

## **RÉSUMÉ — THOMAS J. OVERCAMP**

### **PERSONAL DATA**

Department of Environmental Engineering and Earth Sciences  
445B Brackett Hall  
Clemson University  
Clemson, South Carolina 29634-0919  
Phone: (864) 656-0464 FAX: (864) 656-0672 e-mail: [tjvrc@clermson.edu](mailto:tjvrc@clermson.edu)  
<http://wwwdev.clemson.edu/ces/departments/ees/people/facultydirectory/overcamp.html>

### **EDUCATION**

Ph.D., Massachusetts Institute of Technology, 1973, Mechanical Engineering  
Mech. Eng., Massachusetts Institute of Technology, 1971, Mechanical Engineering  
S.M., Massachusetts Institute of Technology, 1970, Mechanical Engineering  
B.S., Michigan State University, 1968, Mechanical Engineering

### **PROFESSIONAL REGISTRATION**

Professional Engineer, South Carolina, 1978, No. 7025 (1978-2018)  
Emeritus Engineer Retired, (2018-)

### **PROFESSIONAL EXPERIENCE**

Clemson University	2007– Professor of Environmental Engineering and Earth Sciences 1997–2007, Professor of Environmental Engineering and Science 1985–1997, Professor of Environmental Systems Engineering 1978–85, Associate Professor of Environmental Systems Engin. 1975–78, Assistant Professor of Environmental Systems Engin.
University of Maryland	1974–1975, Visiting Assistant Professor of Meteorology 1972–1974, Postdoctoral Research Associate, Meteorology

### **MEMBERSHIPS**

Board Certified Environmental Engineer, American Academy of Environmental Engineers, AAEE (1989–2018), Life Inactive (2018–)  
Fellow Member, Air & Waste Management Association, AWMA, (1973–)  
Member, American Meteorological Society, AMS (1975–)  
Life Member, American Society of Mechanical Engineers, ASME (1974–)  
Member, Association of Environmental Engineering and Science Professors, AEESP (1995–)  
Member, Institute of Professional Environmental Practice, IPEP (1994–)  
Member, Carolinas Air Pollution Control Association, CAPCA (1975–)  
Member, Solid Waste Association of North America, SWANA (2000–)

## PROFESSIONAL ACTIVITIES

American Geophysical Union, Member, Committee on Minorities and Women in the Geophysical Sciences, National (1974–1975)

U.S. Department of Transportation, Member, Climatic Impact Assessment Program, Panel on the Perturbed Stratosphere, National (1973–1975)

U.S. Energy Research and Development Administration, Invited Participant, Atmospheric Effects Workshop, National (1976)

American Association for the Advancement of Science, Reviewer, Science, National (1977)

U.S. Department of Energy, Reviewer, Proposals for Graduate Traineeships on Energy, National (1977)

American Meteorological Society, Reviewer, *Journal of Applied Meteorology*, National (1977, 1982, 1988–1989)

American Society of Mechanical Engineers, Reviewer, National Conferences, National (1978, 1992)

U.S. Department of Energy, Reviewer, Proposals for Faculty Development Projects in Energy, National (1978)

Carolinas Air Pollution Control Association, Member, Board of Directors, Regional (1978–1980)

U.S. Environmental Protection Agency, Reviewer, Environmental Science Research Laboratory, National (1981)

Carolinas Air Pollution Control Association, Vice President, Regional (1981)

Air Pollution Control Association, Reviewer, *Journal of the Air Pollution Control Association*, National (1981–1986)

Carolinas Air Pollution Control Association, President, Regional (1982)

Air Pollution Control Association, Secretary, University Education Subcommittee, National (1982–1983)

American Meteorological Society, Reviewer, *Journal of Climate and Applied Meteorology*, National (1983–1985)

Carolinas Air Pollution Control Association, Past-President, Regional (1983)

Air Pollution Control Association, Secretary, Higher Education Division, National (1983–1984)

State of Maryland, Technical Reviewer, Power Plant Siting Program, National (1984)

American Institute of Chemical Engineers, Reviewer, *Environmental Progress*, National (1984)

U.S. Environmental Protection Agency, Environmental Science Research Laboratory, Program Reviewer, National (1984)

Air Pollution Control Association, Chairman, Higher Education Division, National (1984–1987)

Piedmont Alumnus Chapter of the Tau Beta Pi Association, Member, Board of Directors, Local (1985–1986)

Air Pollution Control Association, Acting Chairman, Scholarship Awards Committee, National (1986)

Air & Waste Management Association, Chairman, Education Council, National (1987–1990)

Air & Waste Management Association, Member (*ex officio*), Board of Directors, National (1987–1990)

Air & Waste Management Association, Member, Planning Committee, National (1988–1989, 1992–1993)

Air & Waste Management Association, Member, Critical Review Subcommittee, National (1988–1997, 2002–2010)

American Society of Civil Engineers, Reviewer, *Journal of Environmental Engineering*, National (1989–1990, 1992, 1994–2002, 2008)

National Research Council, Member, Associateship Review Panel, National (1990–1995, 2002, 2005)

U.S. Department of Energy, Member, Fossil Energy Advanced Research Review Panel, National (1990)

Air & Waste Management Association, Chairman, J. Deane Sensenbaugh Award Committee, National (1990–1993)

Air & Waste Management Association, Reviewer, *Journal of the Air & Waste Management Association*, National (1991–2010)

National Research Council, Site Visitor, Associateship Program, National (1991)

Air & Waste Management Association, Member, Ad-Hoc Committee to Evaluate Societies within the Association (1991–1992)

American Academy of Environmental Engineers, Member, Admissions Committee, National (1992–1998, 2000-2006)

Research Council of Canada, Reviewer, International (1992, 1995)

Air & Waste Management Association, Member, Board of Directors, National (1992–1995)

Air & Waste Management Association, Member, Finance Committee, National (1992–1995)

U. S. Environmental Protection Agency, Atmospheric Research and Exposure Assessment Laboratory, Peer Review Panel for Cooperative Agreements to Support and Stimulate Research in Environmental Science, Chairperson, National (1993)

Air & Waste Management Association, Trustee, Scholarship Trustees Committee, National (1993–1996)

Air & Waste Management Association, Chair, Finance Subcommittee, Planning Intelligence Network Committee, National (1993–1994)

Air & Waste Management Association, Judge, Student Poster Contest, National (1994–1998, 2004)

U.S. Department of Energy, Small Business Innovation Research, Reviewer, National (1993)

*Biotechnology and Bioengineering*, Reviewer, National (1993)

*Health Physics*, Reviewer, National (1993–1994)

U.S. Environmental Protection Agency, Air Pollution Training Institute, Reviewer, National (1993)

*Waste Management*, Reviewer, National (1994, 1999)

*Water Research*, Reviewer, National (1995)

*Water Environment Research*, Reviewer, National (1996, 1998, 2016)

Institute for Professional Environmental Practice, Oral Examiner, National (1997-1998)

American Association for Aerosol Research, Reviewer, *Aerosol Science and Technology*, National (1997)

American Ceramic Society, Reviewer, *Ceramic Transactions*, National (1997)

*Advances in Environmental Research*, Reviewer, National (1997, 1999-2000)

*Environmental Technology*, Reviewer, National (1998)

Vice Chair, Western Carolina Chapter, Air & Waste Management Association, Local (1998-1999)

American Academy of Environmental Engineers, Reviewer, National (1998)

National Association for Environmental Management, Reviewer for Environmental Excellence Awards Program, National (1998)

American Academy of Environmental Engineers, Taskforce to Review the Air Pollution Research and Compliance Issues for the Department of Defense, National (1998-1999)

Chair, Western Carolina Chapter, Air & Waste Management Association, Local (1999-2000, 2001-2003)

U.S. Environmental Protection Agency, Exploratory Environmental Engineering Peer Review Committee, National (1999)

*Journal of Hazardous Materials*, Reviewer, National (1999, 2006)

American Academy of Environmental Engineers, Air Pollution Control Sub-Committee, National (1999-2002)

U.S. Environmental Protection Agency, Fellowship Review Panel, National (2000-2002, 2005-2008, 2010)

U.S. Environmental Protection Agency, Small Business Innovation Research Panel, National (2000-2004, 2006, 2007)

U.S. Environmental Protection Agency, Small Business Innovation Research Panel, Phase II, National (2007, 2008, 2010)

Strategic Environmental Research and Development Program, Peer Reviewer, National (2000)

*Environmental Hazards*, Reviewer, National (2001)

U.S. National Science Foundation, Research Proposal Reviewer, National (2001, 2003, 2005)

U.S. National Science Foundation, Research Proposal Panel Reviewer, Environmental Engineering, National (2001, 2005, 2006, 2007, 2009)

*Journal of Wind Engineering and Industrial Aerodynamics*, Reviewer, National (2002)

American Academy of Environmental Engineers, Deputy Chair, Admissions Committee, National (2002-2006)

U.S. Environmental Protection Agency, Science Advisory Board, Panel to Review the Air Toxics Research Strategy/Multi-Year Plan, National (2003)

Air & Waste Management Association, Associate Editor, *Journal of the Air & Waste Management Association*, National (2004-2013)

American Academy of Environmental Engineers, Ad-hoc Working Group on Membership and Admissions, National (2004)

U.S. Civilian Research and Development Foundation, Proposal Reviewer, National (2004, 2007)

Association of Environmental Engineering and Science Professors, Lecturer Committee (2005-2009)

*Chemosphere*, Reviewer, National (2005)

*Fuel*, Reviewer, National (2005)

*Environmental Engineering Science*, Reviewer, National (2005-2007)

National Academies, 2006 Jefferson Science Fellowships, National (2006)

*Environmental Science & Technology*, Reviewer, National (2006, 2009)

*Experiments in Fluids*, Reviewer, National (2006)

Proposal review, Alberta Ingenuity, International, 2008.

*Industrial & Engineering Chemistry Research*, Reviewer, National, (2008, 2017).

*Journal of Zhejiang University-SCIENCE A*, Reviewer, International (2009)

University of the West Indies, External thesis reviewer, International (2010)

## **PUBLICATIONS**

### **REFEREED PUBLICATIONS**

Schoenhals, R. J., and Overcamp, T. J., "Pressure Distribution and Bubble Formation Induced by Longitudinal Vibration of a Flexible Liquid-Filled Cylinder," *Journal of Basic Engineering*, **89** (4): 737-747 (Dec., 1967).

- Overcamp, T. J., and Hoult, D. P., "Precipitation in the Wake of Cooling Towers," *Atmospheric Environment*, **5** (9): 751–765 (Sept., 1971).
- Overcamp, T. J., and Fay, J. A., "Dispersion and Subsidence of the Exhaust of a Supersonic Transport in the Stratosphere," *Journal of Aircraft*, **10** (12): 720–728 (Dec., 1973).
- Overcamp, T. J., "A General Gaussian Diffusion-Deposition Model for Elevated Point Sources," *Journal of Applied Meteorology*, **15** (11): 1167–1171 (Nov., 1976).
- Israel, G. W., Overcamp, T. J., and Pringle, W. J. B., "A Method to Measure Drift Deposition from Saline Natural Draft Cooling Towers," *Atmospheric Environment*, **11** (2): 123–130 (Feb., 1977).
- Overcamp, T. J., and Israel, G. W., "A Sensitivity Analysis of a Salt Deposition Model for Natural Draft Cooling Towers," *Atmospheric Environment*, **13** (1): 61–69 (Jan., 1979).
- Cooper, C. D., Alley, F. C., and Overcamp, T. J., "Hydrocarbon Vapor Incineration Kinetics," *Environmental Progress*, **1** (2): 129–132 (May, 1982).
- Overcamp, T. J., "A Statistical Plume Model with First-Order Decay," *Journal of Applied Meteorology*, **21** (11): 1589–1593 (Nov., 1982).
- Overcamp, T. J., and Fjeld, R. A., "An Exact Solution to the Gaussian Cloud Approximation for Gamma Dose Due to a Ground-Level Release," *Health Physics*, **44** (4): 367–372 (Apr., 1983).
- Overcamp, T. J., "A Surface-Corrected Gaussian Model for Elevated Sources," *Journal of Climate and Applied Meteorology*, **22** (6): 1111–1115 (June, 1983).
- Overcamp, T. J., and Bowen, S. R., "Effect of Throat Length and Diffuser Angle on Pressure Loss across a Venturi Scrubber," *Journal of the Air Pollution Control Association*, **33** (6): 600–604 (June, 1983).
- Fjeld, R. A., and Overcamp, T. J., "Electrically Enhanced Deposition of a Confined Aerosol in the Presence of Ionizing Radiation," *Nuclear Technology*, **65** (3): 402–408 (June, 1984).
- Nie, Y. F., Overcamp, T. J., and Fjeld, R. A., "An Approximate Method for Estimating the Short-Term, Centerline, Gamma Absorbed Dose Due to a Continuous Ground-Level Release," *Health Physics*, **49** (1): 100–105 (July, 1985).
- Overcamp, T. J., "Filtration by Randomly Distributed Fibers," *Journal of Aerosol Science*, **16** (5): 473–475 (Oct., 1985).

- Overcamp, T. J., "A Theory for Critical Flow through Hypodermic Needles," *Environmental Science & Technology*, **19** (11): 1134–1136 (Nov., 1985).
- Overcamp, T. J., and Ku, T., "Effect of a Virtual Origin Correction on Entrainment Coefficients as Determined from Observations of Plume Rise," *Atmospheric Environment*, **20** (2): 293–300 (Feb., 1986).
- Overcamp, T. J., and Fjeld, R. A., "A Simple Approximation for Estimating Centerline Gamma Absorbed Dose Rates Due to a Continuous Gaussian Plume," *Health Physics*, **53** (2): 143–146 (Aug., 1987). *Errata*: **56** (6): 974 (June, 1989).
- Overcamp, T. J., and Ku, T., "Plume Rise from Two or More Adjacent Stacks," *Atmospheric Environment*, **22** (4): 625–637 (Apr., 1988).
- Schwarz, S., Overcamp, T. J., and Keinath, T. M., "Determination of the Ignition Temperatures of Sewage Sludge," *Environmental Technology Letters*, **10** (7): 629–632 (July, 1989).
- Schwarz, S., Overcamp, T. J., and Keinath, T. M., "An Economic Evaluation of Indirect Sludge Drying Prior to Incineration," *Research Journal, Water Pollution Control Federation*, **62** (3): 275–281 (May/June, 1990).
- Golla, P. S., and Overcamp, T. J., "Simple Solutions for Steady-State Biofilm Reactors," *Journal of Environmental Engineering*, **116** (5): 828–835 (Sept./Oct., 1990).
- Overcamp, T. J., "Diffusion Models for Transient Releases," *Journal of Applied Meteorology*, **29** (12): 1307–1312 (Dec., 1990).
- Overcamp, T. J., "Modeling Gamma Absorbed Dose due to Meandering Plumes," *Health Physics*, **61** (1): 111–115 (July, 1991).
- Overcamp, T. J., Chang, H.-c., and Grady, C. P. L., Jr., "An Integrated Theory for Suspended Growth Bioscrubber," *Journal of the Air & Waste Management Association*, **43** (5): 753–759 (May, 1993).
- Overcamp, T. J., and Scarlett, S. E., "Effect of Reynolds Number on the Stokes Number of Cyclones," *Aerosol Science & Technology*, **19** (3): 362–370 (Oct., 1993).
- Chong, H. G., and Overcamp, T. J., "Effects of the Diffuser and of Particle Interception on the Penetration of a Venturi Scrubber," *Environmental Technology*, **17** (1): 107–111 (Jan., 1996).
- Ockeloen, H. F., Overcamp, T. J., and Grady, C. P. L., Jr., "Modeling of Fixed-Film Bioscrubbers for the Control of Volatile Organic Compounds," *Journal of Environmental Engineering*, **122** (3): 191–197 (Mar., 1996).



- Hartz, M. J., and Overcamp, T. J., "The Geometry of Nonwetting Liquids in the Unsaturated Zone," *Ground Water*, **34** (5): 837-841 (Sept.-Oct., 1996).
- Resce, J. L., Ragsdale, R. G., and Overcamp, T. J., "Vitrification of an Incinerator Blowdown Waste Containing Both Chloride Salts and Carbon," *Journal of Environmental Science and Health*, **A31** (9): 2381-2393 (Sept., 1996).
- Sharma, M. and T. J. Overcamp, "Vaporization of Volatile Liquids Spilled on Sands," *Environmental Progress*, **15** (4): 229-233 (Winter, 1996).
- Sargent, T. N., Jr., Overcamp, T. J., Bickford, D. F., and Cicero-Herman, C. A., "Vitrification of Cesium-Laden Organic Ion-Exchange Resin in a Stirred Melter," *Nuclear Technology*, **123** (1): 60-66 (July, 1998).
- Overcamp, T. J., and Mantha, S. V., "A Simple Method for Estimating Cyclone Efficiency," *Environmental Progress*, **17** (2): 77-79 (Summer, 1998).
- DeHollander, G. R., Overcamp, T. J., and Grady, C. P. L., Jr., "Performance of a Suspended-Growth Bioscrubber for the Control of Methanol," *Journal of the Air & Waste Management Association*, **48** (9): 872-876 (Sept., 1998).
- Boley, T. M., and Overcamp, T. J., "Displacement of Nonwetting Liquids from Unsaturated Sands by Water Infiltration," *Ground Water*, **36** (5): 810-814 (Sept.-Oct., 1998).
- Overcamp, T. J., "Modeling Oxidizing Scrubbers for Odor Control," *Environmental Science & Technology*, **33** (1): 155-156 (Jan. 1, 1999).
- Overcamp, T. J., Harden, J. M., Cicero-Herman, C. A., and Bickford, D. F., "Metal Emissions from Joule-Heated Vitrification Systems," *Journal of the Air & Waste Management Association*, **49** (2): 219-224 (Feb., 1999).
- Overcamp, T. J., Hoffman, B. L., Striebig, B. A., Watts, F., "Volatility of Arsenic and Lead from Simulated Incinerator Slags," *Environmental Engineering Science*, **16** (2): 157-164 (Mar./Apr., 1999).
- Hammervold, R.E., Overcamp, T.J., Grady, C.P.L., Jr., and Smets, B.F., "A Sorptive Slurry Bioscrubber for the Control of Acetone," *Journal of the Air & Waste Management Association*, **50** (6): 954-960 (June, 2000).
- Gray, D. B., Overcamp, T. J., and Watts, F., "Volatility of Arsenic in Contaminated Clay at High Temperatures," *Environmental Engineering Science*, **18** (1): 1-7 (Jan./Feb., 2001).
- Overcamp, T. J., "A Review of the Conditions Leading to Downwash in Physical Modeling Experiments," *Atmospheric Environment*, **35** (20): 3503-3508 (July, 2001).

Myers, E. B., and Overcamp, T. J., "Hydrogen Peroxide Scrubber for the Control of Nitrogen Oxide," *Environmental Engineering Science*, **19** (5): 329-335 (May, 2002)

Overcamp, T. J., Speer, M. P., Griner, S. J., and Cash, D. M. "Gaseous and Particulate Emissions from a DC Arc Melter," *Journal of the Air & Waste Management Association*, **53** (1): 13-20 (Jan., 2003).

Overcamp, T.J., "Plume Rise in a Shear Layer with Neutral Conditions," *Journal of the Air & Waste Management Association*, **55** (5): 669-676 (May, 2005).

Overcamp, T. J., "Type II Settling Data Analysis," *Journal of Environmental Engineering*, **132** (1): 137-140, (Jan, 2006).

Imboden, S. F., and Overcamp, T. J., "Chronic Dose Due to a Continuous Tritium Release Calculated by CAP88-PC and NORMTRI," *Nuclear Technology*, **155** (1): 114-118 (July, 2006).

Overcamp, T. J., "Solutions to the Gaussian Cloud Approximation for Gamma Absorbed Dose," *Health Physics Journal*, **92**(1): 78-81 (Jan., 2007).

Overcamp, T. J., "Stable Plume Rise in a Shear Layer," *Journal of the Air & Waste Management Association*, **57** (3): 328-331 (Mar., 2007).

Overcamp, T.J., "Energy Absorption Buildup and Energy Conservation," *Journal of Nuclear Science and Technology*, **46** (5): 479-483, (May, 2009).

Bridhikitti, A., and Overcamp, T.J., "Optical Characteristics of the Southeast Asia's Regional Aerosols and Their Sources," *Journal of the Air & Waste Management Association*, **61** (7): 747-754, (July, 2011).

Bridhikitti, A., and Overcamp, T. J. "Estimation of SE Asian Rice Paddy Areas with Different Ecosystems from Moderate-Resolution Satellite Imageries," *Agriculture, Ecosystems, and Environment*, **146** (1): 113-120 (January, 2012).

Overcamp, T. J., "An Exact Solution for the Ground-Level Gamma Dose Rate from a Spherical Gaussian Puff," *Health Physics Journal*, 111(5), 403-409, 2016.

#### **CONFERENCE PROCEEDINGS (REVIEWED)**

Overcamp, T. J., and Taylor, D. E., "Calibration of a High Volume Rectangular-Jet Virtual Impactor," *Aerosols in the Mining and Industrial Work Environment*, Vol. 3 — Instrumentation, The Proceedings of the International Symposium, Minneapolis, MN, Nov. 1–6, 1981, (V. A. Marple and B. Y. H. Liu, eds.), Ann Arbor Science, Ann Arbor, MI, pp. 961–969, 1983.

Overcamp, T. J., Agrawal, A. K., Chang, W.-S., and Yang, T.-t., "Calculations of Fuel NO<sub>x</sub> Formation in a Gas Turbine Combustor," 36<sup>th</sup> International Gas Turbine and Aeroengine Congress, Paper 91-GT-361, Orlando, FL, June, 1991.

#### CONFERENCE PROCEEDINGS (UNREVIEWED)

Schoenhals, R. J., and Overcamp, T. J., "Pressure Distribution and Bubble Formation Induced by Longitudinal Vibration of a Flexible Liquid-Filled Cylinder," ASME Fluids Engineering Conference and Fluidics Symposium, Paper No. 67-FE-1, Chicago, IL, May 8–11, 1967, 11 pp.

Overcamp, T. J., and Fay, J. A., "Dispersion of SST Trails in the Stratosphere," AIAA 5<sup>th</sup> Fluid and Plasma Dynamics Conference, Paper No. 72-650, Boston, MA, June 26–28, 1972, 6 pp.

Israel, G. W., and Overcamp, T. J., "Meteorological Aspects of the Chalk Point Cooling Tower Project," Proceedings of the Symposium on the Chalk Point Cooling Tower Project, College Park, MD, March, 1973, Water Resources Research Center, University of Maryland, pp. 3–22, 1973.

Israel, G. W., and Overcamp, T. J., "A Model for Salt Deposition from Natural Draft Cooling Towers," *Cooling Tower Environment — 1974*, The Proceedings of a Symposium, College Park, MD, March 4–6, 1974, (S. R. Hanna and J. Pell, eds.), U.S. Energy Research and Development Administration Symposium Series, CONF-740302, National Technical Information Service, Springfield, VA, pp. 614–628, 1975.

Overcamp, T. J., and Israel, G. W., "Salt Deposition from Cooling Towers," 67<sup>th</sup> Annual Meeting of the Air Pollution Control Association, Paper No. 74-75, Denver, CO, June 9–13, 1974, 27 pp.

Overcamp, T. J., Israel, G. W., and Pringle, W. J. B., "Drift Deposition Measurements from a Brackish-Water Natural Draft Cooling Tower," Proceedings of the Third Symposium on Atmospheric Turbulence, Diffusion and Air Quality, Raleigh, NC, October 17–19, 1976, American Meteorological Society, Boston, MA, pp. 586–592, 1976.

Overcamp, T. J., "Sensitivity Analysis and Comparison of Salt Deposition Models for Cooling Towers," Conference on Waste Heat Management and Utilization, Miami Beach, FL, May 9–11, 1977. In *Waste Heat Management and Utilization*, (S. S. Lee and S. Senguptu, eds.), Hemisphere Publishing Corp., Washington, D.C., v. III, pp. 1959–1975, 1979.

Overcamp, T. J., and Tompkins, D. M., "A Field Study of the Deposition of Salt Water Droplets," *Cooling Tower Environment — 1978*, The Proceedings of a Symposium on the Environmental Effects of Cooling Tower Emissions, College Park, MD, May 2–4, 1978, (R. L. Green, ed.), PB-284 204, National Technical Information Service, Springfield, VA, pp. 151–166, 1978.

Overcamp, T. J., and Ku, T.-C., "A Wind Tunnel Study of Plume Rise from Two Stacks," Proceedings of the Second Joint AMS/APCA Conference on Air Pollution Meteorology, New Orleans, LA, March 24–27, 1980, American Meteorological Society, Boston, MA, pp. 108–115, 1980.

Overcamp, T. J., "A Statistical Plume Model with First Order Decay," Proceedings of the Second Joint AMS/APCA Conference on Air Pollution Meteorology, New Orleans, LA, March 24–27, 1980, American Meteorological Society, Boston, MA, pp. 446–449, 1980.

Overcamp, T. J., and Bowen, S. R., "Effect of Throat Length on Pressure Loss in a Venturi Scrubber," 73<sup>rd</sup> Annual Meeting of the Air Pollution Control Association, Paper No. 80–31.2, Montreal, Que., June 22–27, 1980, 15 pp.

Overcamp, T. J., "A Comparison Between Surface-Corrected and Surface-Depletion Models for Estimating Deposition of Pollutants," Proceedings of the Symposium on Intermediate Range Atmospheric Transport Processes and Technology Assessment, Gatlinburg, TN, October 1–3, 1980, U.S. Department of Energy Symposium Series, CONF-801064, National Technical Information Service, Springfield, VA, pp. 281288, 1981.

Overcamp, T. J., "A Surface-Corrected Gaussian Model for Elevated Sources," Proceedings of the Third Joint AMS/APCA Conference on Application of Air Pollution Meteorology, San Antonio, TX, January 11–15, 1982, American Meteorological Society, Boston, MA, pp. 90–93, 1981.

Overcamp, T. J., and Fjeld, R. A., "An Exact Solution of Gamma Dose from a Ground-Level Plume," Proceedings of the Third Joint AMS/APCA Conference on Application of Air Pollution Meteorology, San Antonio, TX, January 11–15, 1982, American Meteorological Society, Boston, MA, pp. 94–97, 1981.

Overcamp, T. J., "An Analysis of Field Data on Plume Rise from Two or More Stacks," Proceedings of the Third Joint AMS/APCA Conference on Application of Air Pollution Meteorology, San Antonio, TX, January 11–15, 1982, American Meteorological Society, Boston, MA, pp. 204–207, 1981.

Cooper, C. D., Alley, F. C., and Overcamp, T. J., "A General Model for Predicting Hydrocarbon Vapor Incineration Kinetics in an Afterburner," AIChE Annual Meeting, Paper 126B, New Orleans, LA, Nov. 8–12, 1981, 14 pp.

Overcamp, T. J., and Ku, T.-C., "Effect of Stack Diameter in Plume Modeling Experiments," 75<sup>th</sup> Annual Meeting of the Air Pollution Control Association, Paper No. 82-43.6, New Orleans, LA, June 20–25, 1982, 2 pp.

Overcamp, T. J., "Interaction of Line Thermal Pairs," Proceedings of the Sixth Symposium on Turbulence and Diffusion, Boston, MA, March 22–25, 1983, American Meteorological Society, Boston, MA, pp. 337–340, 1983.

Overcamp, T. J., "Guidelines for Stack Downwash in Plume Modeling Experiments," 76<sup>th</sup> Annual Meeting of the Air Pollution Control Association Annual Meeting, Paper 83-36.3, Atlanta, GA, June 19–24, 1983, 10 pp.

Ku, T., and Overcamp, T. J. "An Experimental Study of Spray Dry SO<sub>2</sub> Scrubbing," 77<sup>th</sup> Annual Meeting of the Air Pollution Control Association, Paper 84-98.8, San Francisco, CA, June 24–29, 1984, 16 pp.

Overcamp, T. J., "Modeling Gamma Absorbed Dose Due to Meandering Plumes," Proceedings of the Fifth Joint AMS/APCA Conference on Applications of Air Pollution Meteorology, Chapel Hill, NC, November 18–21, 1986, American Meteorological Society, Boston, MA, pp. 137–140, 1986.

Overcamp, T. J., "Atmospheric Diffusion Models for Short-Term Releases," Proceedings of the Eighth Symposium on Turbulence and Diffusion, San Diego, CA, April 26–29, 1988, American Meteorological Society, Boston, MA, pp. 256-259, 1988.

Overcamp, T. J., "Simple Diffusion Models for Short-Term Releases," 81<sup>st</sup> Annual Meeting of the Air Pollution Control Association, Paper 88-49.2, Dallas, TX, June 20–24, 1988, 12 pp.

Chong, H. G., and Overcamp, T. J., "Modeling Collection Efficiency in Venturi Scrubbers," 83<sup>rd</sup> Annual Meeting of the Air & Waste Management Association, Paper 90-101.3, Pittsburgh, PA, June 24–29, 1990, 13 pp.

Brown, S. M., and Overcamp, T. J., "A Simple Model for Cadmium Uptake for Crops," Purdue Industrial Waste Conference, 46<sup>th</sup> *Purdue Industrial Waste Conference Proceedings*, A conference held at Purdue University, West Lafayette, IN, May, 1991, Lewis Publishers, Chelsea, MI, 1992, pp. 379–384.

Overcamp, T. J., DeHollander, G. R., Chang, H.-c., and Grady, C. P. L., Jr., "A Biologically-Enhanced Scrubber for Volatile Organic Compounds," 84<sup>th</sup> Annual Meeting of the Air & Waste Management Association, Paper 91-180.12, Vancouver, BC, June 16–21, 1991, 17 pp.

Overcamp, T. J., and Scarlett, S. E., "Effect of Reynolds Number on the Collection Efficiency of Tangential-Entry Cyclones," 85<sup>th</sup> Annual Meeting of the Air & Waste Management Association, Paper 92-180.30P, Kansas City, MO, June 21–26, 1992.

Ockeloen, H. F., Overcamp, T. J., and Grady, C. P. L., Jr., "Modeling of Fixed Film Bioscrubbers for the Control of Volatile Organic Compounds," 85<sup>th</sup> Annual Meeting of the Air & Waste Management Association, Paper 92–116.05, Kansas City, MO, June 21–26, 1992.

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Overcamp, T. J., "Modeling Gamma Dose from Radioactive Plumes," Savannah River Laboratory, Aiken, SC, February 10, 1987.

Overcamp, T. J., "Hazardous Wastes in the Textile Industry," American Textile Managerial Engineers Society, Gatlinburg, TN, October 2, 1988.

Overcamp, T. J. and Scarlett, S. E., "A Dimensional Analysis of Cyclone Performance Data," Seventh Annual Meeting of the American Association for Aerosol Research, Chapel Hill, NC, October 10–14, 1988.

Overcamp, T. J., "Innovative Sludge Drying," Water and Pollution Control Association of South Carolina Fall Conference, Greenville, SC, November 1–2, 1988.

Overcamp, T. J., "Insights on the Future of Solid Waste Management," Carolinas Air Pollution Control Association, Myrtle Beach, SC, October 25–27, 1989.

Snider, E. H., Overcamp, T. J., McAnally, A. S., Smith, R. L., Jr., and Kahn, J., "Industry-Specific Strategies for Hazardous Waste Reduction: Preliminary Findings and Research Needs," The 1990 Joint Conference on Hazardous Waste Reduction, South Carolina Universities Research and Education Foundation, Columbia, SC, September 25–26, 1990.

Overcamp, T. J., "Incineration of Hazardous Waste," The 1990 Joint Conference on Hazardous Waste Reduction, South Carolina Universities Research and Education Foundation, Columbia, SC, September 25–26, 1990.

Overcamp, T. J., "Solid and Hazardous Waste Incineration," Ninth Carolina Regional Conference on Issues in Environmental Law and Technology, Greenville, SC, June 24–26, 1991.

Overcamp, T. J., "Getting Rid of What We Can't Eliminate: Issues in Incineration—Metal Emissions from Hazardous Waste Incineration," The 1991 Joint Conference on Hazardous Waste Reduction, Columbia, SC, September 19, 1991.

Brosnan, D. A., and Overcamp, T. J., "Molten Salt Equilibria in Incinerator Slags," Control of Metal Emissions from Waste Combustion, ASME Committee on Incineration, Cincinnati, OH, November 7–8, 1991.



Overcamp, T. J., and Watts, F., "Emission and Control of Heavy Metals from Hazardous Waste Incinerators," 1992 Joint Conference on Hazardous Waste Reduction, Columbia, SC, October 20, 1992.

Hewlett, K. J., Bennert, D. M., Overcamp, T. J., and Bickford, D. F., "Vitrification Demonstration of ORNL Mixed Wastewater Treatment Sludge," American Institute of Chemical Engineers, Denver, CO, August 14–18, 1994.

Resce, J. L., Ragsdale, R. G., Overcamp, T. J., Jurgenson, A., and Bickford, D. F., "XRF in Waste Glass Analysis and Vitrification Process Control, Part 2: Comparison with Conventional Wet Chemical Analysis," Pittcon '95, New Orleans, LA, March 6–9, 1995.

Wilson, R. A., Overcamp, T. J., Bennert, D. M., Bickford, D. F., and Cicero, C. A., "Pilot-Scale Vitrification Demonstration of Rocky Flats Plant Mixed Waste Sludge," 97th Annual Meeting of the American Ceramic Society, Cincinnati, OH, April 30 – May 3, 1995.

Hewlett, K. J., Overcamp, T. J., Bennert, D. M., Bickford, D. F., and Cicero, C. A., "Vitrification of West End Treatment Facility Mixed Waste Sludge," 97th Annual Meeting of the American Ceramic Society, Cincinnati, OH, April 30 – May 3, 1995.

Resce, J. L., Ragsdale, R. G., Overcamp, T. J., Bickford, D. F., and Cicero, C. A., "Compositional Factors Affecting the Chemical Durability of Vitrified Wastewater Treatment Sludges," 97th Annual Meeting of the American Ceramic Society, Cincinnati, OH, April 30 – May 3, 1995.

Resce, J. L., Overcamp, T. J., Jurgenson, A., and Bickford, D. F., "The Elemental Analysis of Environmental Waste Glass Analysis and Melter Feed with XRF," Emerging Technologies in Hazardous Waste Management Conference, Atlanta, GA, September 17–20, 1995.

Resce, J. L., Overcamp, T. J., Cicero, C. A., and Bickford, D. F., "The Effect of Compositional Parameters on the TCLP and PCT Durability of Environmental Glasses," Emerging Technologies in Hazardous Waste Management Conference, Atlanta, GA, September 17–20, 1995.

Overcamp, T. J., DeHollander, G. R., and Grady, C. P. L., Jr., "Performance of a Suspended-Growth Bioscrubber for the Control of Methanol, South Carolina Environmental Conference, Myrtle Beach, SC, March 15-16, 1999.

## **HONORS AND AWARDS**

Phi Eta Sigma (1965)  
Pi Tau Sigma (1966)  
Tau Beta Pi (1966)  
Phi Kappa Phi (1967)  
Sigma Xi (1973)

National Science Foundation Graduate Fellow (1968–1972)  
American Men and Women of Science, 14<sup>th</sup>–23<sup>th</sup> Editions  
Lyman A. Ripperton Award, Air & Waste Management Association (1992)  
Provost’s Award for Scholarly Achievement, Clemson University (1995)  
Board of Trustees’ Award for Faculty Excellence, Clemson University (1995, 1996)  
Fellow Member, Air & Waste Management Association (1996)  
Outstanding Associate Editor Award, *Journal of the Air & Waste Management Association* (2009)

## **SPONSORED RESEARCH**

“Measurements of Multiple Plume Rise,” Faculty Research Committee, 1976, \$1,635.

“Plume Rise from Multiple Stacks,” Power Plant Siting Program, State of Maryland, Principal Investigator, 1977–1982, , \$32,000.

“Atmospheric Particulate Matter in Lakes: Reactivity and Impact on Water Quality,” South Carolina Water Resources Research Institute, Clemson University, Co-Principal Investigator, 1979-1981, \$30,694.

“Solar and Longwave Radiation Climatology at the Savannah River National Environmental Research Park,” E. I. du Pont de Nemours, Inc., Principal Investigator, 1979–1983, \$7,400.

“Method of Utilization and Disposal of Baghouse Dust,” Georgetown Steel Corporation, Co-Principal Investigator, 1980, \$32,829.

“Alternative Energy, Low-Temperature Sludge Drying,” Argonne National Laboratory, Co-Investigator, 1984–1988, \$177,815.

“Verification of Contaminant Transport Computer Modeling for Savannah River Plant Waste Sites,” E. I. du Pont de Nemours, Inc., Co-Investigator, 1985–1986, \$30,396.

“Sensitivity Analysis of Contaminant Transport and Human Health Risk Assessment Methodologies,” E. I. du Pont de Nemours, Inc., Co-Investigator, 1985–1986, \$89,913.

“Ethylene Biological Oxidation Reactor,” Air Force Astronautics Laboratory, Principal Investigator, 1987–1988, \$10,000.

“Fate of Spills of Volatile Hydrocarbons: Downward Transport vs. Volatilization,” South Carolina Water Resources Research Institute, Clemson University, Principal Investigator, 1988–1990, \$90,639.

“Biological Scrubber for Air Pollutants,” Provost Research Award, 1989, \$2,000.

“Evaluating and Defining the Uncertainty in Environmental Transport Models Used for SRP Waste Sites,” Savannah River Laboratory, Co-Investigator, 1988–1989, \$50,557.

“Nonhazardous Solid Waste Management,” U.S. Army Construction Engineering Laboratory, Principal Investigator, 1989, \$52,205.

“Waste Minimization Surveys for South Carolina Industries,” Hazardous Waste Management Research Fund, South Carolina Universities Research and Education Foundation, Co-Principal Investigator, 1990, \$48,400.

“Issues in Hazardous Waste Incineration,” Hazardous Waste Management Research Fund, South Carolina Universities Research and Education Foundation, Principal Investigator, 1990, \$7,000.

“Emissions of Heavy Metals from Hazardous Waste Incinerators,” Hazardous Waste Management Research Fund, South Carolina Universities Research and Education Foundation, Principal Investigator, 1990–1993, \$348,340.

“Establishment of a DOE/Industrial Center for Vitrification Research,” Westinghouse Savannah River Company, Principal Investigator, 1992–1994, \$435,417.

“Demonstration of Vitrification on Surrogate Wasteforms in Support of DOE Process-Based Delisting Petitions,” Westinghouse Savannah River Company, Principal Investigator, 1993–1995, \$1,873,742.

“Benchtop Vitrification Studies,” EnVitCo, Inc., Principal Investigator, 1993, \$5000.

“Development of an Innovative Bioscrubber for Volatile Compounds: Phase I,” U.S. Army Construction Engineering Laboratory, Principal Investigator, 1993–1994, \$20,341.

“Development of an Innovative Bioscrubber for Volatile Compounds: Phase II — Construction,” U.S. Army Construction Engineering Laboratory, Principal Investigator, 1994, \$24,029.

“Demonstration of the EnVitCo Melter for Vitrification of a High-Sodium Content Low-Level Radioactive Liquid Waste,” EnVitCo, Inc., Principal Investigator, 1994, \$371,047.

“Innovative Bioscrubber Technology Development — Phase I,” U.S. Army Construction Engineering Laboratory, Principal Investigator, 1994, \$24,169.

“Demonstration and Evaluation of Stir Melter for Vitrification of Surrogate High-Level Waste,” Battelle-Pacific Northwest Laboratory, Principal Investigator, 1994-1995, \$13,884.

“Innovative Bioscrubber Technology Development,” U.S. Army Construction Engineering Laboratory, Principal Investigator, 1995, \$24,169.

“Checkout of the Transportable Vitrification System,” Westinghouse Savannah River Company, Principal Investigator, 1995–1996, \$804,056.

“High-Temperature Vitrification Formulation Demonstration for SRS Contaminated Soils,” Westinghouse Savannah River Company, Principal Investigator, 1995-1996, \$62,689.

“Off-Gas System for Contained Arc Melter,” Westinghouse Savannah River Company, 1996, Principal Investigator, \$49,962.

“Batch Preparation and Off-Gas Analysis for Stirred-Melter Vitrification Trials of Surrogate Plutonium Ash Waste,” Westinghouse Savannah River Company, Principal Investigator, 1996, \$9,578.

“Treatability Studies with CMP Pit Wastes,” Westinghouse Savannah River Company, Principal Investigator, 1996, \$29,295.

“Pilot-Scale Tests in Support of the Transportable Vitrification System,” Westinghouse Savannah River Company, Principal Investigator, 1996, \$379,321.

“Vitrification of Thermochem Surrogate Wastes,” Thermochem, Inc., Principal Investigator, 1996-1997, \$71,876.

“Offgas Sampling for Non-Radioactive Demonstration of *in situ* Plasma Vitrification at the Savannah River Site,” Westinghouse Savannah River Company, Principal Investigator, 1996-1997, \$10,467.

“Used Energy Related Laboratory Equipment,” Principal Investigator, U. S. Department of Energy, \$230,394, 1997.

“Demonstration in the EPI DC Arc Melter, Investigator, Svedala Industries, \$10,959, 1998.

“EV-16 Demonstration in Support of Fernald Silos 1 & 2,” Investigator, Envitco, \$30,002, 1998.

“Material Substitution Guide: Development of a User Friendly Handbook,” Hazardous Waste Management Research Fund, South Carolina Universities Research and Education Foundation, Principal Investigator, \$10,000, 2001.

“CAP88 Benchmarking and Verification, Savannah River National Laboratory, Co-Investigator, \$13,212, 2007.

## **OTHER SPONSORED ACTIVITY**

“Graduate Traineeship Program in the Environmental Effects of Energy Production,” U.S. Energy Research and Development Administration, Program Director, \$14,000, 1977–1978.

“Graduate Air Pollution Traineeships,” U.S. Environmental Protection Agency, Program Director, \$14,000, 1978–1979.

“Small Quantity Generators Seminars and Workshops,” U.S. Environmental Protection Agency, Program Director, \$65,000, 1986–1987.

“Continuing Education in Vitrification Operations,” EnVitCo, Inc., \$5,000, 1995.

“Graduate Course at the Savannah River Site,” U.S. Department of Energy, \$14,000, 1999.

## **GRADUATE STUDENT ADVISING**

### **DOCTORAL GRADUATES**

Ku, T., “Mechanisms and Modeling of Spray Dry SO<sub>2</sub> Absorption,” 1983

Bridhikitti, A., “Applications of moderate-resolution remote sensing technologies for surface air pollution monitoring in Southeast Asia,” 2011.

### **MASTER’S GRADUATES**

Culler, W. W., “Atmospheric Sulfate Concentrations in Three Coastal South Carolina Cities,” 1976 (MEngr)

Hardwick, N. L., “Design of a Wind Tunnel for Measurement of Plume Rise from Two Stacks Perpendicular to the Wind,” 1977 (MEngr)

Thomas, C. E., “Measurement of Plume Rise from One and Two Stacks in a Wind Tunnel: Perpendicular Flow,” 1978 (MEngr)

Rhodes, W. T., “Evaluation of a Cyclone and a Rotary Dust Separator,” 1979 (MEngr)

Scadden, R. A., “A Study of Plume Rise — Single Stack vs. Two Stack Plumes: Parallel Flow,” 1979 (MS)

Bowen, S. R., “Effects of Throat Length on Pressure Loss in a Venturi Scrubber,” 1979 (MEngr)

Thain, T. V., III, “The Design and Testing of a Sieve Plate Column for Particle Removal,” 1979 (MEngr)

Ku, T. C., “A Wind Tunnel Study of Plume Rise from Multiple Stacks,” 1979 (MS)

Taylor, D. E., “Design and Calibration of a High Volume, Rectangular Jet Virtual Impactor,” 1980 (MS)

Haseldon, R. T., Jr., "Effects of Throat Length on Efficiency in a Venturi Scrubber," 1980 (MEngr)

Jeter, J. H., Jr., "Effects of High Humidity Sampling on Atmospheric Sulfates," 1981 (MS)

Magyar, R. V., "Particle Removal Efficiency in a Laboratory Scale Venturi Scrubber," 1983 (MS)

Petersen, T. N., "Design and Evaluation of a Low Pressure Virtual Impactor for Ambient Particulate Analysis," 1983 (MS)

Scarlett, S. E., "An Investigation of Cyclone Performance Using Dimensional Analysis," 1987 (MS)

Giannopoulos, N., "Effects of Buoyancy on Contaminated Groundwater Plumes Using a Vertical Hele-Shaw Cell," 1987 (MS)

Shrivastava, S., "Design, Development and Evaluation of a Rotary Kiln for Hazardous Sludge Combustion," 1987 (MEngr)

Brown, S. M., "Modeling Crop Uptake of Sludge-Borne Cadmium," 1988 (MS)

Schwarz, S., "An Economic Evaluation of Sewage Sludge Drying and Incineration Processes," 1988 (MS)

Golla, P. S., "Modeling of Biofilm Plugging of a Two-Dimensional Channel," 1989 (MS)

Boley, T. M., "Displacement of Hydrocarbon Residuals from Unsaturated Soils by Infiltration of Water," 1989 (MS)

Chong, H. G., "Venturi Scrubber Modeling Evaluation," 1989 (MS)

Hartz, M. J., "Mobility and Retention of Hydrocarbons in an Idealized Model of the Unsaturated Zone," 1991 (MS)

Sharma, M., "Vaporization of Organic Hydrocarbons Spilled on Soils," 1991 (MS)

Ockeloen, H. F., "Modeling of Fixed-Film Bioscrubbers for the Control of Volatile Organic Compounds," 1992 (MEngr)

Chang, H.-c., "An Integrated Theory for Suspended-Growth Bioscrubbers," 1992 (MS)

Rudolph, S., "Environmental Monitoring for Toxic Substances before and after Initiation of a Municipal Waste Incinerator System," 1992 (MS)

DeHollander, G. R., "Experimental Study of a Suspended-Growth Bioscrubber for Methanol Removal," 1992 (MS)

Hoffman, D. L., "Lead Volatility from a Simulated Hazardous Waste Slag," 1993 (MS)

Striebig, B. A., "Arsenic Volatility from a Simulated Hazardous Waste Slag," 1993 (MS)

Gray, D. B., "Volatilization of Arsenic from an Artificially Contaminated Clay," 1994 (MS)

Sargent, T. N., Jr., "Vitrification of Cesium-Contaminated Organic Ion Exchange Resin," 1994 (MS)

Kistner, B. R., "Clay Adsorption of Arsenic Vapors during Incineration," 1994 (MS)

Hewlett, K. J., "Vitrification Demonstration of West End Treatment Facility Mixed Waste Sludge," 1994 (MS)

Ragsdale, R. G., "XRF and Leaching Characterization of Waste Glasses Derived from Wastewater Treatment Sludges," 1994 (MS)

Greene, H. M., "Equilibrium Modeling of Lead and Arsenic during Incineration," 1994 (MS)

Mantha, S., "Design of Cyclones through Mathematical Modeling," 1995 (MS)

Hammervold, R. E., "Development of an Innovative Sorptive Slurry Bioscrubber," 1995 (MS)

Igoe, J. T., "A Parametric Study of Particulate Matter from Laboratory-Scale and Pilot-Scale Waste Vitrification Systems," 1995 (MEngr)

Hill, J. K., "Detection, Measurement and Control of Gaseous Hydrogen Fluoride Emissions Produced When Firing Traditional Ceramics," 1995 (MS)

Wilson, R. A., "Vitrification of Rocky Flats Plant Surrogate Mixed-Waste Sludge," 1996 (MS)

Myers, E. B., Jr., "Oxidative Techniques for the Control of Oxides of Nitrogen," 1996 (MS)

Cash, D., "Stabilization of Simulated Mixed-Waste Contaminated Savannah River Site Soils via Vitrification in a D.C. Arc Melter," 1996 (MS)

Griner, S. J., "Particulate Emissions from Vitrification of Simulated Mixed Waste in a DC Arc Melter," 1996 (MS)

Speer, M. P., "Gaseous Emissions from a Graphite Electrode DC Arc Melter," 1996 (MS)

Bennert, D. M., "Demonstration of Vitrification of Simulated Savannah River Site M-Area F006 Wastewater Treatment Sludge," 1997 (MS)

Contardi, J. S., “Chemical Enhancement for the Absorption of Mercury,” 1997 (MS)

Fox, S. L., “Computer Modeling of Environmental Tritium Transport following Chronic Releases using the NORMTRI and CAP88PC-2,” 2001 (MS)

Klapmeyer, M. E., “Design of a Municipal Yard Waste Composting Facility for Anderson County, South Carolina,” 2003 (MS)

Green, R. M., “Ozone Measurements in Museums Using Passive Methods in South Carolina, 2006 (MS)

Monroy-Melendes, D., Effect of ultrasonic vibration on the mass transfer coefficient in a sieve plate scrubber

#### **POSTDOCTORAL RESEARCH ADVISEES**

Watts, F., “Metal Emissions from Hazardous Waste Incineration,” 1991–1994

Resce, J., “Vitrification of Wastes,” 1992–1994

Smets, B. F., “Bioscrubber Research,” 1993–1994

#### **TEACHING**

##### **COURSES TAUGHT<sup>1</sup>**

EE&S 401/601, Environmental Engineering, SS II 86, Sp 88, Sp 89, Sp 90, Sp 91, Sp 92, Sp 98, SS II 98, F 98, SS II 99, F 99, SS II 00, F 00, SS II 01, F 01, F 02, Sp 03, F 03, Sp 04, F 04, Sp 05, F 05, Sp 06, SS II 06 (50%), Sp 07, SS II 07, Sp 08, SS II 08, F 08, S 09, S 10, S 11, S 12, S 16.

EE&S 402/602, Water and Wastewater Treatment Systems, Sp 02, Sp 04, Sp 05.

EES 4300/6300 (EE&S 430/630), Air Pollution Engineering, F 80, F 81, F 82, F 83, Sp 85, Sp 86, Sp 89, Sp 90, Sp 91, Sp 92, Sp 93, Sp 94, Sp 95, Sp 96, Sp 97, Sp 98, Sp 99, Sp 06, F 06, F 07, S 09, S 10, S 11, F 11, F 12, F 13, F 14, F 15, F 16.

EES 4500 (EE&S 450), Professional Seminar, F 12, F 13, F 14, F 15, F 16.

EES 4840/6840, Municipal Solid Waste Management, Sp 00, Sp 01, Sp 02, Sp 03, F 03, F 04, F 05, F 06, F 07, F 08, F 09, S 12, S 13, S 14, S 15, S 16.

ESE 485/685, Hazardous Waste Management, F 84, F 85, F 86, F 87, F 88, F 89, F 90, F 91, F 92.

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<sup>1</sup> Clemson University courses prior to 1997 had the ESE designation.



ESE 491, Selected Topics in Environmental Engineering, F 98.

EES 8020 (EE&S 802), Environmental Engineering Principles (50%), F 83, F 84, F 85, F 86, F 87, F 88, F 89, F 90, (100%) F 01, F 02, F 03, F 08, F 09, F 10, F 11, F 12, F 13, F 14.

EES 8060 (EE&S 806), Process and Facility Design of Environmental Treatment Systems (Introductory Module), F 09, F10, F 11, F 12, F13, F 14, F 15.

EE&S 806, Process and Facility Design of Environmental Treatment Systems (Air Pollution Module), F 99, F 00, F 01, F 02, F 03, F 04, F 05.

ESE 831, Air Quality Monitoring, F 80, F 81, F 82.

EE&S 832, Air Pollution Meteorology, Sp 81, Sp 82, Sp 83, Sp 84, Sp 85, F 93, F 95, F 97, F 98, F 99, Sp 01, Sp 03, Sp 05. Sp 07.

EE&S 833, Air Pollution Control Systems, Sp 81, Sp 82, Sp 83, Sp 84, Sp 86, Sp 87, Sp 88, F 92, F 94, F 96, Sp 99, Sp 00, Sp 02, Sp 04, Sp 08.

EE&S 834, Particles in the Atmosphere, F 07.

ESE 849, Environmental Engineering Chemistry Laboratory II, F 85 (25%).

ESE 861, Environmental Systems Engineering Seminar, Sp 87, Sp 88 (50%).

EN SP 472/672, Environmental Planning and Control, F 02, F 05.

EEES Seminar, EE&S 861, EE&S 961, GEOL 851, F 09, Sp 10, F 10, Sp 11.

#### **NEW COURSE DEVELOPMENT**

EES 4300/6300, Air Pollution Engineering

EES 4500, Professional Seminar

EES 4840/6840 Municipal Solid Waste Management

EE&S 485/685, Hazardous Waste Management

EES 8020, Environmental Engineering Principles (50%)

EE&S 806, Integrated Design of Environmental Treatment Systems, (Air Pollution Module, 1 credit)

ESE 831, Air Pollution Monitoring

ESE 832, Air Pollution Meteorology

ESE 833, Air Pollution Control Systems

## **UNIVERSITY AND PUBLIC SERVICE**

### **CONTINUING ENGINEERING EDUCATION**

“Introduction to Industrial Pollution Control,” Lecturer, May 10–14, 1976, 12<sup>th</sup> Annual Air and Water Pollution Control Seminar, CEE-109, Lecturer, March 10–11, 1977.

“Introduction to Industrial Pollution Control,” CEE-179, Lecturer, July 18–22, 1977.

“Air Pollution Diffusion Modeling,” Lecturer, Pennsylvania State University, Capitol Campus, Middleton, PA, November 2–3, 1977.

“Modeling of Air Quality for Industrial Pollution Control,” CEE-222, Developer, December 5, 1977.

“Introduction to Industrial Pollution Control Seminar,” CEE-275, Lecturer, June 5–9, 1978.

“13<sup>th</sup> Annual Air and Water Pollution Control Seminar,” CEE-247, Program Co-Chairman, November 16–17, 1978.

“Introduction to Industrial Pollution Control,” CEE-366, Lecturer, June 4–8, 1979.

“Hazardous Waste Management Conference,” CEE-264–61, Program Chairman, April 3, 1986.

“How to Comply with New Hazardous Waste Regulations for Small Quantity Generators,” (PD-5019), Program Chairman, Charleston (PD-5019-01), Greenville (PD-5019-02), Columbia (PD-5019-03) September, 1986.

“How to Comply with South Carolina Hazardous Waste Regulations for Small Quantity Generators,” (PD-5019), Program Chairman, Florence (PD 5019-04), Charleston (PD-5019-05), Greenwood (PD-5019-06), Spartanburg (PD-5019-07), Aiken (PD-5019-08), Rock Hill (PD-5019-09), Greenville (PD-5019-10), Columbia (PD-5019-11), April–May, 1987.

“South Carolina Hazardous Waste Regulations for Generators,” Lecturer, Palmetto Industrial Trade Show, October, 1987.

“How to Comply with South Carolina Hazardous Waste Regulations for Generators,” CEE 3602, Program Chairman and Lecturer, Charleston (CEE 3602-018), Columbia (CEE 3602-028), Greenville (CEE 3602-038), April–May, 1988.

“Compliance with South Carolina Hazardous Waste Regulations,” Program Chairman and Lecturer, Greenville, SC (CEE 3602-19), February, 1989.

“Solid and Hazardous Waste Incineration Issues,” Ninth Carolina Regional Conference on Issues in Environmental Law and Technology, Lecturer, Greenville, SC (CEE 3604-011), June 24–26, 1991.

“Biological Treatment of VOCs and Odors,” Lecturer, Air & Waste Management Association, Denver, CO, June 13, 1993.

## COMMITTEES

### DEPARTMENT:

Member, Department Head Search Committee (1977)  
Member, Self-Study Committee (1980)  
Member, Peer Evaluation Committee (1980–1981, 1985–1986)  
Member, Departmental Advisory Committee (1981– )  
Chairman, Peer Evaluation Committee (1981–1982)  
Chairman, R. A. Bowen Professorship Search Committee (1982–1983)  
Chairman, Reappointment Peer Evaluation Committee (1987–1988)  
Chairman, Tenure and Promotion Peer Evaluation Committee (1987–1988)  
Chairman, Self-Study Committee (1989–1990)  
Member, Department Head Search Committee (1992–1994)  
Member, Faculty Search Committee (2008-2010)  
Chairman, Curriculum and Assessment Committee (2011–2013)  
Member, Curriculum and Assessment Committee (2011-)  
Chair, Faculty Search Committee (2015-2016)

### SCHOOL:

Chairman, Director Search Committee (1995)

### COLLEGE:

Member, Fluid Mechanics Committee (1975–1978)  
Member, Curriculum Committee (1976–1981)  
Member, Computer Committee (1978–1979)  
Member, Schedule Committee (1978–1979)  
Member, Engineering Computing Laboratory Committee (1978–1979)  
Member, By-Laws Committee (1981)  
Member, Assistant Dean Search Committee (1984)  
Member, Director of South Carolina Energy Center Search Committee (1986)  
Member, Classroom Teaching Effectiveness Committee (1993)  
Member, Curriculum Committee (2011–2014)  
Member, ADUG Advisory Committee Meeting (2016-2017)

### UNIVERSITY:

Member, Schedule Committee (1978–1979)

Senator, Faculty Senate (1982–1984)  
Member, Faculty Senate Research Committee (1982–1983)  
Member, Fire and Safety Committee (1982–1983)  
Member, Executive Committee of the Faculty Senate (1983–1984)  
Member, Research Advisory Committee (1983–1984)  
Member, Commission on Graduate Studies and Research (1983–1984)  
Chairman, Faculty Senate Research Committee (1983–1984)  
Member, President’s Council (1983–1984)  
Member, Awards Committee of the Commission on Graduate Studies and Research (1983–1984)  
Alternate Senator, Faculty Senate (1984–1985)  
Member, H. W. Close Fellowship Selection Committee (1984)  
Member, Campus Building Air and Water Quality Committee (1994–2000)  
Member, Environmental Health & Safety Advisory Committee (1996)  
Member, Select Senate Committee on the Research Component at Clemson University (1996)  
Member, Undergraduate Program Review Committee for Environment and Natural Resources (2007)  
University Marshal, December, 2025, May 2016.

#### **OTHER SERVICE**

Graduate Student Recruiter, Department of Environmental Systems Engineering (1977)  
Academic Advisor to Master’s Degree Candidates, Department of Environmental Systems Engineering (1978–1986)  
Undergraduate Coordinator, BS Environmental Engineering, Department of Environmental Engineering and Earth Sciences (2010–)

#### **COMMUNITY SERVICE**

Assistant Scoutmaster, Boy Scout Troop 235, Fort Hill Presbyterian Church, Clemson (1984–).

September 21, 2018