CURRICULUM VITAE

Robert C. Spear

Date of Birth: June 26, 1939
Place of Birth: Los Banos, California
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Education

B.S., University of California, Berkeley (Engineering Science), 1962

M.S., University of California, Berkeley (Mechanical Engineering), 1963

Ph.D., Cambridge University, Cambridge, England (Control Engineering) 1968

Post-doctoral Fellow, University of California, Berkeley (Environmental Health Sciences), 1969–70

Honors and Awards

National Science Foundation Graduate Fellow, Cambridge University, Cambridge, England, 1965–68

Senior International Fellow, Fogarty International Center, National Institute of Health, 1977–78

Visiting Fellow, Center for Resource and Environ. Studies, Australian National University, 1977–78

Tau Beta Pi

Outstanding Paper of the Year; *American Industrial Hygiene Assoc. Journal;* Co-Author, 1981, 1991

Rutherford T. Johnstone Lecturer, Western Occupational Medical Association, 1990

John M. White Award for scientific research in the field of respiratory protection, 1993

Honorary Professor, Sichuan Institute for Parasitic Disease, 1997–

Jinding Award, Provincial Government of Sichuan, P.R. China, 2003

Honorary Professor, Sichuan University, 2004–

Visiting Professor, Inst. Remote Sensing Applications, Chinese Academy of Sciences, Beijing, 2004–

Professional Qualifications

Licensed Professional Engineer; Control Systems Engineering, #3144, State of California

Major Research Interest

Engineering Aspects of Environmental and Occupational Health

Research and Professional Experience

1963–1965	Mechanical Engineer , Propulsion Development Department, Naval Weapons Center, China Lake, California
1968–1969	Chairman, Research Staff, Propulsion Development Department, Naval Weapons Center, China Lake, California

University of California, Berkeley

1970–present	Professor of Environmental Health Sciences, School of Public Health *(1981 to present)*; Associate Professor *(1975–1981)*; Assistant Professor *(1970–1975)*
1979–1988	Director, Center for Occupational and Environmental Health, University of California
1992–2002	Director, Center for Occupational and Environmental Health, University of California
1982–present	Director, Educational Resource Center, Northern California, National Institute for Occuptional Safety and Health
1987–1988	Vice-chairman, Department of Biomedical & Environmental Health Sciences,
1988–1991	Associate Dean, School of Public Health; Acting Dean, 1989
1991–1996	Director; Environmental Engineering and Health Sciences Laboratory
1994–1996	Associate Dean, College of Engineering

Current Editorial Boards

Environmental Modeling and Software

Associate Editor, 1997–2001

Editorial Board 2001–present

Journal of Preventive Medicine Information, Sichuan Provincial Center for Disease Control and Prevention

Member, Editorial Committee, 2005–present

Significant Committee Assignments

Selected Governmental and Professional Committees

1. Member, Committee on Toxicants and Biosolids Applied to Land, National Research Council, 2001–02
2. Member, Committee on Occupational Exposure to Tuberculosis, Institute of Medicine, NAS, 2000
3. Member, Committee to Assess Occupational Safety and Health Training Needs, Institute of Medicine, NAS, 1999–2000
4. Member, Board of Scientific Counselors, National Institute for Occupational Safety and Health, 1997–2000
5. Vice Chair, Risk Assessment Advisory Committee, California Environmental Protection Agency, 1995–1997
6. Member, Scientific Advisory Panel, Semiconductor Industry Association, 1987–1993
7. Chairman, Advisory Committee to the Hazard Evaluation System and Information Service, California Department of Health Services, 1985–1988
8. National Advisory Committee on Occupational Safety & Health, Occupational Safety & Health Administration, Washington, D.C., 1986–1988
9. Cal-OSHA Advisory Committee, Department of Industrial Relations, State of California, 1979–1986.
10. Technical Advisor, World Health Organization, 1979–80, Hydrogen Sulfide Criteria Document
11. Stockpile Assessment Panel, Committee on Demilitarizing Obsolete Chemical Munitions and Agents, National Research Council, 1984
12. President, Association of University Programs in Occupational Health and Safety, 1984–85
13. Member, Advisory Committee on Reproductive Hazards in the Workplace, Office of Technology Assessment, U.S. Congress, 1984–85

Academic Committees: University of California

1. Chair, Berkeley Division Academic Senate, 1999–00, Vice Chair 1998–99
2. Member, Graduate Council, Berkeley Division Academic Senate 1995–98
   Chair 1997–1998
3. Member, Committee on Educational Policy, Berkeley Division Academic Senate 1990–91
4. Member, Health, Safety and Environment Advisory Committee to the Berkeley, Livermore and Los Alamos National Laboratories, Office of the President, 1990–92
5. Member, Steering Committee on Berkeley Campus Accreditation, 1989–90
6. Health Sciences Committee—Academic Planning and Program Review Board, Office of the President, 1982–1985.
7. Faculty Executive Committee, School of Public Health, Berkeley
   Chairman, 1979–80, 2001–2003
   Vice Chairman, 1978–79
   Member, 1984–85, 1993–94, 1996–97
8. Buildings and Campus Development Committee, Berkeley Campus, 1978–81

Refereed Journal Articles

1. A.J.H.A. Daneels and R.C. Spear, A Computer Algorithm for Frequency Response Calculation, *Simulation* 9:9, 1966.
2. R.C. Spear, The Application of Kolmogorov-Renyi Statistics to Problems of Parameter Uncertainty in Systems Design, *Int. J. Control* 11(5):771–778, 1970.
3. R.C. Spear, A Monte Carlo Method for Component Sizing, *J. Spacecraft and Rockets* 7(9):1127–1129, 1970.
4. E. Wei and R.C. Spear, The Fatal Dose of Methyl Mercury in Man, Letter to Editor, *J.A.M.A.* 216 (8):1347, May 24, 1971.
5. B.D. Tebbens and R.C. Spear, Quality Control of Work Environments, *Amer. Industr. Hyg. Assoc. J.* 32(8):546–551, August 1971.
6. R.C. Spear and E. Wei, Dynamic Aspects of Environmental Toxicology, Transactions of the American Society of Mechanical Engineers, *J. of Dynamic Systems, Measurement, and Control* 94 (Series G, No. 2):114–118, June 1972.
7. P.L. Jacobsen, R.C. Spear and E. Wei, Parathion and Diisopropyl-fluorphosphate Toxicity in Partially Hepatectomized Rats, *Toxicology and Applied Pharmacology* 26:314–317, 1973.
8. W.J. Popendorf and R.C. Spear, Preliminary Survey of Factors Affecting the Exposure of Harvesters to Pesticide Residues, *Amer. Industr. Hyg. Assoc. J.* 35(6):374–380, June 1974.
9. J.T. Leffingwell, R.C. Spear and D.I. Jenkins, The Persistence of Ethion and Zolone Residues on Grape Foliage in the Central Valley of California, *Arch. Environ. Contamination and Toxicology* 1(3):40–54, 1975.
10. R.C. Spear, Dynamic Systems Analysis in Interdisciplinary Research, Transactions of the American Society of Mechanical Engineers, *J. of Dynamic Systems, Measurment, and Control* 97(Series G, No. 1):17–18, March 1975.
11. R.C. Spear, T.H. Milby and D.I. Jenkins, Pesticide Residues and Field Workers, *Environ. Science and Technology* 9:308–313, April 1975.
12. W.J. Popendorf, R.C. Spear and S. Selvin, Collecting Foliar Pesticide Residues Related to Potential Airborne Exposures of Workers, *Environ. Science and Technology* 9:583–585, June 1975.
13. R.C. Spear, W.J. Popendorf, J.T. Leffingwell and D. Jenkins, Parathion Residues on Citrus Foliage: Decay and Composition as Related to Worker Hazard, *J. of Agricultural and Food Chem.* 23(4):808–810, 1975.
14. J. Swartz and R.C. Spear, A Dynamic Model for Studying the Relationship Between Dose and Exposure in Carcinogenesis, *Mathematical Biosciences* 26:19–39, 1975.
15. W.F. Spencer, M.M. Cliath, K.R. Davis, R.C. Spear and W.J. Popendorf, Persistence of Parathion and its Oxidation to Paraoxon on the Soil Surface as Related to Worker Reentry into Treated Crops, *Bull. Environ. Contam. and Toxicology* 14(3):265–272, 1975.
16. R.C. Spear, C.A. Keller and T.H. Milby, Morbidity Studies of Workers Exposed to Whole Body Vibration, *Arch. of Environ. Health* 31(3):141–145, 1976.
17. J. Yager, H. McLean, M. Hudes and R.C. Spear, Components of Variability in Blood Cholinesterase Assay Results, *J. of Occup. Med.* 18(4):242–244, 1976.
18. R.C. Spear, W.J. Popendorf, J.T. Leffingwell, T.H. Milby, J.E. Davis and W.F. Spencer, Fieldworkers Response to Weathered Residues of Parathion, *J. of Occup. Med.* 19(6):406–410, 1977.
19. R.C. Spear, W.J. Popendorf, W.F. Spencer and T.H. Milby, Worker Poisoning Due to Paraoxon Residue, *J. of Occup. Med.* 19(6):411–414, 1977.
20. J.T. Leffingwell, E.R. Turner, S. Futagaki and R.C. Spear, A Field Survey of Dislodgeable Zolone Residues in Twelve Commercially Treated Vineyards, *Bull. Environ. Contam. and Toxicology* 18(2):219–226, 1977.
21. Y. Iwata, J.B. Knaak, R.C. Spear and R.J. Foster, Worker Re-entry into Pesticide Treated Crops. I. Procedure for the Determination of Dislodgeable Pesticide Residues on Foliage, *Bull. Environ. Contam. and Toxicology* 18(6):649–662, 1977.
22. R.C Spear, Y.S. Lee, J.T. Leffingwell and D. Jenkins, Conversion of Parathion to Paraoxon in Foliar Residues: Effects of Dust Level and Ozone Concentration, *J. of Agricultural and Food Chem.* 26(2):434–436, 1978.
23. W.J. Popendorf, R.C. Spear, J.T. Leffingwell, J. Yager and E. Kahn, Harvester Exposure to Phosalone Residues, *J. of Occup. Med.* 21(3):189–194, 1979.
24. G.M. Hornberger and R.C. Spear, Eutrophication in Peel Inlet: I. The Problem Defining Behavior and a Mathematical Model for the Phosphorus Scenario, *Water Research* 14:29–42, 1980.
25. R.C. Spear and G.M. Hornberger, Eutrophication in Peel Inlet: II. Identification of Critical Uncertainties Via Generalized Sensitivity Analysis, *Water Research* 14:43–49, 1980.

26. W.F. Spencer, J.D. Adams, R.E. Hess, T. Shoup and R.C. Spear, Conversion of Parathion to Paraoxon on Soil Dusts and Clay Minerals as Affected by Ozone and UV Light, *J. of Agricultural and Food Chem.* 28(2):366–371, 1980.
27. W.F. Spencer, T.D. Shoup and R.C. Spear, Conversion of Paathion to Paraoxon on Soil Dusts as Related to Atmospheric Oxidants at Three California Locations, *J. of Agricultural and Food Chem.* 28:1295–1300, 1980.
28. R.C. Spear, Technical Problems in Determining Safe Re-entry Intervals, *J. of Environ. Pathology and Toxicology* 4(5 and 6):293–304, Nov. 1980.
29. G.M. Hornberger and R.C. Spear, An Approach to the Preliminary Analysis of Environmental Systems, *J. of Environ. Management* 12:7–18, 1981.
30. R.C. Spear and G.M. Hornberger, A Technical Note on the SPS Energy Analysis of Herendeen et al., *Space Solar Power Review* 2:305–306, 1981.
31. C.A. Franklin, R.A. Fenske, R. Greenhalgh, L. Mathieu, H.V. Denley, J.T. Leffingwell and R.C. Spear, Correlation of Urinary Pesticide Metabolite Excretion with Estimated Dermal Contact in the Course of Occupational Exposure to Guthion, *J. of Toxicology and Environ. Health* 7:715–731, 1981.
32. S.M. Rappaport, S. Selvin, R.C. Spear and C. Keil, Air Sampling in the Assessment of Continuous Exposures to Acutely Toxic Chemicals. Part I: Strategy, *Am. Ind. Hyg. Assoc.* J. 42:831–838, 1981.
33. R. Magnaval, R. Batto, A. Bouville and R.C. Spear, Simulation of Methylmercury Toxicity Resulting from the Consumption of Mediterranean Red Tuna Fish, *Toxicology Letters* 10:233–237, 1982.
34. D.M. Auslander, R.C. Spear and G.E. Young, A Simulation-Based Approach to the Design of Control Systems with Uncertain Parameters, Transactions of the American Society of Mechanical Engineers, *J. of Dynamic Systems Measurement and Control* 104:20–26, 1982.
35. S.M. Rappaport, R.C. Spear and J.W. Yager, Industrial Hygiene Data: Compliance, Dose and Clinical Relevance, *Western Journal of Medicine* 137:572–576, December 1982.
36. J.W. Yager, C.J. Hines and R.C. Spear, Exposure to Ethylene Oxide at Work Increases Sister Chromatid Exchanges in Human Peripheral Lymphocytes, *Science* 219:1221–1223, 1983.
37. R.C. Spear and G.M. Hornberger, Control of DO Level in a River Under Uncertainty, *Water Resources Research* 19:1266–1270, 1983.
38. C.J. Hines and R.C. Spear, Estimation of Cumulative Exposures to Ethylene Oxide Associated with Hospital Sterilizer Operations, *Am. Ind. Hyg. Assn. Journal* 45:44–47, January 1984.
39. R.B. Humphries, G.M. Hornberger, R.C. Spear and A.J. McComb, Eutrophication in Peel Inlet: III. A Model for the Nitrogen Scenario and a Retrospective Look at the Preliminary Analyses," *Water Research*, Vol. 18, 389–395, 1984.
40. H.A. Stubbs, J. Harris and R.C. Spear, A Proportionate Mortality Analysis of California Agricultural Workers, 1978–1979, *Am. Journal of Ind. Med.* 6:305–310, 1984.
41. P.S. Babcock, D.M. Auslander, and R.C. Spear, Dynamic Considerations for Control of Closed Life Support Systems, *Advances in Space Research*, 4:263–270, 1984.
42. M. Lotti, E.T. Wei, R.C. Spear, C.E. Becker, Neurotoxic Esterase in Rooster Testis, *Toxicology & Appl. Pharm.* 77:175–180, 1985.
43. R.C. Spear, S. Selvin and M. Francis, The Influence of Averaging Time on the Distribution of Exposure, *Am. Ind. Hyg. Assoc.* Journal 47:365–368, 1986.
44. J.W. Yager, K.L. Cohn, R.C. Spear, J.M. Fisher, and L. Morse, Sister Chromatid Exchange in Peripheral Lymphocytes Before and After Exposure to Formaldehyde Embalming Solution, *Mutation Research* 174:135–139, 1986.
45. W. Spaul, R.C. Spear and J.E. Greenleaf, Thermoregulatory Responses to Heat and Vibration in Men, Aviation, *Space and Environmental Medicine* 57:1082–1087, 1986.
46. R. Fenske, J.T. Leffingwell and R.C. Spear, A Video Imaging Technique for Assessing Dermal Exposure I. Instrument Design & Testing, *Am. Ind. Hyg. Assoc.* Journal 47:764–770, 1987.
47. R. Fenske, S. Wong, J.T. Leffingwell and R.C. Spear, A Video Imaging Technique for Assessing Dermal Exposure II. Fluorescent Tracer Testing, *Am. Ind. Hyg. Assoc.* Journal 47:771–775, 1987.
48. S. Selvin, S.M. Rappaport, R.C. Spear, J. Schulman and M. Francis, A Note on the Assessment of Exposure Using One-Sided Tolerance Limits, *Am. Ind. Hyg. Assoc.* Journal 49:89–93, 1987.
49. R.C. Spear, S. Selvin, J. Schulman and M. Francis, Benzene Exposures in the Petroleum Refining Industry, *Appl. Ind. Hyg.* 2:155–163, 1987.
50. K.T. Bogen and R.C. Spear, Integrating Uncertainty and Inter-Individual Variability in Environmental Risk Assessment, *Risk Analysis*, 7:427–436, 1987.

51. S.M. Rappaport and R.C. Spear, Physiological Damping of Exposure Variability During Brief Periods, *Ann. Occup. Hyg.*, 32:21–33, 1988.
52. M. Francis, S. Selvin, R.C. Spear and S.M. Rappaport, The Effect of Autocorrelation on the Estimation of Worker's Daily Exposure, *Am. Ind. Hyg. Assoc.* Journal, 50:37–43, 1989.
53. S.M. Rappaport, R.C. Spear and S. Selvin, The Influence of Exposure Variability on Dose-Response Relationships, *Ann. Occup. Hyg.*, 32:529–537, 1988.
54. R.C. Spear and S. Selvin, OSHA's Permissible Exposure Limits: Regulatory Compliance Vs. Health Risk, *Risk Analysis*, 9:579–586, 1989.
55. K. Galvin, S. Selvin and R.C. Spear, Variability in Protection Afforded by Half-Mask Respirators Against Styrene in the Field, *Am. Ind. Hyg. Assoc.* J., 51:625–631, 1990
56. Y. Zhao, S. Zhang, S. Selvin and R.C. Spear, A Dose-response Relationship for Noise-Induced Hypertension, *British J. Industrial Med.*, 48:179–184, 1991

    Condensed and reprinted as: Zur Dosis-Wirkungs-Beziehung von arbeitsarmbedingtem Blutochdruck, *Bundesgesundhbl.*, 133–135, March 1992,
57. F. Y. Bois, M. T. Smith and R. C. Spear,. Mechanisms of Benzene Carcinogensis: Application of a Physiological Model of Benzene Pharmacokinetics and Metabolism, *Toxicology Letters*, 56:283–298, 1991
58. F.Y. Bois, T.J. Woodruff and R.C. Spear, Comparison of Three Physiologically Based Pharmacokinetic Models of Benzene Distribution, *Toxicol. Appl. Pharm.*, 110: 79–88, 1991
59. H.K. Xiao, S.P. Levine, W.F. Herget, J.B. D'Arcy, R.C. Spear and T. Pritchett, A Transportable Remote Sensing Infrared Air-Monitoring System, *Am. Ind. Hyg. Assoc.* J., 52; 449–457, 1991
60. R.C. Spear, F. Bois, T. Woodruff, D. Auslander, J. Parker and S. Selvin, Modeling Benzene Pharmaco-kinetics Across Three Sets of Animal Data: Parametric Sensitivity and Risk Implications, *Risk Analysis*, 11; 641–654, 1991
61. M. Nicas, B. Simmons and R.C. Spear, Environmental vs. Analytical Variability in Exposure Measurements, *Am. Ind. Hyg Assoc. J.*, 52; 553–557, 1991
62. M. Nicas and R.C. Spear, A Probability Model for Assessing Exposure Among Respirator Wearers: Part I—Description of the Model, *Am. Ind. Hyg. Assoc.* J., 53; 411–418, 1992
63. M. Nicas and R.C. Spear, A Probability Model for Assessing Exposure Among Respirator Wearers: Part II—Overexposure to Chronic Vs. Acute Toxicants, *Am. Ind. Hyg. Assoc.* J., 53; 419–426, 1992
64. T. Woodruff, F. Bois, D. Auslander and R.C. Spear, Structure and Parameterization of Toxicokinetic Models: Their Impact on Model Predictions, *Risk Analysis*, 12;189–201, 1992
65. M. Yost, H. Xiao, R.C. Spear and S.P. Levine, Comparison Testing of a FTIR Remote Optical Sensor with Area Samples in a Controlled Ventilation Chamber, *Am. Ind. Hyg. Assoc.* J., 53; 611–616, 1992
66. M.G. Yost and R.C. Spear, Measuring Indoor Air Flow Patterns Using a Sonic Vector Anemometer, *Am. Ind. Hyg. Assoc.* J., 53; 677–680, 1992
67. M. Nicas and R.C. Spear, Application of Mathematical Modeling for Ethylene Oxide Exposure Assessment, *Appl. Occup. and Environ. Hygiene*, 7, 744–748, 1992
68. M. Nicas and R.C. Spear, A Task-Based Statistical Model of a Worker's Exposure Distribution: Part I—Description of the Model, *Am. Ind. Hyg. Assoc.* J., 54, 211–220, 1993
69. M. Nicas and R.C. Spear, A Task-Based Statistical Model of a Worker's Exposure Distribution: Part II—Application to Sampling Strategy, *Am. Ind. Hyg. Assoc.* J., 54, 221–227, 1993
70. H. Xiao, S.P. Levine, J. Nowak, M. Puskar and R.C. Spear, Analysis of Organic Vapors in the Workplace by Remote Sensing Fourier Transform Infrared Spectroscopy, *Am. Ind. Hyg. Assoc.* J., 54, 545–556,1993
71. E. Lichtenberg, R.C. Spear and D. Zilberman, The Economics of Re-Entry Regulation of Pesticides, *Am.J. Agricult. Econ.*, 75, 946–958, 1993
72. B.P. Simmons and R.C. Spear, Source Identification for Multiple Chemical Exposures Using Pattern Recognition and Classification Techniques, *Environ. Sci. Technol.*, 27, 2430–2434, 1993
73. Y. Zhao, R. C. Spear and S. Selvin, Investigation of Dose-Response Relationship Between Cumulative Noise Exposure and Hypertensive Prevalence in Female Textile Workers, *Chinese J. Ind. Hyg. and Occ. Disease*, 11, 325–327, 1993, In Chinese
74. M. Malachowski, S.P. Levine, G. Herrin, R.C. Spear, M. Yost and Y. Zhou, Workplace and Environmental Air Contaminant Concentrations Measured by Open Path FTIR Spectroscopy. *J. Air and Waste Mangage. Assn.*, 44, 673–682, 1994

75. K. Watanabe, F. Bois, J. Daisey, D.M. Auslander and R.C. Spear, Benzene Toxicokinetics in Humans; Bone Marrow Exposure to Metabolites, *Occupational and Environmental Medicine*, 51,414–420, 1994
76. H. Li, K. Watanabe, D. Auslander and R.C. Spear, Model Parameter Estimation and Analysis: Understanding Parametric Structure, *Ann. Biomed. Engineering*, 22, 97–111, 1994
77. R.C. Spear, T.M. Grieb and N. Shang, Parameter Uncertainty and Interaction in Complex Environmental Models, *Water Resources Research*, 30, 3159–3169, 1994
78. R.C. Spear and F. Bois, Parameter Variability and the Interpretation of PBPK Modeling Results, *Environ. Health Perspectives*, 102, Supp. 11, 61–66, 1994
79. J. Eisenberg, W.K. Reisen and R.C. Spear, Dynamic Model Comparing the Bionomics of Two Isolated Culex Tarsalis (Diptera culicidae) Populations: Model Development, *J. Med. Entomology*, 32, 83–97, 1995
80. J. Eisenberg, W.K. Reisen and R.C. Spear, Dynamic Model Comparing the Bionomics of Two Isolated Culex Tarsalis (Diptera culicidae) Populations: Sensitivity Analysis, *J. Med. Entomology*, 32, 98–06, 1995
81. Y. Zhao, S. Zhang, S. Selvin and R.C. Spear, An Investigation of the Dose-Response Relationship Between Steady State Noise Exposure and Hyperstension in Working Populations in Beijing, *Occupational Health and Emergency Rescue*, 13(1), 11–13 1995, In Chinese
82. J. Eisenberg, E. Seto, A. Olivieri and R.C. Spear, Quantifying Water Pathogen Risk in an Epidemiological Framework, *Risk Analysis*, 16(4), 549–563, 1996
83. Yi Zhou, Don Maszle, Peng Gong, R.C. Spear and Xueguang Gu, GIS Based Spatial Network Models of Schistosomiasis Infection, *Geographic Info. Sci.*, 2, 51–57, 1996
84. R.C. Spear, Large Simulation Models: Calibration, Uniqueness, and Goodness of Fit, *Environmental Modeling and Software*, 12, 219–228, 1998
85. J.N.S. Eisenberg, E.Y.W. Seto, J.M. Colford, A. Olivieri, and R.C. Spear, An Analysis of the Milwaukee Cryptosporidium Outbreak Based on a Dynamic Model of the Infection Process, *Epidemiology*, 9, 255–263, 1998
86. D.R. Maszle, P.G. Whitehead, R.C. Johnson and R.C. Spear, Hydrological Studies of Schistosomiasis Transport in Sichuan Province, China, *Sci. Total Environ.* 216, 193–203, 1998
87. Y. Zhou, D. Maszle, R.C. Spear, P. Gong, X. Gu, D. Qiu, S. Liang, S. Wen, GIS and Spatial Analysis in Schistosomiasis Transmission and Control in Mountainous Areas, *Chinese J. Schistosomiasis Control,* 11, 263–266, 1999 In Chinese
88. J.D. Wu, D.K. Milton, S.K. Hammond, and R.C. Spear, Hierarchical Cluster Analysis Applied to Workers' Exposures in Fiberglass Insulation Manufacturing, *Ann. of Occup. Hyg.* 43, 43–55, 1999
89. M.G. Yost, R.A. Hashmonay, Y. Zhou, R. Spear, D. Park, and S. Levine, Estimating Maximum Concentrations for Open Path Monitoring Along a Fixed Beam Path, *Air and Waste Manage. Assn. Journal* 49, 424–433, 1999
90. R. Spear, P. Gong, E. Seto, Y..Zhou, B. Xu, D. Maszle, S. Liang, G. Davis and X. Gu, Remote Sensing and GIS for Schistosomiasis Control in Mountainous Areas in Sichuan, China, *Geog. Info. Sci.*, 4, 14–22, 1999
91. T.M. Grieb, N.Shang, R.C. Spear, S.A. Gherini, R.A. Goldstein, Examination of Model Uncertainty and Parameter Interaction in the Global Carbon Cycling Model, *Environ. Intl.*, 25, 787–803, 1999
92. M. Nicas, J. Neuhaus, and R.C. Spear, Risk-Based Selection of Respirators Against Infectious Aerosols: Application to Anthrax Spores, *J. Occup. And Environ. Med.*, 42, 737–748, 2000
93. E. Seto, S. Liang, D. Qiu, X. Gu, and R.C. Spear, A Protocol for Geographically Randomized Snail Surveys in Schistosomiasis Fieldwork Using the Global Positioning System, *Am. J. Trop. Med Hyg.*, 64, 98–99, 2001
94. E. Seto, S. Liang, D. Maszle, P.Gong, D. Qiu, X. Gu. G. Davis, and R.C. Spear, The Use of Remote Sensing for Predictive Modeling of Schistosomiasis in China, *Photo. Engr. and Remote Sensing,* 68,167–174, 2002
95. S. Liang, D.M. Maszle, and R.C. Spear, A Quantitative Framework for a Multi-Group Model of Schistosomiasis japonicum Transmission Dynamics and Control in Sichuan, China, *Acta Tropica,* 82, 263–277, 2002
96. E. Seto, W. Wu, D. Qiu, H. Liu, X. Gu, H. Chen, R.C. Spear, and G.M. Davis, Impact of Soil Chemistry on the Distribution of Ocomelania Hupensis (Gastropoda: Pomatiopsidae) in China, *Malacologia*, 44, 259–272, 2002
97. A. Hubbard, S. Liang, D. Maszle, D. Qiu, X. Gu, and R.C. Spear, Estimating the distribution of worm burden and egg excretion of Schistosoma japonicum by risk group in Sichuan Province, China, *Parasitology*, 125, 221–231, 2002
98. W. Wu, G. Davis, E. Seto, J. Zhang, Z. Hua, J. Guo, Z. Feng, H. Chen, P. Gong, and R.C. Spear, Application of Remote Sensing for Surveillance of Snail Habitats in Poyang Lake, China, *Chinese J. Parisitolgy and Parasitic Disease,* 20, 205–208, 2002

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100. B. Xu, P. Gong, Edmund Seto, and R.C. Spear, Comparison of Gray Level Reduction and Different Texture Spectrum Encoding Methods for Land-Use Classification Using a Panchromatic IKONOS Image, *Photo. Engr. and Remote Sensing*, 69, 529–536, 2003
101. J.A. Soller, A.W. Olivieri, J.Crook, R.C. Cooper, G. Tchobanoglous, R. Parkin, R.C. Spear, and J. Eisenberg, Risk-Based Approach to Evaluate the Public Health Benefit of Additional Wastewater Treatment, *Environ. Sci. and Tech.*, 37, 1882–1891, 2003
102. R. C. Spear, E. Seto, S. Liang, M. Birkner, A. Hubbard, D. Qiu, C. Yang, B. Zong, F. Xu, X. Gu, and G. M. Davis, Factors Influencing the Transmission of Schistosoma Japonicum in the Mountains of Sichuan Province, *Am. J. Trop. Med. Hyg.*, 70(10), 48–56, 2004
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