

RESUME

CHAIM GUTFINGER

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Academic Degrees:

1962–1964: Ph.D. in Engineering and Applied Science, Yale Univ., New Haven, CT.
1960–1962: M.Sc. in Chemical Engineering, Technion – Israel Inst. of Technology, Haifa.
1956–1960: B.Sc. in Chemical Engineering, Technion – Israel Inst. of Technology, Haifa.

Academic Appointments:

2004– Professor Emeritus of Mechanical Engineering, Technion, Haifa
1983–2004: IDB Chair in Energy, Technion, Haifa.
1976–2004: Professor of Mechanical Engineering, Technion, Haifa.
1969–1976: Associate Professor of Mechanical Engineering, Technion, Haifa.
1967–1970: Associate Professor of Energy Engineering, Univ. of Illinois, Chicago, IL.
1965–1967: Assistant Professor of Chemical Engineering, Illinois Inst. of Technology, Chicago, IL.
1962–1964: Assistant in Research, Yale University, New Haven, CT.
1960–1962: Teaching and Research Assistant, Technion, Haifa.
1960: Instructor, Nuclear Engineering Technicians, Technion, Haifa.

Visiting Academic Appointments:

2002-2003 Visiting Professor of Engineering, California State University, Fullerton, CA.
1996: Visiting Professor of Mechanical Engineering, Naval Postgraduate School, Monterey, CA.
1991–1992 Visiting Professor of Mechanical Engineering, University of Southern California, Los Angeles, CA.
1982–1983: Visiting Professor, Dept. of Nuclear, Thermal and Chemical Engineering, University of California, Los Angeles, CA.
1981: Visiting Professor of Chemical Eng., The City College of CUNY, New York, NY.
1975–1976: Visiting Associate Professor Carnegie – Mellon University, Pittsburgh, PA.
1970-1973 Adjunct Associate Professor of Mechanical Engineering, Ben-Gurion Univ. of the Negev, Beer-Sheba.

Administrative Positions:

- 2006 - 2013 President, Ort Hermelin Academic College of Engineering and Technology, Netanya.
- 2000–2002 Deputy Senior Vice-President, Technion – Israel Inst. of Technology, Haifa.
- 1999–2000: Vice Provost for Academic Development, Technion – Israel Institute of Technology, Haifa.
- 1997–1998: Deputy Senior Vice-President, Technion – Israel Inst. of Technology, Haifa.
- 1977–1980: Dean, Faculty of Mechanical Engineering, Technion – Israel Institute of Technology, Haifa.
- 1973–1975: Head, Extension Division, Technion – Israel Institute of Technology, Haifa.

Industrial Experience:

- 1981–1982: Senior Research Scientist, Occidental Research Corp., Irvine, CA. Project on clean combustion in rotary kilns.
- 1978: Consultant, General Electric Co., Corporate R&D Schenectady, NY. Consulting area: Filtration of flue gases from power plants.
- 1976–1979 Consultant, Rafael – Israel Armament Authority.
- 1976: In-house Consultant, Alcoa Technical Research Center, Alcoa, PA. Consulting areas: Fluid mechanics, heat transfer and two-phase systems.
- 1967: Consultant, Fuel Cell Division, Institute of Gas Technology, Chicago, IL. Design of a clean fuel system consisting of a hybrid fuel-cell – liquid-metal battery power system with electrochemical and/or thermal regeneration.
- 1964–1965: Research Engineer, Allied Chemical Corp. Morristown, NJ. Supervised research and development of a sulfur trioxide continuous sulfonation process for environmentally friendly biodegradable detergents.
- 1959: Consolidated Refineries Ltd., Haifa. Project on refinery losses.

Membership in National Committees.

- Israel Council for Higher Education (1992-93, 1997-2000).
Rothschild Prize Committee (1997 – 2007).
IUCC – Inter University Computation Center (1999 – 2002).

Current Research Areas:

- Aerosol mechanics and gas filtration theory.
Clean room and microcontamination systems.
Gas–solid two-phase flows.
Pollution control technology.
Fluidized bed combustion.
Cooling of electronic equipment.
Fluid mechanics in artificial heart valves.

Professional Societies:

American Association for Aerosol Research.
American Institute of Chemical Engineers.
Gesellschaft für Aerosol Forschung.
International Aerosol Research Assembly.
Israeli Association for Aerosol Research, (President: 1988–91, 1993–95).

Organized Professional Conferences:

Israel Mechanical Engineering Conference, Technion City, Haifa, Israel, June 1970.
National Conference on Heat Exchangers, Netanya, Israel, March 1974.
Third Israel Symposium on Thermal Sciences, Technion City, Haifa, Israel, July 1974.
Fourth Annual Meeting of the Israeli Association for Aerosol Research, Haifa, Israel, December 1989.
Member, International Scientific Committee, Sixth International Heat Transfer Conference, Toronto, Ontario, Canada, August 1978.
Member, Executive Committee, Ninth International Heat Transfer Conference, Jerusalem, Israel, 1990.
Seventh Annual Meeting of the Israeli Association for Aerosol Research, Haifa, Israel, May 1993.
Member, Technical Program Committee and International Advisory Committee, Fourth International Aerosol Conference, Los Angeles, CA USA, August 1994.
Ninth Annual Meeting of the Israeli Association for Aerosol Research, Haifa, Israel, Dec. 1995.
Member, International Advisory Committee, Fifth International Aerosol Conference, Edinburgh, Scotland, September 1998.
Co-Chairman, International Symposium on Multiphase Flow and Transport Phenomena, Antalya, Turkey, November, 2000.

Reviewer for Scientific Journals:

Aerosol Science and Technology (member of Editorial Board, 1987–93).
J. of Aerosol Science.
J. of Colloid and Interface Science.
J. of the Acoustical Society of America.
AIChE Journal.
Int. J. Heat and Mass Transfer.
Int. Communications in Heat and Mass Transfer.
Int. J. Multiphase Flow.
Wärme und Stoffübertragung (Heat and Mass Transfer)
Separation and Purification Technology.
Scientific American – Israel. Member of Editorial board 2006-13.

LIST OF PUBLICATIONS

Chaim Gutfinger

(a) Books:

1. C. Gutfinger (editor), "*Topics in Transport Phenomena*", Hemisphere Publishing Co., 1975, J. Wiley and Sons, distributor.
- 2a. D. Pnueli and C. Gutfinger, "*Fluid Mechanics*", 482 pp., Cambridge University Press, 1992, Paperback edition, 1997.
- 2b. D. Pnueli e C. Gutfinger, "*Meccanica dei Fluidi*", 429 pp., Zanichelli Editore S.p.A., 1995 (Italian translation of 2a).
- 3a. A. Shavit and C. Gutfinger, "*Thermodynamics – From Concepts to Applications*", 487 pp., Prentice-Hall International, 1995.
- 3b. A. Shavit and C. Gutfinger, "*Thermodynamics – From Concepts to Applications*", 2nd Edition, 649 pp., CRC Press, Division of Taylor & Francis, 2009.
http://isbndb.com/d/book/thermodynamics_a86.html

(b) Reviewed Papers:

1. C. Gutfinger and R. Shinnar, "Velocity distributions in two-dimensional laminar liquid into liquid jets in power-law fluids". *AIChE J.*, **10**, 631, (1964).
2. C. Gutfinger and J.A. Tallmadge, "Some remarks on the problems of drainage of fluids on vertical surfaces". *AIChE J.*, **10**, 774, (1964).
3. C. Gutfinger and J.A. Tallmadge, "Films of non-Newtonian fluids adhering to flat plates". *AIChE J.*, **11**, 403, (1965).
4. C.A. Chase and C. Gutfinger, "The free coating process and its relationship to drainage". *AIChE J.*, **13**, 393, (1967).
5. J.A. Tallmadge and C. Gutfinger, "Prediction of film thickness in free withdrawal coating". *Photo. Sci. and Eng.*, **11**, 98, (1967).
6. J.A. Tallmadge and C. Gutfinger, "Entrainment of liquid films – drainage, withdrawal and removal". *Ind. & Eng. Chem.*, **59**, No. 11, 19, (1967).
7. C. Gutfinger and W.H. Chen, "Heat transfer with a moving boundary. Application to fluidized bed coating". *Int. J. Heat Mass Transfer*, **12**, 1097, (1969).
8. C. Gutfinger, J. Isenberg, and M.A. Zeitlin, "Heat transfer to non-Newtonian fluids in counter-current plate heat exchangers". *Israel J. Tech.*, **8**, 225, (1970).
9. N. Abuaf and C. Gutfinger, "Entrainment of solid particles in a turbulent air jet. *Israel J. Tech.*, **9**, 389, (1971).
10. C. Gutfinger and H.C. Chiu, "An experimental study of continuous wire coating with Newtonian fluids". *Progress in Heat and Mass Transfer*, **6**, 753, (1972).
11. N. Abuaf and C. Gutfinger, "Heat transfer with a moving boundary – application to fluidized bed coating of thin plates". *Int. J. Heat Mass Transfer*, **16**, 213, (1973).
12. J. Isenberg and C. Gutfinger, "Heat transfer to a draining film". *Int. J. Heat Mass Transfer*, **16**, 505, (1973).

13. E. Broyer, Z. Tadmor, and C. Gutfinger, "Filling of a rectangular channel with a Newtonian fluid". *Israel J. Tech.*, **11**, 1889, (1973).
14. C. Gutfinger and N. Abuaf, "Heat transfer in fluidized beds". *Advances in Heat Transfer*, **10**, 167-218 (J.P. Hartnett and T.F. Irvine, eds.), Academic Press, New York, 1974.
15. N. Abuaf and C. Gutfinger, "Trajectories of charged solid particles in an air jet under the influence of an electrostatic field". *Int. J. Multiphase Flow*, **1**, 513, (1974).
16. C. Gutfinger, "On the impossibility of negative heat sources in the thermal energy equation". *Int. J. Mech. Eng. Education*, **2**, (4), 49, (1974).
17. G. Sivashinsky and C. Gutfinger, "The extinction of spherical diffusion flames". *Heat Transfer in Flames*, (N.H. Afgan and J.M. Beer, eds.), Scripta Book Co., pp. 495-501, (1974).
19. D. Degani and C. Gutfinger, "Leveling of a Newtonian fluid on a horizontal surface". *Israel J. Tech.*, **12**, 191, (1974).
20. N. Abuaf and C. Gutfinger, "Experimental coating and heat transfer studies in a vibrating fluidized bed". *Int. J. Multiphase Flow*, **1**, 683, (1974).
21. G. Tardos, C. Gutfinger, and N. Abuaf, "Deposition of dust particles in a fluidized bed filter". *Israel J. Tech.*, **12**, 184, (1974).
22. C. Gutfinger, E. Broyer and Z. Tadmor, "Analysis of a cross head film blowing die with the flow analysis network (FAN) method". *Polymer Eng. and Sci.*, **15**, 381, (1975).
23. J. Isenberg and C. Gutfinger, "Solidification of a liquid film on a vertical wall". *Chem. Eng. Sci.*, **30**, 327, (1975).
24. E. Broyer, C. Gutfinger, and Z. Tadmor, "Evaluation flows of non-Newtonian fluids by the method of equivalent Newtonian viscosity". *AIChE J.*, **21**, 198, (1975).
25. E. Broyer, C. Gutfinger, and Z. Tadmor, "A theoretical model for the cavity filling process in injecting molding". *Trans. Soc. Rheology*, **19**, 423, (1975).
26. C. Gutfinger, E. Broyer, and Z. Tadmor, "Melt solidification in polymer processing". *Polym. Eng. and Sci.*, **15**, 515, (1975).
27. G. Sivashinsky and C. Gutfinger, "Application of asymptotic methods to laminar flame theory". In *Topics in Transport Phenomena*, pp. 555-607 (C. Gutfinger ed.), Hemisphere Publishing Co., 1975.
28. A. Segev, N. Abuaf, and C. Gutfinger, "Shape of shock waves emerging from a tube". *Israel J. Tech.*, **13**, 293, (1975).
29. D. Degani and C. Gutfinger, "Numerical studies of free surface flows behind film applicators". *Israel J. Tech.*, **13**, 300, (1975).
30. G. Laufer, C. Gutfinger, and N. Abuaf, "Flow of dilute polymer solutions through a packed bed". *I&EC Fundamentals*, **15**, 74, (1976).
31. D. Degani and C. Gutfinger, "A numerical solution to the leveling problem". *Computers and Fluids*, **4**, 149, (1976).
32. G. Tardos, N. Abuaf, and C. Gutfinger, "Diffusional filtration of dust in a fluidized bed". *Atmospheric Environment*, **10**, 389, (1976).
33. G. Tardos, C. Gutfinger and N. Abuaf, "High Peclet number mass transfer to a sphere in a fixed or fluidized bed". *AIChE J.*, **22**, 1147-1150, (1976).
34. H. Weiss and C. Gutfinger, "Film condensation inside tubes in the presence of a non-condensable gas". *Israel J. Tech.*, **15**, 255, (1977).

35. D. Degani and C. Gutfinger, "Three dimensional low Reynolds number flows with a free surface". *J. Computational Phys.*, **22**, 208, (1977).
36. J. Gavish, R.S. Chadwick and C. Gutfinger, "Viscous flow in partially filled rotating horizontal cylinder". *Israel J. Tech.*, **16**, 264, (1978).
37. G. Tardos, N. Abuaf and C. Gutfinger, "Dust deposition in granular bed filters – theories and experiments". *J. Air Pollution Control Assoc.*, **28**, 354=363, (1978).
38. C. Gutfinger and G.I. Tardos, "Theoretical and experimental investigation on granular bed dust filters". *Atmospheric Environment*, **13**, 853, (1979).
39. G.I. Tardos and C. Gutfinger, "Prediction of high Peclet number mass transfer in granular beds using the constricted tube model". *AIChE J.*, **25**, 1073, (1979).
40. U. Navon, H. Rodrigue, N. Abuaf and C. Gutfinger, "Motion of a solid particle in a rectangular duct under the influence of a turbulent air stream". *Israel J. Tech.*, **17**, 185, (1979).
41. G.I. Tardos, C. Gutfinger and R. Pfeffer, "Triboelectric effects in filtration of small dust particles in a granular bed". *I&EC Fundamentals*, **18**, 433, (1979).
42. A. Oren and C. Gutfinger, "Analysis of a Joule–Thomson cryogenic detector cooler". *Israel J. of Tech.*, **17**, 194, (1979).
43. S. Yavuzkurt, C. Gutfinger and J. Dayan, "Fluidized combustion of oil shale". *Fluidization*, (J.R. Grace and J.M. Matsen, editors.) Plenum Press, 1980, pp. 143-150.
44. C. Gutfinger, D. Degani and D. Pnueli, "Granular bed filter for high temperature particulate removal". *VDI Berichte* **363**, 83 (1980).
45. A. Oron and C. Gutfinger, "Countercurrent jet combustion of a hydrocarbon fuel in air". *Israel J. of Technology*, **19**, 181 (1981).
46. M. Fichman, C. Gutfinger and D. Pnueli, "A modified model for the deposition of dust in a granular bed filter". *Atmospheric Environment*, **15**, 1669 (1981).
47. G.A. Kallio, P.W. Dietz and C. Gutfinger, "Filtration efficiencies in electrostatically augmented granular beds". *Environment International*, **6**, 415-422 (1981).
48. M. Shapiro, G. Laufer, C. Gutfinger, "Electrostatic forces in aerosol filtration in fibrous and granular filters – a parametric study", *Atmos. Envir.* **17**, 447 (1983).
49. R. Rabinovitz, D. Degani, C. Gutfinger and S. Milo, "An experimental study of pulsatile flows in rigid and pulsating stenosis". *J. Biomechanical Engineering, ASME*, **106**, 309 (1984).
50. C. Gutfinger and S.K. Friedlander, "Enhanced deposition of suspended particles to fibrous surfaces from turbulent gas streams". *Aerosol Sci. Techn.* **4**, 1 (1985).
51. M. Shapiro, G. Laufer and C. Gutfinger, "The effect of external electrostatic field orientation on aerosol filtration by granular filters", *Trans. IEEE, IA-22*, 230 (1986).
52. M. Shapiro, G. Laufer and C. Gutfinger, "Electrostatically enhanced granular bed filters", *Aerosol Sci. Techn.* **5**, 39 (1986).
53. M. Shapiro, G. Laufer and C. Gutfinger, "Experimental study on electrostatically enhanced granular bed filters", *Aerosol Sci. Techn.* **5**, 435 (1986).
54. A. Oron and C. Gutfinger, "On turbulent deposition to rough surfaces" *J. Aerosol Sci.* **17**, 903 (1986).
55. S. Sharon and C. Gutfinger, "Design for minimum temperature of a compact heat exchanger cooled by forced air convection". *Israel J. Technology*, **23**, 113 (1986/7).

56. S. Hassid, A. Oron and C. Gutfinger, "An asymptotic description of electrostatic precipitation of charged particles in turbulent flow". *J. Aerosol Sci.* **18**, 357 (1987).
57. M. Fichman, C. Gutfinger and D. Pnueli, "A model for turbulent deposition of aerosols", *J. Aerosol Sci.*, **19**, 123 (1988).
58. M. Fichman, C. Gutfinger and D. Pnueli, "Effect of particle loading on granular bed filtration – the cluster enhanced filter model." *J. Aerosol Sci.*, **19**, 425 (1988).
59. C. Gutfinger, D. Pnueli and M. Fichman, "Effect of particle loading on granular bed filtration – extension of the CEF model to polydisperse systems", *J. Aerosol Sci.*, **19**, 443 (1988).
60. A. Oron, C. Gutfinger and S. Hassid, "Turbulent deposition of charged particles under the influence of an external electric field", *J. Colloid Interface Sci.*, **121**, 531(1988).
61. M. Shapiro, G. Laufer and C. Gutfinger, "Electrostatically enhanced granular bed filters – a review", *J. Aerosol Sci.*, **19**, 651 (1988).
62. M. Shapiro, A. Oron and C. Gutfinger, "A dispersion model for electrostatic precipitation of charged particles". *Physicochemical Hydrodynamics*, **10**, 471 (1988).
63. M. Shapiro, A. Oron and C. Gutfinger, "Precipitation of charged particles from turbulent flows between coaxial cylinders", *J. Colloid Interface Sci.*, **127**, 401 (1989).
64. M. Fichman, D. Pnueli and C. Gutfinger, "Aerosol deposition in the vicinity of a stagnation point". *Aerosol Science & Techn.*, **13**, 281 (1990).
65. D. Pnueli, C. Gutfinger and M. Fichman, "A turbulent – Brownian model for aerosol coagulation." *Aerosol Science & Techn.*, **14**, 201-209 (1991).
66. I. J. Kettner, D. Degani and C. Gutfinger, "Numerical study of laminar heat transfer in internally finned tubes", *Numerical Heat Transfer*, **20** 159-180 (1991).
67. C. Gutfinger, M. Fichman and D. Pnueli, "Shadow effect and the efficiency of a granular-bed filter", *Aerosol Science & Techn.*, **15**, 217-227 (1991).
68. Y. Dain, P. Vainshtein, M. Fichman and C. Gutfinger, "Side drift of aerosol particles in a two-dimensional slowly oscillating sonic field." *Aerosol Science & Techn.*, **21**, 149 (1994).
69. M. Fichman, D. Pnueli and C. Gutfinger, "On the perturbed equations of motion of aerosol particles in regions of strong curvature of the fluid streamlines." *Journal of Engineering Mathematics*, **29**, 141-160 (1995).
70. P. Vainshtein, M. Fichman and C. Gutfinger, "Acoustic enhancement of heat transfer between two parallel plates." *Int. J. Heat Mass Transfer*, **38**, 1893-1899, (1995).
71. Y. Dain, P. Vainshtein, M. Fichman, D. Pnueli, C. Gutfinger, "Dynamics of aerosol particles in two-dimensional high frequency sonic field." *J. Aerosol Sci.*, **26**, 575-594, (1995).
72. G. Ziskind, M. Fichman and C. Gutfinger, "Resuspension of particles from surfaces to turbulent flows – review and analysis." *J. Aerosol Sci.*, **26**, 613-644, (1995).
73. A. Goldshtein, M. Shapiro and C. Gutfinger, "Mechanics of collisional motion of granular materials III. Self-similar wave motions." *J. Fluid Mechanics*, **316**, 29-51 (1996).
74. A. Goldshtein, M. Shapiro and C. Gutfinger, "Mechanics of collisional motion of granular materials IV. Expansion wave." *J. Fluid Mechanics*, **327**, 117-138 (1996).
75. A. Goldshtein, P. Vainshtein, M. Fichman, and C. Gutfinger, "Resonance gas oscillations in closed tubes." *J. Fluid Mechanics*, **322**, 147-163 (1996).
76. P. Vainshtein, M. Fichman, K. Shuster and C. Gutfinger, "The effect of centerline particle concentration in a wave-tube." *J. Fluid Mechanics*, **306**, 31-42 (1996).

77. D. Pnueli, C. Gutfinger and M. Fichman, "Shear induced lift in the motion of small particles in rotating flows." *J. Aerosol Sci.*, **28**, 1507-1516 (1997).
78. G. Ziskind, M. Fichman and C. Gutfinger, "Adhesion moment model for estimating particle detachment from a surface", *J. Aerosol Sci.*, **28**, 623-634, (1997).
79. D. Broday, M. Shapiro, M. Fichman and C. Gutfinger. "Stability of motion of spheroidal particles in a simple shear flow." *J. Aerosol Sci.* **27**, 275-276, (1996).
80. D. Broday, M. Fichman, M. Shapiro and C. Gutfinger. "Motion of diffusionless particles in vertical stagnation flows. Part I: General model and deposition efficiency of spheres" *J. Aerosol Sci.*, **28**, 23-34 (1997).
81. D. Broday, M. Fichman, M. Shapiro and C. Gutfinger, "Motion of diffusionless particles in vertical stagnation flows. Part II: Deposition efficiency of elongated particles" *J. Aerosol Sci.*, **28**, 35-52 (1997).
82. P. Vainshtein, G. Ziskind, M. Fichman, and C. Gutfinger, "Kinetic model of particle resuspension by drag force", *Phys. Review Letters*, **78**, 551-554 (1997).
83. Y. Dain, C. Gutfinger, P. Vainshtein, M. Fichman and D. Pnueli, "Migration of particles due to acoustic streaming in two-dimensional channel", *J. Theor. & Comp. Fluid Mech.*, submitted.
84. G. Ziskind, M. Fichman and C. Gutfinger, "Effects of shear on particle motion near a surface – application to resuspension." *J. Aerosol Sci.* **29** (1998) 323-338.
85. A. Goldshtein, K. Shuster, P. Vainshtein, M. Fichman, and C. Gutfinger, "Particle motion in resonance tubes." *J. Fluid Mechanics*, **360**, 1-20 (1998).
86. P. Vainshtein, C. Gutfinger, D. Pnueli, "Ignition of fuel mixtures by standing acoustic waves", *Combustion and Flame*, **118**, 370 (1999).
87. D. Broday, M. Fichman M. Shapiro, and C. Gutfinger. "On the motion of spheroidal particles in shear flows." *Physics of Fluids A*, **10**, 86-105 (1998).
88. S. Milo, C. Gutfinger, D. Degani, and R. Rabinovitz. "Right ventricular pressure increase after correction of Tetralogy of Fallot: a simple method for determining the necessity of further surgical intervention." *European J. Cardiothoracic Surgery*, (1999) submitted.
89. D. Pnueli, C. Gutfinger, L. Moldavsky, K. Shuster and M. Fichman. "Electrostatic porous filter with a blocking electrode" *J. Aerosol Sci.* **31**, 1371-1379 (2000).
90. Vainshtein, P., Fichman, M., Shapiro, M., Moldavsky, L., and Gutfinger, C., "Fluidized bed in confined volumes." *Int. J. Multiphase Flow*, **25**, 1431-1456 (1999).
91. P. Vainshtein, D. Pnueli, C. Gutfinger, "Ignition of by standing acoustic waves", *Combustion and Flame*, **118**, 370-380 (1999).
92. Vainshtein, P., Shapiro, M., and Gutfinger, C., "Waves of high frequency in suspensions near the critical point of the particulate pressure-density dependence." *J. Eng. Mathematics* **38**, 265-278 (2000).
93. G. Ziskind, M. Fichman and C. Gutfinger, "Particle behavior on surfaces subjected to external excitations." *J. Aerosol Sci.* **31**, 703-719 (2000).
94. A. Muginstein, M. Fichman and C. Gutfinger, Gas Absorption in a Moving Drop Containing Suspended Solids. " *Int. J. Multiphase Flow*, **27**, 1079-1094 (2001).
95. G. Ziskind, L.P. Yarin, S. Peles and C. Gutfinger, "Experimental Investigation of particle removal from surfaces by pulsating air jets." *Aerosol Sci & Techn.* **35**, 652 - 659 (2002).
96. P. Vainshtein, D. Pnueli, C. Gutfinger, "Criterion for ignition of a fuel mixture by acoustic streaming ", *Combustion Science and Technology*, **176**, 289 – 304 (2004).

97. P. Vainshtein and C. Gutfinger, "Effect of weak periodic pressure waves on time to ignition of fuel mixtures ", *Physics of Fluids*, **13**, 2635-2644 (2001).
98. K. Shuster, M. Fichman, A. Goldshtein and C. Gutfinger, "Agglomeration of submicrometer particles in weak periodic shock waves", *Physics of Fluids*, **14**, 1802-1805 (2002).
99. C. Gutfinger, D. Pnueli, L. Moldavsky, K. Shuster and M. Fichman. "Particle motion in simple shear flow with gravity" *Aerosol Science & Techn.*, **37**, 841-845 (2003).
100. A. Alexeev, A. Goldshtein and C. Gutfinger, "Heat interaction in a resonance tube", *Physics of Fluids*, **14**, 1812-1815 (2002).
101. G. Ziskind and C. Gutfinger. "Shear and gravity effects on particle motion in turbulent boundary layers." *Powder Technology*, **125**, 140-148 (2002).
102. P. Vainshtein and C. Gutfinger, "On electroviscous effects in microchannels" *Journal of Micromechanics and Microengineering*, **12**, 252-256. (2002).
103. P. Vainshtein, M. Shapiro and C. Gutfinger, "Creeping flow past and within a permeable spheroid" *Int. J. Multiphase Flow*, **28** , 1945-1963 (2002).
104. L. Moldavsky, A. Goldshtein, K. Shuster, M. Fichman, D. Pnueli, M. Shapiro and C. Gutfinger "Confined fluidized bed – model and experiments" .“ *Int. J. Multiphase Flow*, **31**, 957-967 (2005).
105. Simcha Milo, Edmond Rambod, Chaim Gutfinger and Morteza Gharib, "Mitral Mechanical Heart Valves: *in vitro* studies of their closure, vortex and microbubble formation and their possible medical implications" *European J. Cardio-thoracic Surgery*, **24**, 364-370 (2003).
106. A. Alexeev and C. Gutfinger, "Particle drift in a resonance tube – a numerical study" *J. Acoustic Soc. America*. **33**, 1357-1365 (2003).
107. A. Muginstein, M. Fichman and C. Gutfinger, "Gas Absorption into a Drop in the Presence of an Acoustic Field." *Int. J. Multiphase Flow*, **31**, 263-284 (2005).
108. P. Vainshtein, M. Shapiro and C. Gutfinger, "Mobility of permeable aggregates: Effect of shape and porosity" *J. Aerosol Sci.* **34**, 383-404 (2003).
109. Simcha Milo, Gina Yu-chi Chu, Chaim Gutfinger, and Morteza Gharib, "Bubble formation on St. Jude mechanical heart valves - an *in vitro* study" *J. Heart Valve Disease* **12**, 406-410 (2003).
110. Simcha Milo, Chaim Gutfinger, and Morteza Gharib, "Can regurgitant flow damage left atrial endothelium in patients with prosthetic MHVs?" *European J. Cardio-thoracic Surgery* **14**, 344-352 (2005).
111. A. Alexeev and C. Gutfinger, "Resonance gas oscillations in closed tubes – numerical study and experiments" *Physics of Fluids*, **15**, 3397-3408 (2003).
112. A. Goldshtein, A. Alexeev and C. Gutfinger, "Resonance oscillations with thermal effects of an inviscid gas in a closed tube". *J. Fluid Mech.*, **518**, 1-34 (2004).
113. A. Alexeev and C. Gutfinger "Aerosol Deposition in Periodic Shock Waves" *Physics of Fluids*, **16**, 1028-1036 (2004).
114. C. Gutfinger, A. Goldshtein and H. Weinstein, "A Model for the Collapse of a Fluidized Bed" *Advanced Powder Technology* **16**, 49-60 (2005).
115. L. Moldavsky, M. Fichman and C. Gutfinger, "Enhancing the Performance of Fibrous Filters by means of Acoustic Waves" *J. Aerosol Sci.*, **37**, 528-539, (2006).

116. L. Moldavsky, C. Gutfinger and M. Fichman, "Effect of Acoustic Waves on The Performance of Multi-Cyclone – Filter System" *Filtration*, 37, 229-232, (2011).
117. L. Moldavsky, C. Gutfinger, A. Oron and M. Fichman, "Effect Of Sonic Waves On Gas Filtration By Granular Beds" *Journal of Aerosol Science*, 57, 125-130, (2013)
118. S. Milo, M. Kabaha, C. Gutfinger and M. Lewin, "Pulmonary and cerebral air emboli accompanying current techniques in hemodialysis" *Nephrology and Dialysis* (submitted).

(c) Proceeding of Symposia and Other Papers:

1. C. Gutfinger and C.A. Chase, "Liquid film coating – a problem with a missing constraint". *AIChE Annual Meeting*, Detroit, Michigan, December 1966.
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