CURRICULUM VITAE

September 2013

Name:	Avraham SHITZER
Place and Date of Birth:	Haifa, Israel, February 1, 1940
Marital Status:	Married, 3 children

Academic degrees:

1965	B.Sc. in Mechanical Engineering (Cum Laude), Technion - Israel Institute of Technology.
1968	M.Sc. in Mechanical Engineering, Technion - Israel Institute of Technology.
1971	Ph.D. in Mechanical and Industrial Engineering, University of Illinois at Urbana-Champaign. Majored in Environmental Control and minored in Mathematics.

Academic Record:

2011 to date	Founding Chairperson, Department of Mechanical Engineering, Azrieli College of Engineering Jerusalem.
2008 to date	James H. Belfer Professor Emeritus of Mechanical Engineering, Department of Mechanical Engineering Technion, Israel Institute of Technology, Haifa, Israel.
2006/7	Visiting Professor, Center for Environmental Design Research, University of California, Berkeley, USA
2004/5	Visiting Professor, Department of Biomedical Sciences, Wollongong University and Department of Physical Geography, MacQuarie University, Australia
2004	Visiting Professor, International Center for Indoor environment and Energy, Danish Technical University, Lyngby, Denmark.
2000 - 2002	Vice President for Research, Technion, Israel Institute of Technology, Haifa, Israel.
1998 - 2000	Vice Provost for Research, Technion, Israel Institute of Technology, Haifa, Israel.
1991 - 1996	Dean, Faculty of Mechanical Engineering, Technion - Israel Institute of Technology.
1984 - 2008	Professor of Mechanical Engineering, Department of Mechanical Engineering Technion, Israel Institute of Technology, Haifa, Israel.
1985 - 2008	Incumbent, James H. Belfer Chair in Mechanical Engineering, Department of Mechanical Engineering Technion, Israel Institute of Technology, Haifa, Israel.
1989 - 1990 and 1996-1997	Senior Research Associate, National Research Council of the National Academy of Sciences, US Army Research Institute of Environmental Medicine, Natick, Massachusetts.
Summer 1985	Visiting Scientist, Biomedical Engineering and Instrumentation Branch, National Institutes of Health, Bethesda, Maryland.
Summers 1981 and 1983	Visiting Associate Professor, Dept. of Mechanical Engineering, The City College of New York, The State University of New York, New York.
1980-1983	Head, Danciger Teaching Laboratory, Technion-Israel Institute of Technology.
1979-1985	Associate Professor, Department of Engineering, University of Tel Aviv, Ramat Aviv, Israel. (part time).
1978-1979 and Summer 1980	Visiting Associate Professor, Dept. of Surgery, University of Texas Health Science Center at Dallas.
1977-1984	Associate Professor of Mechanical Engineering, Technion - Israel Institute of Technology, Haifa,

	Israel.
Summer 1977	Chief Research Officer, National Building Research Institute, Council for Scientific and Industrial Research, Pretoria, R. South Africa.
Summer 1975	Research Fellow, Laboratory of Heating and Air Conditioning, Technical University of Denmark, Lyngby, Denmark.
1973-1977	Senior Lecturer, Department of Engineering, University of Tel Aviv, Ramat Aviv, Israel. (part time).
1972-1977	Senior Lecturer, Department of Mechanical Engineering, Technion - Israel Institute of Technology, Haifa, Israel.
1971-1972 and Summer 1973	Research Associate, National Academy of Sciences, Division of Biotechnology, NASA Ames Research Center, Moffett Field, California.
1971	Visiting Assistant Professor of Mechanical Engineering, University of Illinois at Urbana-Champaign.
1968-1971	Research and Teaching Assistant, University of Illinois at Urbana-Champaign.
1964-1968	Teaching Assistant and Instructor, Faculty of Mechanical Engineering, Technion - Israel Institute of Technology.

Industrial Consulting

1972	Rogozin Industries in Israel Ltd., Ashdod; consultant on environmental control.
1973	M. Djerassi & Co., insurance adjusters; consultant on air conditioning systems.
1975	Israel Consortium of insurance companies; consultant on fire extinguishing textbook.
1976	"Keshet" Settlement; consultant on space heating alternatives.
1976, 1981 and 1983	Israel Ministry of Housing: consultant on air conditioning and heating systems.
1978, 1980-1982	Department of Public Works and Ministry of Health; consultant on design conditions in various hospital departments.
1979-1981	Israel Electric Company; cooling of large inland power stations.
1980	Electra Co., Israel; consultant on personal cooling under extreme heat stress conditions.
1981-1985	Sivan, Development of Technological Systems, Israel; consultant on personal cooling systems under extreme heat stress conditions.
1982-1987	Department of Defense, Division of Construction; consultant on air conditioning, heating, ventilation and refrigeration systems.
1985-1988	Elisra, Ltd. Israel; consultant on personal cooling under extreme heat stress conditions.
1990 - 1999	Israel Defense Forces; consultant on personal and environmental conditioning systems.
2003 – 2004	Galil Medical, consultant on cryo-surgical systems.
2006 - 2005	Arbel Medical, consultant on cryo-surgical systems
2007 - 2008	Cardinova, consultant on cryo-surgical systems.

Teaching Record:

(a) Undergraduate Courses

1. Design of air conditioning and refrigeration systems 1.
2. Design of air conditioning and refrigeration systems 2.
3. Environmental control, senior project.
4. Thermodynamics.

5. Heat Transfer.
6. Heating and air conditioning.
7. Fluid dynamics.
8. Experimental methods

(b) Graduate Courses

1. Conduction heat transfer.
2. Convection heat transfer.
3. Heat transfer in living tissue and temperature regulation in mammals.
4. Heat transfer in biological systems.

Supervision of Graduate Students:

1. Richard J. Leo: Steady state and transient temperature distributions on the skin of the human thigh covered with a cooling pad, M.Sc., University of Illinois at Urbana-Champaign (jointly with J.C. Chato, Major supervisor), 1971.

2. Elise Haas: Factors influencing the pressure drop and the cooling rate of oranges packed in different boxes under forced air cooling, M.Sc. (jointly with G. Manor, Major supervisor) 1976.

3. Boris Rubinsky: Analysis of the freezing of biological tissues around a cryosurgical probe. M.Sc., 1976.

4. Yehiam Horev: Analysis of the temperature distribution of frost melting systems. M.Sc., 1977.

5. Aaron Erez: Electrocoagulation of biological tissues. M.Sc., 1977.

6. Hillel Arkin: Optimization of air duct systems. M.Sc., 1977.

7. Avinoam Borenshtein (Bartal): Stability analysis of the thermosyphonic solar collector system. M.Sc. (jointly wlth Y. Zvirin), 1977.

8. Witzman Sorin: Storage of thermal energy in phase changing materials with application to solar energy. M.Sc. (jointly with Y. Zvirin), 1980.

9. Yehuda Shiran: Absorption cooling system utilizing solar energy. M.Sc., 1980.

10. Moshe Levi: Optimal design of a space heating system for offices employing solar air heaters. M.Sc., 1982.

11. Israel Kroizer: Parametric analysis of the heat absorbing tube in a parabolic concentrator, 1982.

12. Yedidya Cohen: Calculation of the performance of a wet/dry cooling tower for a large power station. M.Sc., 1982.

13. Hillel Arkin: Model of thermoregulation in the human body and its application to prediction of the response to local cooling. D.Sc., 1983.

14. Hector Budman: Investigation of the temperature field around a cryogenic probe. M.Sc., 1983.

15. Moshe Levi: Application of solar SRTA to air conditioning and heating, M.Sc. (jointly with Y. Zvirin, Major supervisor). 1984.

16. Rafael Friedman: Effect of flow on forced circulation solar water systems. M.Sc. 1985.

17. Hector Budman: Temperature variations in a phase changing biological medium. (Jointly with Y. Dayan). D.Sc. 1987.

18. Aaharon Sagi: Investigation of heat transfer and temperature distribution in teeth exposed to CO_2 laser (co-supervisor with S. Doitsh). D.Sc. 1988.

19. Anne Weill: Analysis of multiprobe application to tissue freezing. M.Sc. (jointly with P.Z. Bar-Yoseph) 1989.

20. Yoed Rabin: Freezing of biological tissues for destruction or preservation. D.Sc. 1994.

21. Stephen Bellomo: Model of the thermal behavior of cold stressed fingers, M.Sc. 1995.

22. Yehoshua Chayut: Freezing temperature field around a major blood vessel, M.Sc. 1995.

23. Vadim Pinchevski: Thermal analysis of the newborn in an incubator, M.Sc. 1998.

24. Loay Massalha: Solidification of a material contacting a surface cryoprobe with an imbedded cylindrical heat source, M.Sc. 2001.

25. Genady Bekerman: Numerical model of solidification by an external cryoprobe of a material with an embedded cylindrical heat source. M.Sc. (jointly with D. Degani), 2006.

26. Zaur Maglov: Investigation of the temperature field developed by simultaneously operating cryo-surgical probes embedded inside a phase-changing medium. M.Sc. (jointly with D. Degani), 2006.

27. Noga Rybko: Experimental imaging of the effects of a thermally significant blood vessel on the temperature field in a tissue undergoing freezing, M.Sc. (jointly with D. Degani) 2007.

28. Peleg Pavel Levin: PCM based thermal management system (TMS) of electronic devices with transient and high heat generation: A design optimization procedure, M.Sc. (jointly with G. Hesroni, major adviser), 2009.

29. Yael Benshabat: Modified wind chill temperature based on estimated human convective heat transfer coefficients and a whole body thermoregulation model, M. Sc., 2010.

30. Zaur Maglov: An approximate computational method for cryoprobe positioning and activation during cryosurgery in 2D convex target areas, Ph.D. (jointly with D. Degani), 2011

31. Oren Rotman: Effect of arterial distensibility and stenosis on pressure drop in pulsatile flow, Ph.D. (jointly with S. Einav, major adviser), in progress.

32. Hadas Faibish: Model of thermal behavior of a limb in a cold environment including counter-current heat exchange between major blood vessels, M.Sc., currently on leave.

Supervision of Post Graduate Fellows:

1.	Dr. Matvey Kleiner,	1974-1975
2.	Dr. Elizabeth Michelson,	1980-1983
3.	Dr. Victor Berelovich,	1992-1994
4.	Dr. Yan-min Wang,	1994-1996
5.	Dr. Sha Bin,	1995-1996

Administrative Experience:

1972-1978	Member, Curriculum Committee, Faculty of Mechanical Engineering, Technion, Israel Institute of Technology.
1973-1975	Member, Development Committee, Faculty of Mechanical Engineering, Technion, Israel Institute of Technology.
1974	Coordinator, Committee on Acceptance of Students and Senior Technicians.
1975-1977	Associate Dean for Academic Affairs and Coordinator of the Curriculum Committee, Faculty of Mechanical Engineering, Technion - Israel Institute of Technology.
1977	Member of the Technion Senate. (Faculty representative).
1978	Chairman, Technion Committee on Adjunct Professors
1978, 1984-5	Chairman, Technion Appeals Committee on Promotion of Technical Staff.
1980-1983	Head, Danciger Teaching Laboratories, Technion - Israel Institute of Technology.
1980	Chairman, Technion Committee for Advancement of Technical Staff.
1980-1982	Member, Technion Senate Committee on Approval of Graduation.
1980-1981	Member of the Directorate, Technion Research and Development Foundation.
1981	Member, Committee for Revision of Mechanical Engineering Students Laboratories.

1981-1986	Member, Academic Council of the Technion Extension Division.
1980-1987	Member, Preparatory Committee, Department of Education in Science and Technology.
1982-1987	Scientific advisor on energy proposals for the US-Israel Binational Science Foundation.
1982	Chairperson of the Organizing Committee, Conference of the International Institute of Refrigeration, Jerusalem, Israel.
1982	Session coordinator on "concepts behind approaches to measure blood flow in tissues", XIIth European Conference on Microcirculation, Jerusalem, Israel.
1983	Member, Organizing Committee, Food and Agriculture Organization of the United Nations, First Technical Consultation of the European Cooperative Network on Rural Energy, Solar Energy, Tel Aviv, Israel.
1984-pres.	Member, Steering Committee for Development of Mathematical Curriculum in Vocational High Schools, Department of Technology and Science Teaching, Technion, Haifa, Israel.
1984-1986	Head, Technion Youth Liaison Bureau.
1984-1986	Associate Head for Youth Activities, Technion Extension Division.
1985-1987	Member, Technion Senate Standing Committee for Promotion of Lecturers and Senior Lecturers.
1985	Chairperson of Organizing Committee, Israel-Norway Conference on Heat Pumps and Energy Conservation.
1985	Organizer, Workshop on Heat Transfer in the Living Body and its Environment, Technion, Haifa, Israel.
1986	Chairperson, Technion Committee on Promotion Procedures of Technical Staff.
1986-1989	Principal, Junior Technical College of the Technion, Israel Institute of Technology, Haifa, ISRAEL.
1987-1989	Member, Technion Senate Standing Committee for Promotion of Senior Faculty Members and Tenure.
1989	Chairperson, National Council for Higher Education Accreditation Committee for the Jerusalem College for Technology Teachers.
1989	Chairperson and Organizer, The James H. Belfer Symposium on Heat Transfer in the Living Body and Its Environment.
1990	Member, Technion Senate Preparatory Committee for Promotion and tenure of Senior Faculty members.
1990-	Member, International Steering Committee, Annual World Renewable Energy Sources, Reading, UK.
1991-1994.	Member, Comptrolling Committee, Technion Academic Staff Association.
1991	Co-chairperson of the International Symposium on Heat and Mass Transfer in Biomedical Engineering, International Centre for Heat and Mass Transfer, Athens, Greece.
1991	Co-chairperson, The James H. Belfer Symposium on Artificial Hands for Robotics and Rehabilitation.
1992-1994.	Chairperson, National Council for Higher Education Committee for accreditation of B. Tech. degrees.
1993	Co-chairperson, The James H. Belfer Symposium on Computational Fluid Dynamics.
1994	Member, International Committee for Colleges Accreditation, Ministry of Education, Cyprus.
1994-1995	Member, International Steering Committee, International Seminar on Transfer Processes in Biomedical Investigations, A. V. Luikov Heat and Mass Transfer Institute, Minsk, Byelorussian Academy of Sciences, April 1995.

1994-1996	Member, Steering Committee, The 2nd Jerusalem International Science and Technology Education Conference on Technology Education for a Changing Future: Theory, Policy and Practice.
1995	Chairperson and Organizer, The James H. Belfer Symposium on Recent Developments in Cryosurgery.
1995	Co-chairperson, The James H. Belfer Symposium on Modeling of Structures and Mechanical Systems.
1996	Co-chairperson, The James H. Belfer Symposium on Nonlinear Systems.
1997	Co-chairperson, The James H. Belfer Symposium on Nonlinear Mechanics.
1998	Chairperson and Organizer, The James H. Belfer Symposium on Heat and Mass Transfer within the Living Body and with its Environment.
1998	Co-chairperson, The James H. Belfer Symposium on Computer-Aided Surgery, Medical Robotics and Medical Imaging.
1998	Member, Technion Senate Standing Committee for Promotion of Senior Faculty Members and Tenure.
1998	Head, Energy Engineering and Environment Conservation Center.
1998	Member, Technion Preparatory Committee for Promotion of Senior Faculty Members and Tenure.
2000 -	Member of the Scientific Council, International Centre for Heat and Mass Transfer
2002 – 2004	Chairperson, Senate Tenure and Promotion Professional Ad-hoc Committees
2006/7	Member, Technion committee on relations with the Colleges
2007 - 2008	Head, Energy Engineering and Environment Conservation Center.
2009 -	Member, Academic Council, Ort Braude Academic College
2009 -	Chairperson, Academic council, Ort Hermelin Academic College
2010 – to date	Chairperson, National Council for Higher Education Committee for accreditation of M.Sc degree without thesis in Energy Systems (Afeka College).

Public and Professional Activities:

1975	Founding Member and Originator of ISHRAE - Israel Society of Refrigerating and Air Conditioning Engineers.
1975-1977	Chairman, Membership Committee of ISHRAE.
1976	Member, Ministry of Education, Director General's Committee for Evaluation of the Israel Society for the Promotion of Technical Youth Clubs.
1977-1986	Member, Executive Committee, Israel Society for the Promotion of Technical Youth Clubs.
1978-1990	Official Delegate and Representative of ISHRAE to ASHRAE's International Activities Committee.
1980-1984 and 1987-1988	Secretary, Israel Section of ISES, International Solar Energy Society.
1980-pres.	Member, K-17 Committee of the ASME (Heat Transfer in Biological Systems).
1981-1985	Member of the executive committee, Israel Society of Refrigerating and Air Conditioning Engineers.
1983	Official delegate of Israel to the International Institute of Refrigeration.
1994-1995	Member, Subcommittee for folk dancing, Municipality of Haifa.

1995-2001	Member, International Advisory Committee, University of Cyprus.
1999 – 2004.	Director, Board of directors of the Belfer Institute for Energy Research
2000 - 2002	Chairperson, Board of Directors, Technion Entrepreneurial Incubator Company.
2000 – 2002	Chairperson, Board of Directors, Dimotech.
2002 – 2002	Director, Board of Directors of the Electro-Optical Research and Development Company.
2001 – Pres.	Director, Board of Directors of the National School for Handassaim (senior technicians)
2001 – 2002	Chairperson, Board of directors, Israel Coastal and Marine Engineering Research Institute, Technion.
2005 - 2006	Adviser to GIF – German-Israeli Foundation in the area of Mechanical Engineering/Technology
2006 -2010	Chairperson, Social Justice and Civil Society Committee, Haifa-Boston Connection.

Honors and Awards:

1962-4	Scholarships, Technion - Israel Institute of Technology.
1965	B.Sc. Cum Laude
1968	Fulbright-Hayes Grant.
1968-9/70	Scholarships, Hebrew Technical Institute, New York.
1978	Recipient, Best International Paper Award, ASHRAE.
1983	Recipient, Ray & Miriam Klein Award.
1985	Incumbent, James H. Belfer Chair in Mechanical Engineering.
2000	Fellow, ASME - American Society of Mechanical Engineers
2005	Fellow and Life Member, ASHRAE - American Society of Heating, Refrigerating and Air Conditioning Engineers
2006	Fellow, AIMBE – American Institute for Medical and Biological Engineering

Editorial Boards:

2002- to date	Associate Editor, Energy – The International Journal

Membership in Professional Societies:

ASHRAE	Fellow and Life Member, American Society of Heating, Refrigerating, and Air Conditioning Engineers.
IIR	International Institute of Refrigeration.
ISHRAE	Founding Member, Israel Society of Refrigerating and Air Conditioning Engineers.
ASME	Fellow, American Society of Mechanical Engineers.
AIMBE	American Institute for Medical and Biological Engineering

Current Research Interests:

Thermal modeling and behavior of biological media

Estimation of blood perfusion in biological tissues.

Applications of heat transfer in medicine (cryosurgery, electro-coagulation, hyperthermia, etc.)

Regulation of temperature in mammals.

Human thermal comfort and protective garments.

Air conditioning and refrigeration.

Computer aided design and optimization of energy and solar energy systems.

Technical and vocational education and curriculum design.

LIST OF PUBLICATIONS

(a) **Articles**

1. Chato, J.C. and Shitzer, A.: On the dimensionless parameters associated with heat transport within living tissue. Aerospace Medicine, Vol. 41, No. 4, pp. 390-393, 1970.

2. Shitzer, A. and Chato, J.C.: Analytical modeling of the thermal behavior of living human tissues. Proc. 4th International Heat Transfer Conference, Versailles, France, pp. Cu. 3.9.:1-11, 1970.

3. Chato, J.C., Shitzer, A., and Fry, F.J.: Measurement of thermal properties of living tissues. Proc. of 23rd Annual Conference on Engineering in Medicine and Biology, Washington, D.C., p. 156, 1970.

4. Chato, J.C. and Shitzer, A.: Thermal modeling of the human body - further solutions of the steady state heat equation. AIAA J., Vol. 9, No. 5, pp. 865 - 869, 1971.

5. Shitzer, A., Chato, J.C., and Hertig, B.A.: Removal of metabolic heat from man working in a protective suit. Proc. of the 2nd Conference on Portable Life Support Systems, NASA Ames Research Center, May 11 -13, pp. 265 - 281, 1971.

6. Shitzer, A. and Chato, J.C.: Effect of variable blood supply temperature on the temperature distribution in a biological tissue, Proc. of the 24th Annual Conference on Engineering in Medicine and Biology, Vol. 13, p. 57, 1971.

7. Shitzer, A. and Chato, J.C.: Steady-state temperature distribution in living tissue modeled as cylindrical shells, ASME Paper No. 71-WA/HT-34, 1971.

8. Shitzer, A. and Chato, J.C.: Analytical solution to the problem of transient heat transfer in living tissue, ASME Paper No. 71-WA/HT-36, 1971.

9. Shitzer, A. and Chato, J.C.: Further studies on the dimensionless parameters associated with the in vivo transport of heat within biological tissues, Aerospace Medicine, Vol. 42, No. 12, pp. 1279-1283, 1971.

10. Shitzer, A.: Addendum to "A review on mathematical models of the human thermal system", IEEE Transactions on Biomedical Engineering, Vol. BME-20, No. 1, pp. 65-66, 1973.

11. Leo, R.J., Shitzer, A., Chato, J.C., and Hertig, B.A.: Steady and transient temperature distributions on the skin of human thigh covered by a water-cooled pad, ASHRAE Trans., Vol. 79, Part I, pp. 62-74, 1973.

12. Shitzer, A., Chato, J.C., and Hertig, B.A.: Thermal protective garment using independent regional control of coolant temperature, Aerospace Medicine, Vol. 44, No. 1, pp. 49-59, 1973.

13. Williams, B.A., Shitzer, A., and Elkins, W.: A liquid-cooled helmet liner for thermal comfort, Proc. Aerospace Medicine, 44th Conference, Las Vegas, Nevada, pp. 13-14, 1973.

14. Shitzer, A.: A model of heat transfer in a biological tissue perfused by blood of arbitrary temperature, Israel J. Tech., Vol. 11, No. 4, pp. 169-177, 1973.

15. Shitzer, A. and Chambers, A.B.: Comparative study of patches for liquid cooled garments, J. Spacecraft and Rockets, Vol. 10, No. 8, pp. 541-544, 1973.

16. Chato, J.C. and Shitzer, A.: Analytical prediction of the heat transfer from a blood vessel near the skin surface cooled by a symmetrical strip, ASME Transactions, Journal of Engineering for Industry, Vol. 97, Series B, No. 1, pp. 61-65, 1975.

17. Chato, J.C., and Shitzer, A.: Transcutaneous cooling of a large blood vessel by a symmetric strip, Proc. of the 26th Annual Conference on Engineering in Medicine and Biology, Vol. 15, p. 104, 1973.

18. Williams, B.A. and Shitzer, A.: Modular, liquid-cooled helmet liner for thermal comfort, Aerospace Medicine, Vol. 45, No. 9, pp. 1030-1036, 1974.

19. Shitzer, A.: Studies of bio-heat transfer in mammals, In: Current Topics in Transport Phenomena, C. Gutfinger, ed., Halsted Press, pp. 211-343, 1975.

20. Shitzer, A.: Temperature distribution in a biological tissue modeled as a spherical shell, Proceedings, 28th Annual Conference on Engineering in Medicine and Biology, Vol. 17, p. 257, 1975.

21. Shitzer, A. and Kleiner, M.K.: Thermal behavior of biological tissues - a general analysis, Bulletin of Mathematical Biology, Vol. 38, No. 4, pp. 369-386, 1976.

22. Rubinsky, B. and Shitzer, A.: Analysis of a Stefan-like problem in a biological tissue around a cryosurgical probe, ASME Transaction, Journal of Heat Transfer, Vol. 98, Series C, No. 3, pp. 514-519, 1976.

23. Haas E., Felsenstein, G., Shitzer, A., and Manor, G.: Factors affecting resistance to air flow through packed fresh fruit, ASHRAE Transactions, Vol. 82, Part II, pp. 548-554, 1976.

24. Zvirin, Y., Shitzer, A. and Grossman, G.: The natural circulation solar heater-models with linear and non-linear temperature distributions, International Journal of Heat and Mass Transfer, Vol. 20, pp. 997-999, 1977.

25. Grossman, G., Shitzer, A., and Zvirin, Y.: Heat transfer analysis of a flat plate solar energy collector, Solar Energy, Vol. 19, pp. 493-502, 1977.

26. Shitzer, A., Rasmussen, E.B. and Fanger, P.O.: Human responses during recovery from heat stress with relation to comfort, Ergonomics, Vol. 21, No. 1, pp. 21-34, 1978.

27. Shitzer, A.: Comparison of analytically predicted and experimentally measured temperature profiles inside the thigh muscle of exercising men, Mathematical Biosciences, Vol. 36, pp. 31-44, 1977.

28. Zvirin, Y., Shitzer, A. and Bartal-Borenstein, A.: On the stability of the natural circulation solar heater, Proc. Sixth International Heat Transfer Conference, Toronto, Canada, EC-23, pp. 141-145, 1978.

29. Shwartz, I. and Shitzer, A.: Solar absorption system for space cooling and heating, ASHRAE Journal, Vol.. 19, No. 11, pp. 51-54, 1977.

30. Rubinsky, B. and Shitzer, A.: Analytic solutions to the heat equation involving a moving boundary with application to the change of phase problem (the inverse Stefan problem), ASME Transactions, Journal of Heat Transfer, Vol. 100, pp. 300-303, 1978.

31. Shitzer, A. and Chato, J.C.: Analytical solutions to the problem of transient heat transfer in living tissue, ASME Transactions, Journal of Biomechanical Engineering, Vol. 100, No. 4, pp. 202-210, 1978.

32. Arkin, H. and Shitzer, A.: Computer aided optimal life-cycle design of rectangular air supply duct systems, ASHRAE Transactions, Vol. 85, Part I, pp. 197 - 213, 1979.

33. Shitzer, A., Kalmanoviz, D., Zvirin, Y. and Grossman, G.: Experiments with a flat-plate solar water heating system in thermosyphonic flow, Solar Energy, Vol. 22, No. 1, pp. 27-35, 1979.

34. Grossman, G., Shitzer, A. and Zvirin, Y.: Solar Research around the world: Israel, ASHRAE Journal, Vol. 21, No. 2, pp. 40-44, 1979.

35. Shitzer, A. and Arkin, H.: Study of economic and engineering parameters related to the cost of an optimal air supply duct system, ASHRAE Transactions, Vol. 85, Part 2, pp. 363-374, 1979.

36. Shitzer, A., Eberhart, R.C. and Eisenfeld, J.: Estimation of blood perfusion rate from diffusible indicator measurements: a sensitivity analysis, ASME Advances in Bioengineering, pp. 183-186, 1979.

37. Erez, E. and Shitzer, A.: Controlled destruction and temperature distribution in biological tissues subjected to monoactive electrocoagulation, ASME Transactions, Journal of Biomechanical Engineering, Vol. 102, No. 1, pp. 42-49, 1980.

38. Eberhart, R.C., Shitzer, A. and Hernandez, E.J.: Thermal dilution methods: estimation of blood flow and metabolism, Annals of the New York Academy of Sciences, Vol. 335, pp. 107-132, 1980.

39. Shitzer, A., Eberhart, R.C. and Eisenfeld, J.: Estimation of tissue blood perfusion rate from diffusible indicator measurements: a sensitivity analysis, ASME Transactions, Journal of Biomechanical Engineering, Vol. 102, No. 3, pp. 258-264, 1980.

40. Shitzer, A. and Kleiner, M.K.: On the relationship between blood perfusion, metabolism and temperature in biological tissues heat balance, ASME Transactions, Journal of Biomechanical Engineering, Vol. 102, No. 2, pp. 162 - 169, 1980.

41. Shitzer, A., Elkowitz, A.B. and Eberhart, R.C.: Temperature profiles calculated in tissues subjected to non-uniform blood flow distributions, ASME Paper 101st Winter Annual Meeting, Chicago, Ill. 1980.

42. Shitzer, A., Eberhart, R.C. and Eisenfeld, J.: Improvement in indicator dilution-based capillary flow estimation by sensitivity analysis, Computers in Cardiology, pp. 471-474, 18980.

43. Shitzer, A. and Kleiner, M.K.: Effective thermal conductivity of biological tissues - analytical considerations, ASME PAPER, 101st Winter Annual Meeting, Chicago, Ill. 1980.

44. Michelson, E., Shitzer, A. and Fruchter, E.: Comparison of weather data of different time resolutions as applied to a simulation of an indoor swimming pool, Proceedings of the IIR Meeting on "Utilization of Solar Energy for Refrigeration and Air- Conditioning", Jerusalem, Israel, pp. 283-289, 1982.

45. Michelson, E., Levy, M., Shitzer, A. and Zvirin, Y.: Simulation of a solar office heating system with air collectors and a rock bed store, ibid, pp. 339-346, 1982.

46. Eberhart, R.C., Elkowitz, A.B. and Shitzer, A.: Prediction of tissue perfusion and heat generation rates by an improved heat clearance technique, in: Computers in Critical Care and Pulmonary Medicine, Vol. II, D. Parakash, ed. Plenum Press, N.Y., pp. 117-119, 1982.

47. Elkowitz, A.B., Shitzer, A and Eberhart, R.C.: Transient temperature profiles in tissues with non-uniform blood flow distributions, ASME Transactions, Journal of Biomechanical Engineering, Vol. 104, No. 3, pp. 202-208, 1982.

48. Shiran, Y., Shitzer, A. and Degani, D.: Computerized design and economic evaluation of an aqua-ammonia solar operated absorption system, Solar energy, Vol. 29, No. 1, pp. 43-54, 1982.

49. Shitzer, A. and Eberhart, R.C.: Simultaneous measurements of blood flow and heat production in tissues: sensitivity analysis, in: Measurement of Blood Flow and Local Tissue Energy Production by Thermal Methods, edited by W. Muller-Schauenburg et al., pp. 61-67, 1983.

50. Eberhart, R.C., Keitzer, W.F., Elkowitz, A.B., Shitzer, A., Brown, R., Cassimus, D. and Howard, L.: Influence of perfusion distribution, surface heat transfer and countercurrent exchange on renal flow measurement by heat clearance technique, ibid, pp. 86-91, 1983.

51. Eberhart, R.C., Shitzer, A., Olsen, R.W., Elkowitz, A.B. and Keitzer, W.F.: Crucial experiments, validity and limitations of models in the prediction of regional blood flow by heat clearance methods, ibid, pp. 92-93, 1983.

52. Shitzer, A. and Levy, M.: Transient behavior of a rock-bed thermal storage system subjected to variable temperatures: analysis and experimentation, ASME Transactions, Journal of Solar Engineering, Vol. 105, No. 2, pp. 200-206, 1983.

53. Witzman, S., Shitzer, A. and Zvirin, Y.: Simplified calculation procedure of a latent heat reservoir for stabilizing the temperature of electronic devices, In: Heat Transfer in Electronic Equipment, HTD-Vol. 28, ASME Winter Annual Meeting, pp. 29-34, Boston, November 1983.

54. Levy, M. and Shitzer, A.: Dynamic simulation of the heating load of offices coupled with measured occupancy distributions, ASHRAE Transactions, Vol. 90, Part 1, pp. 226-244, 1984.

55. Arkin, H. and Shitzer, A.: A model of thermoregulation in the human body, ASME Paper 84-WA/HT-66, 1984.

56. Arkin, H. and Shitzer, A.: Simulation of thermoregulation in the human body exposed to non-symmetric thermal and work loads, Proceedings, XIV International Conference on Medical and Biological Engineering, ESPOO, Finland, August 1985.

57. Shitzer, A.: Space heating system for offices utilizing solar air collectors, Israel Meteorological Research Papers, Vol. 4, pp. 91-97, 1985.

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