensland, Australia (20 – 25 May 2001); Eds G de Vahl Davis and E Leonardi, Begell House, New York, Wallington (UK), pp. 325-331.

13. Savich, S., Begg, S.M., Feng, G., Heikal, M.R. and Sazhin, S.S., (2001) Probability distributions for modelling in-cylinder air velocities in a G-DI internal combustion engine. In proceedings of the 1st IMechE Automotive Division Southern Centre Conference on *Total Vehicle Technology (Challenging Current Thinking)* (University of Sussex, 18-19 September 2001). Professional Engineering Publishing, pp. 223-231.

14. Sazhin, S.S., Heikal, M.R., Dombrovsky, L.A. and Pozorski, J. (2001) New approaches to analytical and numerical modelling of fuel sprays. In proceedings of the 1st IMechE Automotive Division Southern Centre Conference on *Total Vehicle Technology (Challenging Current Thinking)* (University of Sussex, 18-19 September 2001). Professional Engineering Publishing, pp. 233-240.

15. Sazhin, S.S., Sazhina, E.M., Heikal, M.R., Krutitskii, P.A., Dombrovsky, L.A. and Pozorski, J. (2002) Modelling of diesel fuel sprays: penetration, heating, autoignition. Proceedings of the Second Mediterranean Combustion Symposium, 6-11 January, 2002, Sharm El-Sheikh, Egypt, Eds. by M.S. Mansour and M. Kamel, Vol. 2, pp. 738-749. Published by ICHMT (International Centre of Heat and Mass Transfer)

16. Sazhin, S.S., Dombrovsky, L.A., Krutitskii, P.A., Sazhina, E.M. and Heikal, M.R. (2002) Analytical and numerical modelling of convective and radiative heating of fuel droplets in diesel engines. Proceedings of the Twelfth International Heat Transfer Conference. Grenoble (August 18 - 23, 2002) Editions scientifique et medicale Elsevier SAS,, Editions scientifique et medicale Elsevier SAS, Vol. 1, pp. 699-704.

17. Sazhin, S.S. and Krutitskii, P.A. (2003) A conduction model for transient heating of fuel droplets. In *Progress in Analysis*. Proceedings of the 3d International ISAAC (International Society for Analysis, Applications and Computations) Congress (August 20 - 25, 2001, Berlin). Eds. H.G.W. Begehr, R.P. Gilbert, M.W. Wong. World Scientific, Singapore, 2003, Vol. II, 1231-1239.

18. Dombrovsky, L.A. and Sazhin, S.S. (2003). Absorption of thermal radiation inside a fuel droplet, Proc. of Eurotherm Seminar "Computational Thermal Radiation in Participating Media", 15-17 April 2003, Mons, Belgium (eds P Lybaert, V Feldheim, D Lemonnier, N Selcuk), pp. 249-258, Elsevier.

19. Sazhin, S.S. and Heikal, M.R. (2003) Transient convective and radiative heating of diesel fuel droplets. In *Proceedings of the International Symposium on Transient Convective Heat and Mass Transfer in Single and Two-Phase Flows* (Eds. J Padet and F. Arinç, Cesme, Turkey, August 17-22, 2003, pp. 49-59. Published by Begell House.
20. Sazhin, S.S., Krutitskii, P.A., Abdelghaffar, W.A., Sazhina, E.M. and Heikal, M.R. (2004) Transient heating of droplets. In Proceedings of '3rd International Symposium on Two-Phase Flow Modelling and Experimentation', Pisa 22-24 September 2004, paper bja01 (CD-ROM). Published by Begell House.
21. Kaplanski, F., Sazhin, S.S. and Rudi, U (2004) Particle dynamics in the vortex ring. In Proceedings of '3rd International Symposium on Two-Phase Flow Modelling and Experimentation', Pisa 22-24 September 2004, paper as05 (CD-ROM). Published by Begell House.
22. Sazhin, S.S., Abdelghaffar, W.A., Martynov, S.B., Sazhina, E.M. and Heikal, M.R. and Krutitskii, P.A. (2005) Transient heating and evaporation of fuel droplets: recent results and unsolved problems. In Proceedings of '5rd International Symposium on Multiphase Flow, Heat Mass Transfer and Energy Conversion', Xi'an, China, 3-6 July 2005 (CD ROM, paper 125). Published by State Key Laboratory of Multiphase Flow in Power Engineering, Xian Jiaotong University (China).
23. Abdelghaffar, W.A., Sazhin, S.S., Sazhina, E.M. and Heikal, M.R. (2005) Models for droplet transient heating: a comparative analysis. In Proceedings of HEFAT2005 (4th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics), Cairo, Egypt; Paper number: AW1. Published by HEFAT.
24. Sazhin, S.S., Krutitskii, P.A., Martynov, S.B., Mason, D, Heikal, M.R. and Sazhina, E.M. (2005) Transient heating of semitransparent droplet. In Proceedings of HEFAT2005 (4th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics), Cairo, Egypt; Paper number: SS1. Published by HEFAT.
25. Sazhina, E.M., Bykov, V., Goldfarb, I., Goldshtein, V., Sazhin, S.S. and Heikal, M.R. (2005) Modelling of spray autoignition by the ODE system decomposition technique. In Proceedings of HEFAT2005 (4th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics), Cairo, Egypt; Paper number: SE2. Published by HEFAT.
26. Bykov, V., Goldfarb, I., Gol'dshtein, V., Sazhin, S., Sazhina, E. (2005) An Asymptotic Approach to Numerical Modelling of Spray Autoignition. In *Hot Gas Proceedings of the Fourth Mediterranean Combustion Symposium, MCS4, Paper V.6, Lisbon (Portugal), October 6-10 (CD-ROM)*. Published by Instituto Superior Tecnico.
27. Abramzon, B. and Sazhin, S. (2005) Convective vaporization of fuel droplet: effects of thermal radiation absorption and variable liquid properties. Proceedings of HT2005, 2005 ASME Summer Heat Transfer Conference, July 17-22, 2005, San Francisco, California, USA. Paper HT2005-72653. Published by American Society of Mechanical Engineers.
28. Sazhin, S.S. (2005) Modelling of heating, evaporation and ignition of fuel droplets: combined analytical, asymptotic and numerical analysis. *Journal of Physics, Conference Series, Vol. 22, 2005*. Proceedings of International workshop on hysteresis and multi-scale asymptotics 1721 March 2004, University College, Cork, Ireland (Eds. M Mortell, R O'Malley, A Pokrovskii and V Sobolev), pp. 174-193. Published by Institute of Physics (UK).
29. Sazhin, S.S., Martynov, S., Shishkova, I., Crua, C, Karimi, K., Gorokhovski, M., Sazhina, E., Heikal, M. (2006) Modelling of droplet heating, evaporation and break-up: recent developments. Proceedings of 13th International Heat Transfer Conference (13-18 August 2006), Sydney, Australia. Paper MPH-08. Published by Begell House.
30. Martynov, S., Mason, D., Heikal, M., Sazhin, S., Gorokhovski M. (2006) Modelling of cavitation flow in a nozzle and its effect on spray development. Proceedings of 13th International Heat Transfer Conference (13-18 August 2006), Sydney, Australia. Paper JET-08. Published by Begell House.
31. Sazhin, S.S. (2006) Multiple scales in spray modelling. *Journal of Physics, Conference Series, International Workshop on Multi-Rate Processes & Hysteresis*. University College Cork, Ireland, April 3-8, 2006 (Eds. M Mortell, R O'Malley, A Pokrovskii and V Sobolev), vol. 55, pp. 191-202. Published by Institute of Physics (UK).
32. Sazhin, S.S., Kristyadi, T., Heikal, M.R., Abdelghaffar, W.A., Shishkova, I.N. (2007) Fuel droplet heating and evaporation: analysis of liquid and gas phase models. SAE paper 07SFL-18 - 2007-01-0019. Published by Society of Automotive Engineers.
33. Sazhin, S.S., Crua, C., Martynov, S.P., Kristyadi, T. and Heikal, M. (2007) Advanced models for droplet heating and evaporation: effect on the autoignition of diesel fuel sprays. Proceedings of the Third European Combustion Meeting ECM 2007, paper 15-2. Published by Mediterranean Agronomic Institute of Ghania, Crete, Greece.
34. Ribaucour, M., Minetti, R., Sazhina, E.M., Sazhin, S.S. (2007) Autoignition of n-pentane in a rapid compression machine: experiment versus modelling. Proceedings of the Third European Combustion Meeting ECM 2007, paper 1-1. Published by Mediterranean Agronomic Institute of Ghania, Crete, Greece.
35. Sazhin, S.S., Martynov, S.P., Kristyadi, T., Crua, C., and Heikal, M. (2007) Models for droplet heating and evaporation: application to the autoignition process in Diesel engines. *Combustion Engines. V. 2 Mixture*

Formation, Ignition & Combustion, pp. 246-257. Proceedings of the PTNSS Congress (Krakow, Poland 20-23 May 2007); Published by 'Polskie Towarzystwo Naukowe Solników Spalinowych'.

36. Sazhin, S.S., Shishkova, I.N., Kristyadi, T., Martynov, S.P. and Heikal, M. (2007) Droplet heating and evaporation: hydrodynamic and kinetic models. In 'Advances in Heat Transfer', Proceedings of the Baltic Heat Transfer Conference, September 19-21, 2007, V. 2, pp. 405-414. Publishing House of St Petersburg State Polytechnic University.

37. Sazhin, S.S. and Shishkova, I.N. (2008) Evaporation of droplets into a background gas: hydrodynamic and kinetic modelling. Proceedings of the 19th National & 8th ISHMT-ASME Heat and Mass Transfer Conference, January 3-5, JNTU Hyderabad, India. Published by Indian Society of Heat and Mass transfer.

38. Sazhin, S.S., Shishkova, I., Martynov, S., Heikal, M. (2008) Hydrodynamic and kinetic models of droplet heating and evaporation. Proceedings of CHT-08 ICHMT International Symposium on Advances in Computational Heat Transfer. May 11-16, 2008, Marrakesh, Morocco, CD, paper CHT-08-101. Published by Begell House.

39. Sazhin, S.S., Shishkova, I.N., Kryukov, A.P., Levashov, V.Yu., Heikal, M.R. (2008) Evaporation of droplets into a background gas in the presence of heat flux: kinetic and hydrodynamic modelling. Proceedings of the 19th International Symposium on Transport Phenomena, 17-20 August, 2008, Reykjavik, Iceland, paper 48. Published by University of Iceland.

40. Sazhin, S.S., Kaplanski, F., Begg, S., Heikal, M.R. (2008) Vortex rings in internal combustion engines: modelling versus experiment. Proceedings of the 19th International Symposium on Transport Phenomena, 17-20 August, 2008, Reykjavik, Iceland, paper 33. Published by University of Iceland.

41. Katoshevski, D., Shakkeed, T. and Sazhin, S.S. (2008) Grouping of droplets in oscillating flows. ILASS 2008, 22nd European Conference on Liquid Atomization and Spray Systems, September 8-10, 2008, Como Lake, Italy. CD, paper 4-8. Published by Politecnico di Milano and the Università degli Studi di Bergamo.

42. Sazhin, S.S., Kaplanski, F., Begg, S. and Heikal, M. (2008) Vortex ring-like structures in gasoline fuel sprays: modelling and observations. ILASS 2008, 22nd European Conference on Liquid Atomization and Spray Systems, September 8-10, 2008, Como Lake, Italy. CD, paper 6-5. Published by Politecnico di Milano and the Università degli Studi di Bergamo.

43. Sazhin, S.S., Martynov, S.B., Kaplanski, F., Begg, S. (2008) Spray dynamics as a multi-scale process. Journal of Physics, Conference Series, International Workshop on Multi-Rate Processes & Hysteresis. University College Cork, Ireland, March 31 – April 5, 2008 (Eds. M Mortell, R O'Malley, A Pokrovskii and V Sobolev), **138**, paper 012034. Published by Institute of Physics (UK).

44. Sazhin, S.S., Kaplanski, F., Begg, S. and Heikal, M. (2009) Vortex ring-like structures in gasoline fuel sprays. Proceedings of the JUMY International Automotive Conference and Exhibition (XXII Science and Motor Vehicles 2009), Belgrade 14-16 April 2009, paper 31 (CD). Published by the Society of Automotive Engineers of Serbia.

45. Sazhin, S.S., Shishkova, I.N., Kryukov, A.P., Levashov, V.Yu., Heikal, M.R. (2009) A Simple algorithm for kinetic modelling of Diesel fuel droplet evaporation. Progress in Computational Heat and Mass Transfers; Proceedings of 6th ICCHMT May 18-21, 2009, Guangzhou, China, paper 151, pages 386-391. Published by South China University of Technology.

46. Sazhin, S.S., Kaplanski, F., Begg, S. and Heikal, M. (2010) Vortex ring-like structures in a non-evaporating gasoline-fuel spray: simplified models versus experimental results. SAE paper 10SFL-0069. Published by Society of Automotive Engineers.

47. Sazhin, S.S., Shishkova, I.N., Gusev, I.G., Elwardany, A., Krutitskii, P.A. and Heikal, M. (2010) Fuel droplet heating and evaporation: new hydrodynamic and kinetic models. Proceedings of the 14th International Heat Transfer Conferences, Washington 8-13 August 2010, paper IHTC14-22320.

48. Sazhin, S.S., Krutitskii, P.A., Elwardany, A., Castanet, G., Lemoine, F. and Heikal, M. (2010) An analytical solution to the spherically symmetric species diffusion equation: application to modelling of heating and evaporation of bi-component droplets. Proceedings of the ILASS-Europe 2010, Brno, Czech Republic, 6-8 September 2010, paper ID: 29.

49. Sazhin, S.S., and Shishkova, I.N. (2010) Advanced models for droplet heating and evaporation: recent developments. Proceedings of DIPSI Workshop 2010 on Droplet Impact Phenomena & Spray Investigation, May 28, 2010, Bergamo, Italy. Editors E Cossali and S Tonini, Bergamo University Press, pp. 43-48.

50. Sazhin, S.S., Shishkova, I.N., Gusev, I.G. and Heikal, M.R. (2010) Hydrodynamic and kinetic models for monocomponent droplet heating and evaporation: recent developments. Proceedings of the 21st International Symposium on Transport Phenomena 2-5 November, 2010, Kaohsiung City, Taiwan, paper IS07-03.

51. Sazhin, S.S., Shishkova, I.N., Elwardany, A., Gusev, I.G. and Heikal, M. (2011) Modelling of droplet heating and evaporation: recent results and unsolved problems. Journal of Physics, Conference Series, **268**, 012026. International Workshop on Multi-Rate Processes & Hysteresis in Mathematics, Physics and Information Sciences. University of Pecs, Hungary, May 31 – June 3, 2010. Published by Institute of Physics (UK).

52. Snegirev, A., Talalov, V., Sheinman, I. and Sazhin, S. (2011) An enhanced spray model for flame suppression simulations. Proceedings of the Fifth European Combustion Meeting ECM, Cardiff, 29th June to 1st July 2011 paper 072-1 (CD).
53. Abdelghaffar, W.A., Elwardany, A.E., Sazhin, S.S. (2011) Effect of fuel droplet break-up, heating and evaporation in Diesel engines. World Congress on Engineering 2011, London, UK, 6-7 July 2011, Vol. 3, p. 2485-2490. Publisher: Newswood Limited International Association of Engineers (IAENG), Hong Kong.
54. Sazhin, S.S., Turner, M.R., Healey, J.J. and Martynov, S.B. (2011) Transient Diesel fuel jets and sprays: mathematical analysis and applications, Proceedings of ILASS Europe 2011, 24th European Conference on Liquid Atomization and Spray Systems, Estoril, Portugal, 5-7 September 2011, paper 1028 (CD).
55. Gusev, I.G., Sazhin, S.S. and Heikal, M.R. (2011) The effects of the moving boundary on the heating of evaporating droplets, Proceedings of ILASS Europe 2011, 24th European Conference on Liquid Atomization and Spray Systems, Estoril, Portugal, 5-7 September 2011, paper 1017 (CD).
56. Elwardany, A.E., Sazhin, S.S., Castanet, G., Lemoine, F. and Heikal, M.R. (2011) The modelling of heating and evaporation of mono-component, bi-component and multi-component Droplets, Proceedings of ILASS Europe 2011, 24th European Conference on Liquid Atomization and Spray Systems, Estoril, Portugal, 5-7 September 2011, paper 1018 (CD).
57. Sazhin, S.S., Gusev, I.G., Heikal, M.R., Krutitskii, P.A. (2011) Modelling of liquid droplet heating and evaporation taking into account the effects of the moving boundary. Proceedings of the Asian Symposium on Computational Heat Transfer and Fluid Flow - 2011, 22-26 September 2011, Kyoto, Japan, paper 029 (CD).
58. Xie, J.-F., Sazhin, S.S., Cao, B.-Y. (2011) Molecular dynamics study of condensation/evaporation and velocity distribution of Diesel fuel at liquid-vapour phase equilibria. Proceedings of the Asian Symposium on Computational Heat Transfer and Fluid Flow - 2011, 22-26 September 2011, Kyoto, Japan, paper 032 (CD).
59. Sazhin, S.S. (2011) Modelling droplet heating and evaporation. Proceedings of the 6th Baltic Heat Transfer Conference (BHTC), CD (Section Combustion 1), August 24-26, 2011, Tampere, Finland.
60. Sazhin, S.S., Gusev, I.G., Xie, J.-F., Elwardany, A.E., Snegirev, A.Yu. and Heikal, M.R. (2011) New approaches to modelling droplet heating and evaporation. Proceedings of DIPSI Workshop 2011 on Droplet Impact Phenomena & Spray Investigation, May 27, 2011, Bergamo, Italy. Editors E Cossali and S Tonini, Published by Dip. di Ingegneria industriale, Universita degli studi di Bergamo, pp. 59-65. ISBN-978 88 97413 03 5. See <http://hdl.handle.net/10446/25199>.
61. Boronin, S., Healey, J., Sazhin, S.S. (2011) Transient unstable round jets: mathematical analysis and applications. Proceedings of 22nd International Symposium on Transport Phenomena, Delft November 8-11, 2011, CD.
62. Sazhin, S.S., Elwardany, A.E., Gusev, I.G., Xie, J.-F., Snegirev, A.Yu., Heikal, M.R. (2012) Heating and evaporation of mono- and multi-component droplets: hydrodynamic and kinetic models. International Symposium on Multiphase flow and Transport Phenomena, April 22-25, 2012, Agadir, Morocco. CD, Edited by M'barek Feddaoui and Hicham Meftah, paper 15.
63. Sazhin, S.S., Elwardany, A.E., Gusev, I.G., Xie, J.-F., Shishkova, I.N., Cao, B.-Y., Snegirev, A.Yu., Heikal, M.R. (2012) New models for droplet heating and evaporation. Proceedings of the International Conference on Production, Energy and Reliability (ICPER2012). 12-14 June 2012, Kuala Lumpur Convention Centre, CD, paper 1569529783.
64. Sazhin S.S., Heikal M.R. (2012) Droplet heating and evaporation – recent results and unsolved problems. Proceedings of International Symposium on Advances in Computational Heat Transfer (1-6 July Bath, UK). CD, Begell House Inc., paper KN-CHT12-SH.
65. Xie, J.-F., Sazhin, S.S., Shishkova, I., Cao, B.-Y. (2012) Kinetic and molecular dynamics simulations of n-dodecane droplet heating and evaporation. Proceedings of International Symposium on Advances in Computational Heat Transfer (1-6 July Bath, UK). CD, Begell House Inc., paper CHT12-MP02.
66. Snegirev, A.Yu., Talalov, V.A., Tsoi, A.S., Sazhin, S.S., Crua, C. (2012) Advancement in turbulent spray modelling: the effect of internal temperature gradient in droplets. Proceedings of International Symposium on Advances in Computational Heat Transfer (1-6 July Bath, UK). CD, Begell House Inc., paper CHT12-MP09.
67. Sazhin, S.S., Shishkova, I.N., Xie, J.F. (2012) Kinetic and molecular dynamic modelling of n-dodecane droplet heating and evaporation. Proceedings of ICLASS 2012, 12th Triennial International Conference on Liquid Atomization and Spray Systems, Heidelberg, Germany, September 2-6, 2012. Contribution 1107b.
68. Sazhin, S.S. (2013) New approaches to modelling of automotive fuel droplet heating and evaporation. Proceedings of the International Automotive Conference XXIV Science and Motor Vehicles 2013, Belgrade 23-24 April 2013, paper NMV13AutoSim01 (CD). Published by the Society of Automotive Engineers of Serbia.
69. Sazhin, S.S., Boronin, S.A., Begg, S., Crua, C., Healey, J., Lebedeva, N.A., Osiptsov, A.N., Kaplanski, F., Heikal, M.R. (2013) Jet and vortex ring-like structures in internal combustion engines: stability analysis and analytical solutions. Proceedings of IUTAM Symposium on Waves in Fluids: Effects of nonlinearity, Rotation, Stratification and Dissipation. Procedia IUTAM, Elsevier **8** 196-204.

70. Elwardany, A.E., Sazhin, S.S., Farooq, A. (2013) Modeling of heating and evaporation of primary reference fuels and toluene reference fuels. Proceedings of the 9th Asia-Pacific Conference on Combustion, Gyeongju Hilton, Gyeongju, Korea, 19-22 May 2013.
71. Sazhin, S.S. (2013) Mono- and multi-component droplet heating and evaporation: hydrodynamic, kinetic and molecular dynamics models. Proceedings of the ILASS – Europe 2013, 25th European Conference on Liquid Atomization and Spray Systems, Chania, Greece, 1-4 September 2013, Paper No. 1 (CD).
72. Al Qubeissi, M., Kolodnytska, R., Sazhin, S.S. (2013) Biodiesel Fuel Droplets: Modelling of Heating and Evaporation Processes. Proceedings of the ILASS – Europe 2013, 25th European Conference on Liquid Atomization and Spray Systems, Chania, Greece, 1-4 September 2013, Paper No. 4 (CD).
73. Kolodnytska, R., Al Qubeissi, M., Sazhin, S.S. (2013) Biodiesel fuel droplets: transport and thermodynamic properties. Proceedings of the ILASS – Europe 2013, 25th European Conference on Liquid Atomization and Spray Systems, Chania, Greece, 1-4 September 2013, Paper No. 7 (CD).
74. Nasiri, R., Gun'ko, V., Sazhin, S.S. (2013) Quantum mechanical effects in n-alkane droplets. Proceedings of the ILASS – Europe 2013, 25th European Conference on Liquid Atomization and Spray Systems, Chania, Greece, 1-4 September 2013, Paper No. 8 (CD).
75. Elwardany, A.E., Farook, A., Sazhin, S.S. (2013) Modelling of heating and evaporation of gasoline fuel: effects of input parameters. Proceedings of the ILASS – Europe 2013, 25th European Conference on Liquid Atomization and Spray Systems, Chania, Greece, 1-4 September 2013, Paper No. 35 (CD).
76. Sazhin, S.S. (2013) Droplet heating and evaporation: hydrodynamic, kinetic and molecular dynamics models. Proceedings of the 8th Symposium on Numerical Analysis of Fluid Flow and Heat Transfer – Numerical Fluids Symposium September 21-27 2013. AIP Conference Proceedings 1558, 62-65 (2013); doi: 10.1063/1.4825421.
77. Lebedeva, N.A., Osipov, A.N., Sazhin, S.S., Fully Lagrangian modeling of two-phase impulse microjets. Proceedings of the ASME 2013 International Mechanical Engineering Congress & Exposition, 15-21 November 2013, San Diego CA, USA. CD. 8 pages.
78. Sazhin, S.S., Shishkova, I.N. (2014) Kinetic modelling of Diesel fuel droplet heating and evaporation: effects of inelastic collisions and three components. Proceedings of the 15th International Heat Transfer Conferences, Kyoto 10-15 August 2014, paper IHTC15-8860. ISBN: 978-1-56700-421-2.
79. Sazhin, S.S., Al Qubeissi, M., Heikal, M.R. (2014) Modelling of biodiesel and Diesel fuel droplet heating and evaporation. Proceedings of the 15th International Heat Transfer Conferences, Kyoto 10-15 August 2014, paper IHTC15-8936. ISBN: 978-1-56700-421-2.
80. Sazhin, S.S. (2014) Processes in the vicinity of the surfaces of individual droplets. Proceedings of the International Conference 'Fluxes and Structures in Fluids – 2013', St Petersburg, June 25-28, MAKS Press, Moscow, Eds. Y.D. Chashechkin and V.G. Baydulov (Selected papers), pp. 193-202. ISBN 978-5-317-04780-1.
81. Sazhin, S.S., Shishkova, I.N., Al Qubeissi, M. (2014) Kinetic modelling of Diesel fuel droplet heating and evaporation: effects of the approximation of fuel composition. Proceedings of ILASS Europe 2014, 26th Annual Conference on Liquid Atomization and Spray Systems, Sep. 2014, Bremen, Germany, CD, paper ABS-148.
82. Al Qubeissi, M., Sazhin, S.S., de Sercey, G., Cyril C. (2014) Multi-dimensional quasi-discrete model for the investigation of heating and evaporation of Diesel fuel droplets. Proceedings of ILASS Europe 2014, 26th Annual Conference on Liquid Atomization and Spray Systems, Sep. 2014, Bremen, Germany, CD, paper ABS-135.
83. Rybdylova, O., Sazhin, S.S., Osipov, A.N., Begg, S., Heikal, M. (2014) Modelling of non-isothermal sprays using a combined viscous vortex method and the Fully Lagrangian Approach. Proceedings of ILASS Europe 2014, 26th Annual Conference on Liquid Atomization and Spray Systems, Sep. 2014, Bremen, Germany, CD, paper ABS-179.
84. Duret, B., Al Qubeissi, M., Sazhin, S.S., Cyril C. (2014) Evaporating droplets: comparisons between DNS and modelling. Proceedings of ILASS Europe 2014, 26th Annual Conference on Liquid Atomization and Spray Systems, Sep. 2014, Bremen, Germany, CD, paper ABS-187.
85. Al Qubeissi, M., Sazhin, S.S., Crua, C., and Heikal, M.R. (2015) Modelling of heating and evaporation of biodiesel fuel droplets, World Academy of Science, Engineering and Technology, International Science Index 97, International Journal of Mechanical, Aerospace, Industrial and Mechatronics Engineering, V. 9(1), pp. 46-49.
86. Sazhin, S.S., Elwardany, A.E., Heikal, M.R. (2015) New approaches to the modelling of multi-component fuel droplet heating and evaporation. *Journal of Physics, Conference Series*, Published by Institute of Physics (UK) **585** 012014 doi:10.1088/1742-6596/585/1/012014.
87. Sazhin, S.S., Shishkova, I.N. (2015) New approaches to modelling of heating and evaporation of automotive fuel droplets. Proceedings of the 11th all-Russia congress on fundamental problems of theoretical and applied mechanics, 20-24th August 2015; Paper 1154, pp. 3313-3314 (CD); editors D.Yu. Akhmetov, A.N. Gerasimov, Sh.M. Khaidarov. Publishing House of Kazan (Volga Region) Federal University (in Russian).
88. Sazhin, S.S., Al Qubeissi, M., Heikal, M.R. (2015) Modelling of heating and evaporation of automotive fuel droplets: recent results and unsolved problems. Proceedings of the 7th Baltic Heat Transfer Conference, Tallinn, Estonia, 24-26th August 2015, pp. 181-186; published by Tallinn University of Technology.

89. Kaplanski, F., Danaila, I., Rybdylova, O., Osiptsov, A.N., Begg, S., Sazhin, S.S., Rudi, Y., Heikal, M.R. (2015) New approaches to modelling vortex rings and vortex ring-like structures. Proceedings of the 7th Baltic Heat Transfer Conference, Tallinn, Estonia, 24-26th August 2015; pp. 35-40; published by Tallinn University of Technology.

90. Sazhin S.S., Al Qubeissi M. (2016) Modelling of automotive fuel droplet heating and evaporation: mathematical tools and approximations. Proceedings of 7th Multi-Rate Processes and Hysteresis (MURPHYS-HSFS-2014), Berlin, Germany, 7th-11th April 2014. Journal of Physics: Conference Series **727** (2016 012015 doi:10.1088/1742-6596/727/1/012015

91. Sobolev, V., Shchepakina, E., Sazhin, S.S. (2016) Order reduction in non-Lipschitzian models of spray ignition. Proceedings of the 27th European Conference on Liquid Atomization and Spray Systems. Paper P-02, Editors: G. de Sercey and S. Sazhin.

92. Shchepakina, E., Sobolev, V., Sazhin, S.S. (2016) System order reduction methods in spray ignition problems. Proceedings of the 27th European Conference on Liquid Atomization and Spray Systems. Paper P-03, Editors: G. de Sercey and S. Sazhin.

93. Zaripov, T., Gilfanov, A., Begg, S., Rybdylova, O., Sazhin, S.S., Heikal, M.R. (2016) Numerical and experimental analysis of a gasoline fuel spray. Proceedings of the 27th European Conference on Liquid Atomization and Spray Systems. Paper AS-12, Editors: G. de Sercey and S. Sazhin.

94. Al Quibeissi, M., Sazhin, S.S. (2016) Blended biodiesel/Diesel fuel droplet heating and evaporation. Proceedings of the 27th European Conference on Liquid Atomization and Spray Systems. Paper DHE-01, Editors: G. de Sercey and S. Sazhin.

95. Zubkov, V., Cossali, G.E. Tonini, S., Crua, C., Sazhin, S.S. (2016) Mathematical modelling of heating and evaporation of a spheroidal droplet. Proceedings of the 27th European Conference on Liquid Atomization and Spray Systems. Paper DHE-07. Editors: G. de Sercey and S. Sazhin.

96. Kaplanski, F., Danaila, I., Begg, S., Rybdylova, O., Sazhin, S.S., Heikal, M. (2016) Confined vortex rings in gasoline fuel sprays: modelling and observations. Proceedings of the 27th European Conference on Liquid Atomization and Spray Systems. Paper MF-01. Editors: G. de Sercey and S. Sazhin.

97. Lebedeva, N.A., Osiptsov, A.N., Sazhin, S.S. (2016) A combined vortex method and fully Lagrangian approach for simulation of axially symmetric gas-droplet vortex ring-like flows. Proceedings of the 27th European Conference on Liquid Atomization and Spray Systems. Paper MF-02. Editors: G. de Sercey and S. Sazhin.

98. Papoutsakis, A., Danaila, L., Sazhin, S.S. (2016) Modelling of the evolution of a droplet cloud in a turbulent flow. Proceedings of the 27th European Conference on Liquid Atomization and Spray Systems. Paper MF-07. Editors: G. de Sercey and S. Sazhin.

99. Rybdylova, O., Danaila, I., Osiptsov, A., Begg, S., Sazhin, S.S. (2016) Modelling of a two-phase vortex ring flow based on the fully Lagrangian Approach. 27th European Conference on Liquid Atomization and Spray Systems. Paper MF-10. Editors: G. de Sercey and S. Sazhin.

In press:

100. Rybdylova, O., Sazhin, S.S. (2017) Meshless methods for 'gas – evaporating droplet flow modelling. Proceedings of 8th Multi-Rate Processes and Hysteresis (MURPHYS-HSFS-2016), Barcelona, Spain, 13th-17th June 2016. Journal of Physics: Conference Series (in press).

101. Sazhin, S.S., Shchepakina, E., Sobolev, V., (2017) Positively invariant manifolds: concept and applications. Processes and Hysteresis (MURPHYS-HSFS-2016), Barcelona, Spain, 13th-17th June 2016. Journal of Physics: Conference Series (in press).

F. Papers (others):

1. Pudovkin, M.I. and Sazhin, S.S. (1974) Instabilities in the magnetospheric plasma. In *High-latitude geophysical phenomena*, ed B.E. Brunelly, pp. 199-223. Leningrad: Nauka (in Russian).

2. Sazhin, S.S. (1975) VLF emissions in the auroral zone. In *Substorms and disturbances in the magnetosphere*, pp. 252-63. Leningrad: Nauka (in Russian).

3. Sazhin, S.S. (1976) VLF emissions in the Earth's magnetosphere. In *Geomagnetic Research* No. 18, ed O.A. Troshichev, pp. 24-53. Moscow: Nauka (in Russian).

4. Sazhin, S.S. (1977) On the relationship between the equatorial variations of magnetic field and precipitating charged particle fluxes. In *The Structure of magneto-ionospheric and auroral disturbances*, pp. 105-8. Leningrad: Nauka (in Russian).

5. Sazhin, S.S. (1977) A model of magnetospheric ELF emissions with Cerenkov excitation. In *The connection of VLF emissions in the upper atmosphere with other geophysical phenomena*, ed N.I. Fediakina, pp. 76-82, Yakutsk (in Russian).

6. Sazhin, S.S. (1977) A model of magnetospheric ELF-VLF emissions with cyclotron excitation, *ibid*, pp. 83-91.
7. Sazhin, S.S. (1978) Cyclotron whistler-mode instability in a collisional plasma. In *Geomagnetic Research* No. 23, pp. 105-7. Moscow: Soviet Radio (in Russian).
8. Sazhin, S.S. (1979) Mechanisms of the DR-current decay. In *Geomagnetic Research* No. 24, pp. 38-52. Moscow: Soviet Radio (in Russian).
9. Sazhin, S.S. (1979) The Physical structure of waves in a cold plasma. In *Geomagnetic Research* No. 25, pp. 84-90. Moscow: Soviet Radio (in Russian).
10. Varshavski, S.P., Ponyavin, D.I. and Sazhin, S.S. (1980) Whistler-mode group velocity in the magnetospheric plasma. In *Low frequency waves and signals in the magnetosphere and the ionosphere*, ed Ja.I. Likhter, pp. 144-7. Moscow: Nauka (in Russian).
11. Sazhin, S.S. and Tsyganenko, N.A. (1980) A self-consistent magnetospheric parallel electric field in the presence of a cold plasma. In *Geomagnetic Research*, No. 27, eds M.I. Pudovkin and S.S. Sazhin, pp. 61-4. Moscow: Soviet Radio (in Russian).
12. Sazhin, S.S. and Kobeleva, O.A. (1981) Quasilonitudinal whistler-mode propagation in a hot anisotropic plasma (applications to magnetospheric conditions). In *Low frequency emissions in the ionosphere and the magnetosphere of the Earth*, ed O.M. Raspopov, pp. 13-6. Apatity: Academy of Sciences (in Russian).
13. Sazhin, S.S. (1983) Diagnostic possibilities of natural radio emissions. In *Magnetospheric Research* No. 2, ed M.I. Pudovkin, pp. 5-27. Moscow: Geophysical Committee (in Russian).
14. Majewski, M. and Sazhin, S.S. (1985) RF-wave propagation in the anisotropic space plasma. In *Planetary Radio Emissions*, eds H.O. Rucker and S.J. Bauer, pp. 59-78. Wien: Verlag.
15. Hayakawa, M., Tanaka, Y., Sazhin, S.S. and Okada, T. (1985) An interpretation of dawn-side mid-latitude VLF emissions in terms of quasilinear electron cyclotron instability. In *Nonlinear and Environmental Electromagnetics*, ed H. Kikuchi, pp. 33-42. Amsterdam: Elsevier Science Publishers B.V..
16. Sazhin, S.S. and Abaza, V.P. (1986) On whistler-mode group velocity in the magnetospheric plasma. In *Magnetospheric Research* No 6, eds A.D. Chertkov and N.A. Tsyganenko, pp. 68-70. Moscow: Radio i Sviaz (in Russian).
17. Bogdanov O.A. and Sazhin, S.S. (1986) A self-consistent parallel electric field in a magnetic trap. *Ibid.*, pp. 71-80.
18. Sazhin, S.S. (2000). Modelling of spray ignition processes in Diesel engines. In "Proceedings of the 16th IMACS World Congress 2000 on Scientific Computation, Applied Mathematics and Simulation" CD (paper 125-9).
19. Sazhina, E.M., Sazhin, S.S., Heikal, M.R. and Bardsley, M.E.A. (2000). The P-1 model for thermal radiation transfer: application to numerical modelling of combustion processes in Diesel engines. In "Proceedings of the 16th IMACS World Congress 2000 on Scientific Computation, Applied Mathematics and Simulation" CD (paper 125-10).
20. Sazhin, S.S., Heikal, M.R., Pozorski, J., Petrovich, S. and Jovanovich, Z. (2001) Fuel spray penetration modelling in diesel engines (paper CG-29201A28). In proceedings of *6th International Scientific and Professional Conference on Power Source and Transfer*. Power source and transfer, IPS'2001, edited by Prof Dr Bozidar Nikolic, University of Montenegro, Montenegro, Podgorica, pp. 221-226 (in Serbian).
21. Dombrovsky, L.A., Sazhin, S.S. and Heikal, M.R. (2002) A model for computation of radiative characteristics of diesel fuel droplets. Proceedings of 3rd Russian National Heat and Mass Transfer Conference, v. 6, pp. 262-265 (in Russian). English Translation: Computational Model of Spectral Radiation Characteristics of Diesel Fuel Droplets. In *Heat Transfer Research*. Vol. 35, Issues 1-2 (7 pages). Published by Begell House, 2004.
22. Goldfarb, I., Goldshtein, V., Katz, D. and Sazhin, S.S. (2003) Effect of thermal radiation on thermal explosion in a hot gas containing cold fuel droplets. "Proceedings of the 3rd European Combustion Meeting 2003", CDROM.
23. Goldfarb, I., Sazhin, S.S. and Zinoviev, A. (2004) Thermal explosion in flammable gas containing fuel droplets: asymptotic analysis. Proceedings of '5th Minsk International Heat and Mass Transfer Forum' (May, 2004) Section 4, CDROM.
24. Sazhin, S.S., Abdelghaffar, W.A., Krutitskii, P.A., Sazhina, E.M. and Heikal, M.R. (2004) Numerical modelling of droplet transient heating and evaporation. Proceedings of '5th Minsk International Heat and Mass Transfer Forum' (May, 2004) Section 6, CDROM.
25. Snegirev A.Yu., Sazhin S.S., Talalov V.A. (2011) The model and numerical algorithm to predict heating and vaporization of a liquid droplet. Proc. SPbSPU, 2011, No 1 (116), pp. 44-55 (ISSN 1994-2354) (in Russian).
26. Snegirev A.Yu., Sazhin S.S., Talalov V.A., Savin, M.V. (2011) Validation study of the model to predict heating and vaporization of a liquid droplet. Proc. SPbSPU, 2011, No 2 (122), pp. 48-59 (ISSN 1994-2354) (In Russian).

27. Snegirev A.Yu., Sazhin S.S., Talalov V.A. (2011) The effect of non-uniform temperature distribution inside a vaporizing liquid droplet. Proc. SPbSPU, 2011, No 3 (129), pp. 17-26 (ISSN 1994-2354) (in Russian).
28. Sazhin, S.S., Sobolev, V.A. and Shchepakina, E.A. (2011) A new mathematical tool for modelling the processes in fuel sprays. Vestnik Samarskogo Gosudarstvennogo Aerokosmicheskogo Universiteta imeni akademika Koroleva, No. 5(29), pp. 215-220 (in Russian).
29. Sazhin, S.S. (2016) Book of Abstracts of the 27th European Conference on Liquid Atomization and Spray Systems. Editors: G. de Sercey and S. Sazhin, p. 3; Preface.
30. Zeidan, D., Saghir, M.Z., Sazhin, S. S., Darwash, M. (Guest Edotors) (2017) Preface to the special issue of a selection of papers representative of the Eighth International Conference on Thermal Engineering Theory and Applications – ICTEA 2015, held in Amman, Jordan, 18-21 May, 2015, *International Journal of Engineering Systems Modelling and Simulation* **9**(1) 1-2.

G. Abstracts

1. Sazhin, S.S. (1975) On the theory of discrete VLF emissions. In *Programs and abstracts of the XVI IUGG General Assembly*, Grenoble, ed L.P.Aldredge, p. 349.
2. Sazhin, S.S. (1977) A model of quasiperiodic VLF emissions. In *Final program of IAGA / IAMAP Joint Assembly*, Seattle, p. 122.
3. Vershinina, N.I. and Sazhin, S.S. (1977) Estimation of the large scale magnetospheric electric field from the frequency drift of bursts of VLF emissions. In *Symposium on geomagnetospheric physics (abstracts)*, p. 71, Irkutsk (in Russian).
4. Pudovkin, M.I. and Sazhin, S.S. (1978) Pedersen conductivity of a turbulent plasma. In *IV All-Union seminar on VLF emissions (abstracts)*, pp. 21-2, Tbilisi (in Russian).
5. Sazhin, S.S. and Kobelev, V.V. (1981) Models of whistler-mode propagation in the magnetospheric plasma. In *All-Union meeting on the results of the fulfillment of the project 'International research on the magnetosphere' (abstracts)*, pp. 29-30. Ashkhabad (in Russian).
6. Sazhin, S.S., Walker, S.N. and Woolliscroft, L.J.C. (1989) Oblique whistler-mode propagation and instabilities in the magnetopause region of the magnetosphere. In *IAGA Bulletin* No. 53 (ed M. Gadsden), p. 262, published by the Secretary General of IAGA, Aberdeen University.
7. Sazhin, S.S., Smith, A.J. and Sazhina, E.M. (1989) Can magnetospheric electron temperature be inferred from whistler dispersion measurements? *Ibid.*, p. 427.
8. Sazhin, S.S. (1989) Improved quasilinear models of parallel whistler-mode instability. *Ibid.*, p. 435.
9. Horne, R.B. and Sazhin, S.S. (1989) Quasielectrostatic and electrostatic approximations for whistler-mode waves in the magnetospheric plasma. *Ibid.*, p. 464.
10. Sazhin, S.S., Walker, S.N. and Woolliscroft, L.J.C. (1990) Observations and theory of whistler-mode waves in the vicinity of the Earth's magnetopause. In *Twenty-eighth plenary meeting of the committee on space research (25 June - 6 July 1990)*. Abstracts. The Hague, p. 33.
11. Sazhin, S.S., Bullough, K., Smith, A.J. and Saxton, J.M. (1991) On the influence of the ring current on whistler group delay time in the magnetosphere. In *IAGA XX General Assembly (Vienna, 11-24 August 1991): Program and Abstracts*, p. 415 (printed by RM- Druck- und Verlagsgesellschaft, Graz, Austria).
12. Sazhin, S.S. (1994) Approximate solutions of the parallel whistler-mode dispersion equation in a weakly relativistic plasma. In *Institute of Physics Annual Congress 11 - 14 April 1994 (Abstract book)* p. 59.
13. Sazhin, S.S., Wild, P., Sazhina, E.M., Makhlof, M., Leys, C., and Toebaert, D. (1994) The three dimensional modelling of the processes in the fast-axial-flow CO₂ laser. In *Institute of Physics Annual Congress 11 - 14 April 1994 (Abstract book)* p. 91.
14. Rose, C., Sazhin, S., Taylor, H. and Waite S. (1997) Contact et perspective possible. In *Connaissance Mutuelle des Littoraux*. Actes du colloque de Sainte-Valerie-sur-Somme, pp. 207-210.
15. Sazhin, S.S., Sazhina, E.M., Heikal, M.R. and Marooney, C. (1998) A new mathematical formulation of the Shell autoignition model. Seventh International Conference on Numerical Combustion (30 March - 1 April 1998). Abstracts, p. 113.
16. Sazhina, E.M., Sazhin, S.S., Heikal, M.R. and Marooney, C (1998) The Shell autoignition model: Application to gasoline and Diesel fuels (abstract). Proceedings of the 27th International Symposium on Combustion. Abstracts of work-in-progress posters, p. 103.
17. Goldfarb, I., Goldshtein, V., Kuzmenko, G. and Sazhin, S.S. (1998) Radiation effects on thermal explosion in combustible gas containing fuel spray. 14th Annual Symposium of the Israeli Section of the Combustion Institute. Book of Abstracts, pp. 53-56 (Technion, Haifa, Israel).
18. Goldfarb, I., Goldshtein, V., Kuzmenko, G. and Sazhin, S.S. (1999) Radiation effects on thermal explosion in combustible gas containing fuel spray. Mediterranean Combustion Symposium, Antalya, Turkey, June 20-25, 1999.

19. Goldfarb, I., Goldshtein, V., Kuzmenko, G. and Sazhin, S.S. (1999) Radiation effect on thermal explosion in combustible gas containing fuel spray. In "Proceedings of the 17th International Colloquium on the Dynamics of Explosions and Reactive Systems" (Heidelberg), P-116 (CD-ROM).
20. Goldfarb, I., Goldshtein, V., Feng, G., Heikal, M.R., Kuzmenko, G. and Sazhin, S.S. (1999) Thermal radiation effects of the evaporation and initial combustion of fuel droplets. 15th Annual Symposium of the Israeli Section of the Combustion Institute. Book of Abstracts, pp. 87-89 (Technion, Haifa, Israel).
21. Sazhin, S.S., Feng, G., Savich, S., Sazhina, E.M., Heikal, M.R., Goldfarb, I., Gol'dshtein, V., Kuzmenko, G. (2000) Modelling of the fuel spray penetration and ignition processes (abstract). Proceedings of the 28th International Symposium on Combustion. Abstracts of work-in-progress posters (page 447).
22. Chowdhury, S.J., Sapsford, S.M., Sazhin, S.S., and Heikal, M.R. (2000) Numerical study of turbulent swirling flow in a combustion chamber (abstract). Proceedings of the 28th International Symposium on Combustion. Abstracts of work-in-progress posters (page 340).
23. Sazhin, S.S. (2001) Analytical and numerical modelling of fuel sprays (abstract). 3d International ISAAC (International Society for Analysis, Applications and Computations) Congress (August 20 - 25, 2001, Berlin). Abstracts (page 194-195).
24. Sazhin, S.S. (2001) New models for fuel droplet heating (abstract). Bi-National Israel-Britain Workshop on "Applied Mathematical Methods in Spray Combustion" (December 2001, Beer Sheva, Israel) (Book of Abstracts).
25. Sazhin, S.S., Dombrovsky, L.A., Sazhina, E.M. and Heikal, M.R. (2002) New models for convective and radiative heating of fuel droplets: application to numerical simulation of combustion processes in diesel engines. In proceedings of the 9th International Conference on Numerical Combustion (Paper No. 113). Sorrento 8 - 10 April 2002, pp. 261-262.
26. Goldfarb, I., Sazhin, S.S. and A Zinoviev (2002) Delayed thermal explosion in flammable gas containing fuel droplets. 18th Annual Symposium of the Israeli Section of the Combustion Institute. Book of Abstracts, pp. 90-92 (The Hebrew University of Jerusalem, Israel).
27. Goldfarb, I., Goldshtein, V., Katz, D. and Sazhin, S.S. (2002) Effect of thermal radiation on thermal explosion in a hot gas containing cold fuel droplets. 18th Annual Symposium of the Israeli Section of the Combustion Institute. Book of Abstracts, pp. A13-A15 (The Hebrew University of Jerusalem, Israel).
28. Sazhin, S.S., Crua, C. and Heikal, M.R. (2003) Fuel spray penetration: modelling and experiments. In 'Proceedings of *Fourth Symposium 'Towards Clean Diesel Engines'*, Eindhoven, June 5-6, 2003, (invited lecture), Book of Abstracts, pp. 22-23.
29. Kaplanski, F., Sazhin, S.S. and Rudi, U. (2003) Particle dynamics in a swirling vortex ring. In 'Proceedings of *Euromech Colloquium 447 'Interaction phenomena in turbulent particle-laden flows'*, Tallinn (Estonia), June 18-20, 2003. Book of Abstracts, p. 41.
30. Sazhin, S.S. (2003) Models of fuel spray penetration. In 'Proceedings of *Euromech Colloquium 447 'Interaction phenomena in turbulent particle-laden flows'*, Tallinn (Estonia), June 18-20, 2003. Book of Abstracts, p. 57.
31. Sazhin, S.S. and Heikal, M.R. (2003) Transient convective and radiative heating of fuel droplets: application to numerical simulation of the ignition process in diesel engines. In 'Proceedings of International Symposium on 'Transient Convective Heat and Mass Transfer in Single and Two-Phase Flows TR CON-03', Cesme, Turkey, August 17-22, 2003. Organised by International Centre for Heat and Mass Transfer. Book of Abstracts, p. 83.
32. Zinoviev, A., Goldfarb, I. and Sazhin, S.S. (2003) Delayed thermal explosion in flammable gas containing fuel droplets. 5th International Congress on Industrial and Applied Mathematics, Sydney, Australia; 7-11 July 2003. Book of Abstracts, pp. 248-249.
33. Goldfarb, I., Goldshtein, V., Katz, D. and Sazhin, S.S. (2003) Effect of thermal radiation on thermal explosion in a hot gas containing cold fuel droplets. Book of Abstracts of the European Combustion Meeting, 3rd European Combustion Meeting, 2003. Book of abstracts of ECM2003., p.188
34. Goldfarb, I., Sazhin, S.S. and Zinoviev, A. (2004) Thermal explosion in flammable gas containing fuel droplets: asymptotic analysis. 5th Minsk International Heat and Mass Transfer Forum (May, 2004) Theses and Abstracts, Vol. 1, pp. 346-347.
35. Sazhin, S.S., Abdelghaffar, W.A., Krutitskii, P.A., Sazhina, E.M. and Heikal, M.R. (2004) Numerical modelling of droplet transient heating and evaporation. 5th Minsk International Heat and Mass Transfer Forum (May, 2004) Theses and Abstracts, Vol. 2, pp. 189-190.
36. Sazhin, S.S. (2004) Transient heating and evaporation of diesel fuel droplets. 20th Annual Symposium of the Israeli Section of the Combustion Institute. Book of Abstracts, p. 8 (Ben-Gurion University, Beer-Sheva, Israel).
37. Bykov, V., Goldfarb, I., Goldshtein, V., Sazhin, S.S. and Sazhina, E.M. (2004) System decomposition technique: application to spray modelling in CFD codes. 20th Annual Symposium of the Israeli Section of the Combustion Institute. Book of Abstracts, p. 16 (Ben-Gurion University, Beer-Sheva, Israel).
38. Goldfarb, I., Goldshtein, V., Katz, D. and Sazhin, S.S. (2004) Effect of thermal radiation on thermal

explosion in a hot gas containing cold fuel droplets. 20th Annual Symposium of the Israeli Section of the Combustion Institute. Book of Abstracts, pp. 45–48 (Ben-Gurion University, Beer-Sheva, Israel).

39. Abdelghaffar, W.A., Sazhin, S.S., Heikal, M.R., Sazhina, E.M. and Krutitskii, P.A. (2005) Advanced gas droplets heat transfer models and their applications. In ‘Proceedings of the ICHTC’, Antalya, Turkey. Edited by N. Chigier.

40. Sazhin, S.S., Abdelghaffar, W.A., Martynov, S.B., Sazhina, E.M. and Heikal, M.R. and Krutitskii, P.A. (2005) Transient heating and evaporation of fuel droplets: recent results and unsolved problems. In Proceedings of ‘5rd International Symposium on Multiphase Flow, Heat Mass Transfer and Energy Conversion’, Xi’an, China, 3-6 July 2005. Book of Abstracts p. 138.

41. Bykov, V., Goldfarb, I., Gol’dshstein, V., Sazhin, S.S., Sazhina, E.M. (2005) An asymptotic approach to numerical modelling of spray autoignition. In ‘Hot Gas Fourth Mediterranean Combustion Symposium’, MCS4, Book of Abstracts of Accepted Papers, Instituto Superior Tecnico, Lisbon (Portugal), October 6-10, p. 50.

42. Goldfarb I., Gol’dshstein, V., Katz, D., Sazhin, S. (2005) The effect of thermal radiation on thermal explosion in a hot gas containing cold fuel droplets. In ‘21st Annual Symposium of the Israeli Section of the Combustion Institute (ICS-2005)’ 29 December, 2005, Technion, Haifa, Israel. The Book of Abstracts, p. 26.

43. Katoshevski, D., Crua, C., Sazhin, S.S., Heikal, M.R. (2005) Grouping modes of spray droplets. In ‘21st Annual Symposium of the Israeli Section of the Combustion Institute (ICS-2005)’ 29 December, 2005, Technion, Haifa, Israel. The Book of Abstracts, p. 10.

44. Martynov, S., Mason, D., Heikal, M. and Sazhin, S. (2006) Modelling of cavitation flow in a diesel injection nozzle. UK national science week 2006. Annual Presentations by Britain Tot Younger Scientists, Engineers and Technologists at the House of Commons, London, Monday 13 March 2006. Abstracts are available at <http://www.setforeurope.org/hoc06/img/AbstractsLWebsite.pdf>.

45. Sazhin, S., Martynov, S., Crua, C., Sazhina, E., Heikal, M., Chtab, A., Gorokhovskii, M. and Katoshevski, D (2006) Modelling of the dynamics and break-up of jets and sprays. The 6th Euromech Fluid Mechanics Conference, KTH - Royal Institute of Technology, Stockholm 26-30 June 2006 (book of abstracts, p. 117).

46. Bykov, V., Goldfarb, I., Gol’dshstein, V., Sazhin, S.S. and Sazhina, E.M. (2006) The dynamic decomposition approach to spray combustion modelling. The 14th European Conference on Mathematics for Industry (ECMI 2006). The UNIVERSITY CARLOS III DE MADRID, July 10-14 2006.

47. Sazhin, S., Martynov, S., Shishkova, I., Crua, C., Karimi, K., Gorokhovski, M., Sazhina, E. and Heikal, M. (2006) Modelling of droplet heating, evaporation and break-up: recent developments. International Heat Transfer Conference (IHTC-13), Sydney, Australia, 13-18 August, 2006. Book of Abstracts, p. 28.

48. Martynov, S., Mason, D., Heikal, M, Sazhin, S. and Gorokhovski, M. (2006) Modelling of cavitation flow in a nozzle and its effect on spray development. International Heat Transfer Conference (IHTC-13), Sydney, Australia, 13-18 August, 2006. Book of Abstracts, pp. 210-211.

49. Sazhin, S.S., Crua, C., Martynov, S.P., Kristyadi, T. and Heikal, M. (2007) Advanced models for droplet heating and evaporation: effect on the autoignition of diesel fuel sprays. Third European Combustion Meeting ECM 2007, Book of Abstracts, p. 15-2.

50. Ribaucour, M., Minetti, R., Sazhina, E.M., Sazhin, S.S. (2007) Autoignition of n-pentane in a rapid compression machine: experiment versus modelling. Third European Combustion Meeting ECM 2007, Book of Abstracts, p. 1-1.

51. Katoshevski, D., Shakked, T., Sazhin, S.S. (2007) Grouping of droplets/particles in oscillating flows. UK-Israel Workshop ‘Sprays: Modelling versus Experimentation’, 16-18 July 2007, Brighton, UK (Abstract).

52. Kaplanski, F., Fukumoto, Y. and Sazhin, S.S. (2007) Modelling of a vortex ring flow at high Reynolds numbers. UK-Israel Workshop ‘Sprays: Modelling versus Experimentation’, 16-18 July 2007, Brighton, UK (Abstract).

53. Sazhin, S.S. (2007) Recent progress in modelling droplet heating and evaporation. UK-Israel Workshop ‘Sprays: Modelling versus Experimentation’, 16-18 July 2007, Brighton, UK (Abstract).

54. Martynov, S.B., Sazhin, S.S., Crua, C., Gorokhovskiy, M.A., Chtab, A., Sazhina, E.M., Karimi, K., Kristyadi, T., Heikal, M.R. (2007) Effects of droplet breakup, heating and evaporation on autoignition of Diesel sprays. UK-Israel Workshop ‘Sprays: Modelling versus Experimentation’, 16-18 July 2007, Brighton, UK (Abstract).

55. Sazhin, S.S. and Shishkova, I.N. (2008) Evaporation of droplets into a background gas: hydrodynamic and kinetic modelling. 19th National & 8th ISHMT-ASME Heat and Mass Transfer Conference, January 3-5, JNTU Hyderabad, India. Book of Abstracts, page K1 (Keynote lecture).

56. Sazhin, S.S. Shishkova, I., Martynov, S. and Heikal, M. (2008) Hydrodynamic and kinetic models of droplet heating and evaporation. CHT-08 ICHMT International Symposium on Advances in Computational Heat Transfer. May 11-16, 2008, Marrakesh, Morocco, Book of Abstracts, paper CHT-08-101. Begell House, Inc., Redding, CT, USA.

57. Katoshevski, D., Shakked, T. and Sazhin, S.S. (2008) Grouping of droplets in oscillating flows. ILASS

2008, 22nd European Conference on Liquid Atomization and Spray Systems, September 8-10, 2008, Como Lake, Italy. Book of Abstracts, page 4-8.

58. Sazhin, S.S., Kaplanski, F., Begg, S. and Heikal, M. (2008) Vortex ring-like structures in gasoline fuel sprays: modelling and observations. ILASS 2008, 22nd European Conference on Liquid Atomization and Spray Systems, September 8-10, 2008, Como Lake, Italy. Book of Abstracts, page 6-5.

59. Kaplanski, F., Fukumoto, Y. and Sazhin, S.S. (2008) Vortex rings in a viscous fluid: Asymptotic theory and numerical simulations. EUROMECH Fluid Mechanics Conference 7, University of Manchester, 14-18 September 2008, Book of Abstracts, page 169.

60. Sazhin, S.S. Shishkova, I., Levashov, V.Yu. and Heikal, M. (2008) Modelling of droplet heating and evaporation in computational fluid dynamics codes. Fourth International PhD, DLA Symposium, University of Pecs, Pollack Mihaly Faculty of Engineering (Hungary). Book of Abstract, page 49.

61. Healey J.J., Sazhin, S.S. and Turner M.R. (2010) Transient unstable jets: mathematical analysis and applications. 5th International workshop on multi-rate processes and Hysteresis (MURPHYS), University of Pecs, Pollack Mihaly Faculty of Engineering (Hungary). Book of Abstract, page 19. Published by Rotari Press, Komlo, Hungary.

62. Gusev, I.G., Krutitskii, P.A. and Sazhin, S.S. (2010) Droplet heating and evaporation in the presence of a moving boundary: numerical analysis based on analytical solutions. 11th International Conference on Integral Methods in Science and Engineering, University of Brighton (UK), 12-14th July 2010. Book of Abstracts, page 42.

63. Sazhin, S.S., Shishkova, I.N., Gusev, I.G., Elwardany, A., Krutitskii, P.A. and Heikal, M. (2010) Fuel droplet heating and evaporation: new hydrodynamic and kinetic models. Proceedings of the 14th International Heat Transfer Conferences, Washington 8-13 August 2010. Book of Abstracts, page 26.

64. Sazhin, S.S., Krutitskii, P.A., Elwardany, A., Castanet, G., Lemoine, F. and Heikal, M. (2010) An analytical solution to the spherically symmetric species diffusion equation: application to modelling of heating and evaporation of bi-component droplets. Proceedings of the ILASS-Europe 2010, Brno, Czech Republic, 6-8 September 2010, Book of Abstracts, Eds., M. Forman, V. Kreici and J. Volavy, Cover @ Persona Studio, pages 77-78.

65. Kaplanski, F., Sazhin, S.S., Fukumoto, Y. and Rudi, Y. (2010) The evolution of an elliptic vortex rings in viscous fluid: Asymptotic theory and numerical simulations. EUROMECH Fluid Mechanics Conference 8, University of Munich, 13-16 September 2010, Book of Abstracts, paper S15-9.

66. Sazhin, S.S., Shishkova, I.N., I.G. Gusev, I.G. and Heikal, M.R. (2010) Hydrodynamic and kinetic models for monocomponent droplet heating and evaporation: recent developments. Proceedings of the 21st International Symposium on Transport Phenomena 2-5 November, 2010, Kaohsiung City, Taiwan, paper IS07-03. Book of Abstracts, p. 183.

67. Sazhin, S.S., Elwardany, A., Gusev, I.G., Xie, J.-F., Cao, B.-Y., Shishkova, I.N., Snegirev, A.Yu. and Heikal, M.R. (2011) Modelling of complex hydrocarbon droplet heating and evaporation: hydrodynamic, kinetic and molecular dynamics approaches. 25th European Symposium on Applied Thermodynamics, June 24-27, 2011, Saint Petersburg, Russia. Book of Abstracts.

68. Sazhin, S.S. (2011) Advanced models for droplet heating and evaporation. ECAEM Keynote Speech. World Congress on Engineering 2011, London, UK, 6-7 July 2011, Vol. 1, p. 1xxxv, Publisher: Newswood Limited International Association of Engineers (IAENG), Hong Kong.

69. Snegirev, A., Talalov, V., Sheinman, I. and Sazhin, S. (2011) An enhanced spray model for flame suppression simulations. Proceedings of the Fifth European Combustion Meeting ECM, Cardiff, 29th June to 1st July 2011. Book of Abstracts, p. 73.

70. Sazhin, S.S. (2011) Modelling droplet heating and evaporation. Proceedings of the 6th Baltic Heat Transfer Conference (BHTC) August 24-26, 2011, Tampere, Finland. Extended Abstracts, pp. 17-18, Tampere University of Technology.

71. Sazhin, S.S., Turner, M.R., Healey, J.J. and Martynov, S.B. (2011) Transient Diesel fuel jets and sprays: mathematical analysis and applications, Proceedings of ILASS Europe 2011, 24th European Conference on Liquid Atomization and Spray Systems, Estoril, Portugal, 5-7 September 2011, paper 1028, Proceedings, p. 36, ISBN: 978-989-20-2409-7, Printed in Portugal.

72. Gusev, I.G, Sazhin, S.S. and Heikal, M.R. (2011) The effects of the moving boundary on the heating of evaporating droplets, Proceedings of ILASS Europe 2011, 24th European Conference on Liquid Atomization and Spray Systems, Estoril, Portugal, 5-7 September 2011, paper 1017, Proceedings, p. 119, ISBN: 978-989-20-2409-7, Printed in Portugal.

73. Elwardany, A.E., Sazhin, S.S., Castanet, G., Lemoine, F. and Heikal, M.R. (2011) The modelling of heating and evaporation of mono-component, bi-component and multi-component Droplets, Proceedings of ILASS Europe 2011, 24th European Conference on Liquid Atomization and Spray Systems, Estoril, Portugal, 5-7 September 2011, paper 1018, Proceedings, p. 125, ISBN: 978-989-20-2409-7, Printed in Portugal.

74. Xie, J.-F., Sazhin, S.S. and Cao, B.Y. (2011) Molecular dynamics study of condensation/evaporation of Diesel fuel, Proceedings of ILASS Europe 2011, 24th European Conference on Liquid Atomization and Spray Systems, Estoril, Portugal, 5-7 September 2011, paper 1256, Proceedings, p. 187, ISBN: 978-989-20-2409-7, Printed in Portugal.
75. Sazhin, S.S., Gusev, I.G., Heikal, M.R., Krutitskii, P.A. (2011) Modelling of liquid droplet heating and evaporation taking into account the effects of the moving boundary. The Asian Symposium on Computational Heat Transfer and Fluid Flow - 2011 (ASCH2011), 22–26 September 2011, Kyoto. Program and Book of Abstracts, p. 75.
76. Xie, J.-F., Sazhin, S.S., Cao, B.-Y. (2011) Molecular dynamics study of condensation/evaporation and velocity distribution of Diesel fuel at liquid-vapour phase equilibria. The Asian Symposium on Computational Heat Transfer and Fluid Flow - 2011 (ASCH2011), 22–26 September 2011, Kyoto. Program and Book of Abstracts, p. 94.
77. Boronin, S., Healey, J., Sazhin, S.S. (2011) Transient unstable round jets: mathematical analysis and applications, In: Book of Abstracts for 22nd International Symposium on Transport Phenomena, Delft November 8-11, 2011, p. 78.
78. Sazhin, S.S., Elwardany, A.E., Gusev, I.G., Xie, J.-F., Snegirev, A.Yu., Heikal, M.R. (2012) Heating and evaporation of mono- and multi-component droplets: hydrodynamic and kinetic models. International Symposium on Multiphase flow and Transport Phenomena, April 22-25, 2012, Agadir, Morocco. Book of Abstracts, Edited by M'barek Feddaoui and Hicham Meftah, pp. 53-54.
79. Boronin, S.A., Crua, C., Healey, J., Sazhin, S.S. (2012) Modal and Non-modal stability of round viscous jets. 6th International workshop on multi-rate processes and Hysteresis (MURPHYS), 21th-24th May 2012, Stefan cel Mare University of Suceava (Romania), Abstracts Book.
80. Xie, J.-F., Sazhin, S.S., Cao, B.-Y. (2012) Condensation/evaporation of n-dodecane: molecular dynamic study. 6th International workshop on multi-rate processes and Hysteresis (MURPHYS), 21th-24th May 2012, Stefan cel Mare University of Suceava (Romania), Abstracts Book.
81. Sazhin S.S., Boronin S.A., Begg S., Crua C., Heikal M.R., Healey J., Lebedeva N.A., Osiptsov A.N., Kaplanski F. (2012) Jets and Vortex Ring-Like Structures in Internal Combustion Engines: Stability Analysis and Analytical Solutions. Proceedings of the IUTAM Symposium 12-3 'Waves in Fluids: Effects of Non-linearity, Rotation, Stratification and Dissipation. Book of Abstracts. MAKS Press, Moscow, pp. 141-143.
82. Sazhin S.S., Heikal M.R. (2012) Droplet heating and evaporation – recent results and unsolved problems. International Symposium on Advances in Computational Heat Transfer (1-6 July Bath, UK). Book of Abstracts, Begell House Inc., page 4.
83. Xie, J.-F., Sazhin, S.S., Shishkova, I.N., Cao, B.-Y. (2012) Kinetic and molecular dynamics simulations of n-dodecane droplet heating and evaporation. International Symposium on Advances in Computational Heat Transfer (1-6 July Bath, UK). Book of Abstracts, Begell House Inc., page 32.
84. Snegirev, A.Yu., Talalov, V.A., Tsoi, A.S., Sazhin, S.S., Crua, C. (2012) Advancement in turbulent spray modelling: the effect of internal temperature gradient in droplets. International Symposium on Advances in Computational Heat Transfer (1-6 July Bath, UK). Book of Abstracts, Begell House Inc., page 35.
85. Sazhin, S.S., Shishkova, I.N., Xie, J.F. (2012) Kinetic and molecular dynamic modelling of n-dodecane droplet heating and evaporation. ICLASS 2012, 12th Triennial International Conference on Liquid Atomization and Spray Systems, Heidelberg, Germany, September 2-6, 2012. Book of Abstracts, Heidelberg, Germany, p. 109.
86. Sazhin, S.S. (2013) Processes in the vicinity of the surfaces of individual droplets. Proceedings of the International Conference 'Fluxes and Structures in Fluids', St Petersburg, June 25-28, Book of Abstracts, pp. 267-268, MAKS Press, Moscow, ISBN 978-5-317-04468-8.
87. Sazhin, S.S. (2013) Droplet heating and evaporation: hydrodynamic, kinetic and molecular dynamics models. World Congress on Engineering Invited Keynote Speech. World Congress on Engineering 2013, London, UK, 3-5 July 2013, Vol. 1, pp. 1xxii-1xxiii, Publisher: Newswood Limited International Association of Engineers (IAENG), Hong Kong. ISBN 978-988-19251-0-7.
88. Sazhin, S.S. (2014) Modelling of sprays in internal combustion engines: engineering, physical and mathematical approaches. International conference 'Nonlinear problems in the theory of hydrodynamic stability and turbulence', Moscow, 25 February – 4th March 2014, Abstract: <http://hit-conf.imec.msu.ru/abstracts.html>
89. Rybdylova, O., Sazhin, S.S., Begg, S., Heikal, M. (2014) Droplet dynamics in a vortex-ring flow. International conference 'Nonlinear problems in the theory of hydrodynamic stability and turbulence', Moscow, 25 February – 4th March 2014, Abstract: <http://hit-conf.imec.msu.ru/abstracts.html>
90. Sazhin, S.S. (2014) Modelling of automotive fuel droplet heating and evaporation. MURPHYS-HSFS-2014 - 7th International Workshop on Multi-Rate Processes & Hysteresis, 2nd International Workshop on Hysteresis and Slow-Fast Systems, April 7-11, 2014. Weierstrass Institute for Applied Analysis and Stochastics. Book of Abstracts, page 56.
91. Gunko, V.M., Sazhin, S.S. (2014) Modelling of evaporation of clusters and nanodroplets of organic

molecules using quantum chemical and kinetic gas theory methods, 34th International Conference on Vacuum Microbalance and Thermoanalytical Techniques, May 20-21, 2014, Kyiv, Ukraine, p. 71.

92. Sazhin, S.S., Shishkova, I.N., Al Qubeissi, M. (2014) Kinetic modelling of Diesel fuel droplet heating and evaporation: effects of the approximation of fuel composition. Proceedings of ILASS Europe 2014, 26th Annual Conference on Liquid Atomization and Spray Systems, Sep. 2014, Bremen, Germany. Book of Abstracts, edited by Lydia Achelis and Udo Fritsching, published by the University of Bremen, pp. 109-110.

93. Al Qubeissi, M., Sazhin, S.S., de Sercey, G., Cyril C. (2014) Multi-dimensional quasi-discrete model for the investigation of heating and evaporation of Diesel fuel droplets. Proceedings of ILASS Europe 2014, 26th Annual Conference on Liquid Atomization and Spray Systems, Sep. 2014, Bremen, Germany. Book of Abstracts, Edited by Lydia Achelis and Udo Fritsching, published by the University of Bremen, pp. 171-172.

94. Rybdylova, O., Sazhin, S.S., Osiptsov, A.N., Begg, S., Heikal, M. (2014) Modelling of non-isothermal sprays using a combined viscous vortex method and the Fully Lagrangian Approach. Proceedings of ILASS Europe 2014, 26th Annual Conference on Liquid Atomization and Spray Systems, Sep. 2014, Bremen, Germany. Book of Abstracts, edited by Lydia Achelis and Udo Fritsching, published by the University of Bremen, pp. 151-152.

95. Duret, B., Al Qubeissi, M., Sazhin, S.S., Cyril C. (2014) Evaporating droplets: comparisons between DNS and modelling. Proceedings of ILASS Europe 2014, 26th Annual Conference on Liquid Atomization and Spray Systems, Sep. 2014, Bremen, Germany. Book of Abstracts, edited by Lydia Achelis and Udo Fritsching, published by the University of Bremen, pp. 127-128.

96. Sazhin, S.S. (2014) Effects of the moving interface on the heating of evaporated droplets and diffusion of liquid species. EFMC10 10th European Fluid Mechanics Conference), 14th to 18th September 2014. Technical University of Denmark, Copenhagen, Denmark. Book of Abstracts, page 596.

97. Rybdylova, O., Sazhin, S.S., Begg, S., Heikal, M. (2014) Numerical modelling of a two-phase vortex ring flow using the FLA method for the dispersed phase. EFMC10 10th European Fluid Mechanics Conference), 14th to 18th September 2014. Technical University of Denmark, Copenhagen, Denmark. Book of Abstracts, page 469.

98. Begg, S., Osiptsov, A.N., Rybdylova, O., Sazhin, S.S., Heikal M. (2014) Modelling of non-isothermal two-phase flows with phase transitions using Lagrangian methods. Book of abstract of the XVII workshop "Modern problems of aerohydrodynamics, dedicated to the memory of acad. G.G. Chernyj and to the MSU Institute of Mechanics 55th anniversary". August 20-30, 2014, Sochi, Russia, MSU Publishing. P. 21. (in Russian).

99. Al Qubeissi, M., Sazhin, S., Crua, C., Heikal, M. (2014) Modelling of heating and evaporation of biodiesel fuel droplets, World Academy of Science, Engineering and Technology, International Science Index, Mechanical and Mechatronics Engineering, Proceedings of ICHTA 2015 : International Conference on Heat Transfer and Applications, January, 19-20, 2015, London, United Kingdom 2(9), p. 667.

100. Sazhin, S.S. (2015) Modelling of automotive fuel droplet heating and evaporation: recent results and unsolved problems. 8th International Conference on Thermal Engineering: Theory and Applications May 18-21, 2015, Amman-Jordan. Extended abstract 14, CD.

101. Elwardany, A., Sazhin, S.S., Im, H.G (2015) Modelling of droplet heating and evaporation: an application to biodiesel, gasoline and Diesel fuels. 8th International Conference on Thermal Engineering: Theory and Applications May 18-21, 2015, Amman-Jordan. Extended abstract 13, CD.

102. Al Qubeissi, M., Sazhin, S.S. (2015) Modelling of heating and evaporation of gasoline fuel surrogate droplets. 8th International Conference on Thermal Engineering: Theory and Applications May 18-21, 2015, Amman-Jordan. Extended abstract 27, CD.

103. Nasiri, R., Gun'ko, V.M., Sazhin, S.S. (2015) n-Dodecane evaporation/condensation: a comparative quantum chemical study. Asian Nano Forum Conference, 8-11 March 2015, Kish Island, IR Iran. Abstract book, pp. 892-893.

104. Sazhin, S.S. (2015) Modelling of automotive fuel droplet heating and evaporation: recent results and unsolved problems. In 'Proceedings of the World Congress on Engineering, London, UK, 1-3 July 2013, volume 2, pp. lvii-lviii.

105. Sazhin, S.S., Shishkova, I.N. (2015) New approaches to modelling of heating and evaporation of automotive fuel droplets. 11th all-Russia congress on fundamental problems of theoretical and applied mechanics. Section II-5 Mechanics of multiphase media. Kazan, Russian Federation, 20-24th August 2015; Book of Abstracts, p. 245; Publishing House of the Russian Academy of Sciences (in Russian).

106. Rybdylova, O., Osiptsov, A.N., Sazhin, S.S., Begg, S., Heikal, M. (2015) A fully meshless method for 'gas-evaporating droplet' flow modelling. PAMM – Proc. Appl. Math. Mech. **15**, 685-686 / DOI 10.1002/pamm.201510332

107. Zaripov, T.S., Gilfanov, A.K., Sazhin, S.S., Begg, S.M., Heikal, M.R. (2016) Concentration of droplets in a transient gas flow. ICAST 2016: 18th International Conference on Aerosol Science and Technology. Lisbon, Portugal, April 14-15, 2016, World Academy of Science, Engineering and Technology, 2016, 18(4), 1024 eissn 2010-3778, pissn 2010-376X.

108. Sazhin, S.S. (2016) Modelling of droplet heating and evaporation: recent results and unsolved problems.

EMN Meeting on Droplets 2016. Energy Materials Nanotechnology. Program and Abstracts, page 20. May 9-13, 2016, San Sebastian, Spain.

109. Zubkov, V.S., Cossali, G.E., Tonini, S., Crua, C., Heikal, M., Sazhin, S.S. (2016) Mathematical modelling of heating and evaporation of spheroidal droplet. EMN Meeting on Droplets 2016. Energy Materials Nanotechnology. Program and Abstracts, pages 58-59. May 9-13, 2016, San Sebastian, Spain.

110. Sazhin, S.S. (2016) Hydrodynamic and kinetic models for droplet heating and evaporation: recent results. MURPHYS-HSFS 2016. Workshop on Slow-Fast Systems and Systems with Hysteresis, CRM, Bellaterra, Spain, June 13 to 17. Book of Abstracts, published by Centre de Recerca Matemàtica, Bellaterra, Barcelona, p. 16.

111. Sazhin, S.S. (with O. Rybdylova) (2016) Meshless methods for ‘gas – evaporating droplet’ flow modelling. MURPHYS-HSFS 2016. Workshop on Slow-Fast Systems and Systems with Hysteresis, CRM, Bellaterra, Spain, June 13 to 17. Book of Abstracts, published by Centre de Recerca Matemàtica, Bellaterra, Barcelona, pp. 26-27.

112. Sobolev, V., Shchepakina, E., Sazhin, S.S. (2016) Order reduction in non-Lipschitzian models of spray ignition. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin, pp. 27-29.

113. Shchepakina, E., Sobolev, V., Sazhin, S.S. (2016) System order reduction methods in spray ignition problems. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin pp. 29-30.

114. Al Quibeissi, M., Begg, S., Ibrahim, E., Sazhina, E., Sazhin, S.S. (2016) Influence of thermal radiation on the heating and evaporation of fuel droplets in internal combustion engines: a parametric study. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin pp. 61-63.

115. Zaripov, T., Gilfanov, A., Begg, S., Rybdylova, O., Sazhin, S.S., Heikal, M.R. (2016) Numerical and experimental analysis of a gasoline fuel spray. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin pp. 149-150.

116. Al Quibeissi, M., Sazhin, S.S. (2016) Blended biodiesel/Diesel fuel droplet heating and evaporation. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin pp. 181-182.

117. Zubkov, V., Cossali, G.E. Tonini, S., Crua, C., Sazhin, S.S. (2016) Mathematical modelling of heating and evaporation of a spheroidal droplet. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin pp. 193-194.

118. Kaplanski, F., Danaila, I., Begg, S., Rybdylova, O., Sazhin, S.S., Heikal, M. (2016) Confined vortex rings in gasoline fuel sprays: modelling and observations. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin pp. 307-309.

119. Lebedeva, N.A., Osiptsov, A.N., Sazhin, S.S. (2016) A combined vortex method and fully Lagrangian approach for simulation of axially symmetric gas-droplet vortex ring-like flows. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin pp. 309-311.

120. Papoutsakis, A., Danaila, L., Sazhin, S.S. (2016) Modelling of the evolution of a droplet cloud in a turbulent flow. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin pp. 319-321.

121. Rybdylova, O., Danaila, I., Osiptsov, A., Begg, S., Sazhin, S.S. (2016) Modelling of a two-phase vortex ring flow based on the fully Lagrangian Approach. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin pp. 355-356.

H. Papers not related to Physics or Engineering

1. Sazhin, S.S. (1988) Human rights are not only the Jewish rights. The Times Higher Education Supplement, 14 October.

2. Sazhin, S.S. (1989) Letter. Frontier, May-June issue.

3. Sazhin, S.S. (1989) Are perestroika and glasnost reversible?, Posev, No. 4, pp. 13-14 (in Russian).

4. Sazhin, S.S. (1989) Is perestroika tolerant towards Christianity?, Posev, No. 7, pp. 59-62 (in Russian).

5. Sazhin, S.S. (1989) Through Russian eyes. Frontier, September-October issue, pp. 8-9.

6. Sazhin, S.S. (1989) Russian culture: Slavonic, Orthodox or Christian?, Posev, No. 9, pp. 60-61 (in Russian).

7. Sazhin, S.S. (1989) Who is to restore the Churches?, Posev, No. 11, p. 44 (in Russian).

8. Sazhin, S.S. (1989) Who is to restore the Churches?, Orthodox America, Nov.-December issue, p. 2.

9. Sazhin, S.S. (1990) Perspectives of Perestroika “No turning back”, Human rights Briefing, May issue.

10. Sazhin, S.S. (1990) Is Orthodoxy archaic?, Orthodox America, June issue, vol. 10, NO. 10 (100), p. 14.

11. Sazhin, S.S. (1991) Russians versus Jews. Frontier, January-February issue, p. 4.

12. Sazhin, S.S. (1992) Does socialism self-destruct? Frontier, January-March issue, p. 4.

13. Sazhin, S.S. (1999) Letter, Sunday Times, April.

I. Translations

1. *Bilan de la théologie du XXe siècle*, sous la direction de Robert Vander Gucht et Herbert Vorgrimler. T. II: La théologie chrétienne (suite) : Les disciplines particulières. Portraits de théologiens. (see *Revue Philosophique de Louvain*, Année 1974, Vol. 72, Numéro 14, pp. 424-425) Translation of selected chapters from French into Russian (1982-1983) by S.S. Sazhin. Manuscript is available from St Petersburg Theological Academy of the Russian Orthodox Church.

2. Tuvya Zaretsky *Turning to God*, Intervarsity Press. Translated from English into Russian (1990) by S.S. Sazhin and E.M. Sazhina. Published by Loimaan Kirjapaino Oy, ISBN 0-87784-064-4.