

Sigma Pi Sigma Physics Honor Society, 1985
Cyril Gail Scholarship Academic Excellence Award, 1983

TEACHING AND ADVISING

Courses at CSUEB (6000 level = graduate, <5000 – undergraduate)

Environmental Resource Analysis
Environmental Sustainability and Social Justice
Energy Climate and Society
Environmental Projects

Introduction to Environmental Studies
Environmental Resource Analysis
Applied Field Studies
Cooperative Education
Special Issues in Environmental Studies: Social Impact through
Sustainable Solar Design
Senior Seminar
Independent Study
Internship in Environmental Studies
Energy and Society
Sustainable Resource Management
Literature and Research Aides
Graduate Seminar on Human Impacts on the Natural Environment
Graduate Seminar on Environmental Planning
Graduate Seminar on Urban and Regional Planning and Development
Special Issues in Teacher Education: Social Impact Solar

Courses at SJSU (200 level = graduate, 100 level = undergraduate)

Sustaining the Earth—lower division undergraduate
Alternative Energy Strategies—upper division undergraduate
Solar Energy Design—upper division undergraduate
Energy and the Environment—upper division undergraduate
Independent Reading
Research Topics in Environmental Science—co-taught with CE and
Geology
Senior Seminar in Environmental Studies
Senior Thesis in Environmental Studies
Graduate Methods Seminar
Graduate Seminar on Research and Proposal Development

(≥200 = graduate courses. ≤199 = undergraduate courses)

Master's Thesis Advising

COMPLETED THESES

(ECS), ceiling fan light kits (TP and ECS), luminaires (TP), general service lamps (ECS).

Principle Investigator: *Max Tech and Beyond Design Competition for Ultra-Low Energy Use Appliances and Equipment*. 2011 – 2014. Developed and ran the DOE-supported competition for the Lawr

UNIVERSITY SERVICE

CSU System-wide Service

Organizer *CCC-CSU Alternative Fuels / Alternative Energy / Sustainability* Cal State East Bay, August 31, 2007. (See below.)

Selected Member of the *CSU Sustainability Advisory Committee, Education and Research Subcommittee* Fall 2007 -- current. To promote sustainability education and policy in the CSU system.

SJSU Representative to the *California Urban Environmental Research and Education Center* Grants Management Board, 1999. Evaluated the relative merits of proposals submitted or grants funding.

Reviewer of proposal for the new *CSU Master of Science in Environmental Science at CSU, Chico*.

Cal State East Bay, Service

AY20/21, AY19/20, and AY18/19.

AY20/21, AY19/20, AY15/16, AY 14/15.

, AY19/20.

pursue a campus-community partnership using the Sustainable City Year Program model developed by the University of Oregon. The FLC recommended piloting the program with the City of Hayward, won the approval of CSUEB President Morishita and City Manager Fran David, and agreement to cost share the program in AY16/1/7.

_____ at the Campus-Community Partnerships for Advancing Sustainability Workshop, which took place July 23, 2015, at the 2015 California Higher Education Sustainability Conference, San Francisco State University.

_____ at the National Council on Science and the Environment's 2015 Summer Meeting of the Council of Environmental Deans and Directors. June 22 – 24, Scripps Institute of Oceanography, San Diego, California.

_____ (a student club of Cal State East Bay's Associated Students, Inc.) AY 15/16.

_____ *Philosophy Tenure, Retention, and Promotion Committee* AY 09/10. Addressing cases for tenure, promotion to Associate Professor, promotion to Full Professor, and retention.

Fall 2005 –

_____ *Search Committee for Vice President of Administration and Finance and CFO of CSUEB*, Winter 06/07.

_____ *Chair Search Committee Department of Theater and Dance*, Spring 2007.

_____ *University Commencement* SP 2006, 2005, 2003, 2002, 2001, 2000.

_____ *Strategic Planning Steering Committee*, Appointed by CSUEB President Rees, AY05/06. The Steering Committee guides development of 5-year planning goals and objectives for CSUEB, reports to the president.

Budget Advisory Committee AY03/04 –

Chair, Budget Crisis Committee AY 02/03 Department Representative Organizer, Budget Crisis Forum, May 2003 • Lobbied Lonnie Hancock, 14 Assembly District Rep. on Behalf of CSU, March 10, 03 • CFA interviewer of 14 Assembly District candidates, December 3, 2001, 2 – 5pm. • AY01/02 CFA teach-in LA CFA system wide meeting AY 01/02. San Francisco Marriot Hotel demonstration • CFA representative at meeting with Senator Liz Figueroa, May 25, 2001, CSUH (NOW CSUEB). • Diehr for PERS Board campaign.

Department Service, Geography & Environmental Studies, CSUEB

2014 – present, 2002 - 2009. Including all responsibilities associated with semester conversion.

, AY19/20, AY18/19.

, AY18/19.

AY19/20,

AY18/19, AY17/18.

AY18/19, AY05/06, Chair committee conducting departmental evaluation of range elevation candidates.

Fall 2002 – Spring 2004.

Conducted Major Revamp of Environmental Studies Curriculum, coordinating with contributing departments (Fall 2003 – Spring 2005).

Envt 3400 (Resource Management), and Evt 3480 (Applied Field Study).

AY01/02.

AY 00/01, 01/02, 02/03, 04/05, 05/06. Active in numerous special actions including: Meeting with Senator Liz Figueroa, May 25, 2001, CSUH (NOW CSUEB), interviewing state assembly candidates, phone banking to elect Gloria Romero to the state senate, gathering endorsements for George Diehr for CalPERS Board, and participation in meetings and actions in Los Angeles and San Francisco.

AY 00/01, 01/02.

, Saturday, October 20, 2001

. Booth set-up and student advising on the mall. (We won a prize for best booth both times!)

University Service, San Jose State University

AY 98/99. Mission: to coordinate and enhance environmental programs, education, and opportunities at SJSU. Major accomplishments: initiated EF Web site (outreach for all environmental programs on campus); initiated spring speaker series (Prof. Stephen Schneider: Climate Warming:

Justice case studies in GE classes; preliminary planning for Environmental Curriculum Faire and Environmental Honors Scholarships.

, SJSU (AY 97/97); reviewed proposals for new courses and curriculum changes in the College of Social Science.

(AY 94/95), Facilitated environmental research collaborations on campus by developing a data base of all SJSU faculty interested in or conducting environmental research and or projects.

(member AY 97/98, chair AY 98/99). Representative of the Department of Environmental Studies in multi-college forum to enhance environmental programs at SJSU.

Department Service, Environmental Studies, SJSU

(S97, AY 97/98, AY 98/99), I managed all aspects of the Environmental Studies Graduate Program, which had between 40 and 50 active students.

BS in Environmental Studies (I designed and manage the Concentration and advice of all of its students);

(AY 97/99). I got all ES faculty connected to Internet, oversaw the department web site, and arranged computer system backup and digital scanning for the Department.

(AY 98/99).

(AY 95/96, 96/97, 97/98), I was a major player in the redesign of the Environmental Studies Curriculum (AY 97/98) and in setting standards and developing departmental syllabi for the independent reading course and the senior thesis courses.

PROFESSIONAL SERVICE (see also Invited Talks and Guest Lectures)

Peer review for archival journals: *Environmental Science and Technology, Health Physics, Soil Science Society of American Journal*

Book Reviewer for the following publishers

Addison and Wesley

Analytics Press (Koomey, *Turning Numbers into Knowledge*, 2001)

Prentice Hall

Rowman and Littlefield

Peer review for institutional reports:

Lawrence Berkeley Laboratory,

United States Geological Survey

International Summer School on Science and World Affairs, Energy and Environment Group. Princeton University, Princeton, NJ. (Sm91, participant), Moscow, USSR (Sm920, participant), and Shanghai, China (Sm93, keynote speaker)

Conference Organizer: *Star Wars and National Security: A Conference on the Strategic Defense Initiative*, October 9 - October 11, 1986, University of California, Berkeley.

Volunteer: October 2005. Rehabilitation of Berkeley low-income apartments for Katrina relief victims. A collaborative project of the City of Berkeley, Prospect Sierra School, and two non-profits: Rebuilding Together Albany-Berkeley-Emeryville and Affordable Housing Associates.

Kensington Fire Protection District (KFPD) Board of Directors: 2001. The District is the lead agency for the prevention and suppression of fire and for emergency preparedness and medical response. Key issues of interest to me include ecological vegetation management and fire-safety at the urban/wildland interface.

Kensington Emergency Preparedness Council: I represented KFPD on the Council.

Kensington Hilltop Elementary School •Member (1999 - 2002) PTA, KEF, Dad's Club.
•Guest Lecture/Fieldtrip for 2 Graders (Rms 9 & 4), "Weather Data and Weather Stations: How Scientists Use Them"October 29, 2001 •Delivered a Solar Energy Lecture to Room 20 Classroom (June 13, 2001), see Talks •Active member of the Dad's club for which I have volunteered numerous hours doing seismic retrofits. •Organizer

MANAGEMENT: CONTRACTS and GRANTS

From January 2010 – May 2014 I served as an acting program manager and principle investigator at Lawrence Berkeley National Laboratory managing the following energy research programs under contract and on professional leave from CSUEB.

Pioneers for Sustainable Communities, (\$150k AY 16/17, estimated) Principle Investigator and Project Lead for this university-community partnership program, modeled on the University of Oregon's *Sustainable City Year Program*. In AY16/17 CSUEB is partnering with the City of Hayward on 5 city sustainability projects involving 15 courses. Co-PI, Craig Derksen.

Social Impact Solar Program, (~50k/yr AY 15/16, and 16/17) Principle Investigator.

Investigator). I provide oversight of this project which is largely the responsibility of the project co-PI, Robert Van Buskirk. Funded by the U.S. Department of Energy's Building Technologies Office.

Support for MCC-Ghana Compact II, Co-Principle Investigator: FY 2013/2014 The Millenium Challenge Corporation is pursuing a second compact with the government of Ghana to address problems of inadequate and unreliable power supply. To support the compact, the MCC has an Inter-Agency Agreement with the U.S.DOE to assist MCC in conducting due diligence on specific proposed energy projects and policy reforms, focusing on load management, energy efficiency policy & green building initiatives including retrofit of government buildings. DOE has contracted LBNL to provide that work under a Task Order under the Agreement. Dr. Robert Van Buskirk is the Principle Investigator on that work, which assesses, recommends, and evaluates relevant energy sector investments. I am a Co-PI on the project. (\$182k)

Energy Efficiency (EE) Technology Innovation Acceleration by Linking Deployment Programs to Adoption and Monitoring with Top-down Empirical Impact Analysis. FY 2013 (\$350 – Principle Investigator). Funded by the U.S. Department of Energy's Building Technologies Office.

Ultra Low Energy Use Appliances Development of Prototype Specifications: FY 2011 (\$250k).

Other research management:

Environmental Finance Center, EPA Region 9. AY05/06, 06/07. Grant funds used to operate the Finance Center in support of green business in the region. Activities include organization of California Chemical Policy Symposium, environmental product and behaviors placement on prime time television, toxic waste reduction on tribal lands.

Pollution Prevention Grant, USEPA. AY05/06, 06/07. Purpose of Grant us to reduce toxics exposures from products used in beauty salons.

Switzer Environmental Leadership Grant, 2000/2001. To support consulting work to the ELJC, see Consulting, above.

Probational Faculty Professional Activities Grant, 2000/2001, School of Arts, Letters, and Social Sciences, CSUH (NOW CSUEB).

RSCA Mini Grant From CSU Hayward. For "System Performance and Economics of Net-Metered Solar Electric Systems in the SF Bay Area", 1999 – 2000.

College of Social Science Foundation Research Grant. San Jose State University Foundation research support for the project: "Investigation of the Potential for City-Community Collaboration to Enhance Renewable Energy in the Restructured Electricity Market", 1998 – 1999.

University of California Sustainable Agriculture Research and Education Program, Oct. 95 – Dec. 96, Support for graduate student J. Chu thesis: "Social and Environmental Restoration through Urban Therapeutic Gardens", I am the Project Director.

Environmental Initiative Grant F96, SJSU Inter-college collaborative. Award for 20% time to formulate research proposal for interdisciplinary environment research.

CSU Award for Research, Summer 96, Awarded two months of summer salary by the California State University for research on the project: "Wind Energy Resource Assessment for Eritrea, Africa".

Professional Development Grant, Sp96 San Jose State University Lottery Fund support for the project: "Wind Energy Resource Assessment for Eritrea, Africa".

Affirmative Action Faculty Development Grant, Sp96 reduced course load for S96 to conduct research, plus research funds, San Jose State University Foundation research support for the project: "Wind Energy Resource Assessment for Eritrea, Africa".

College of Social Science Foundation Research Grant, 11/95 – 11/96. San Jose State University Foundation research support for the project: "Wind Energy Resource Assessment for Eritrea, Africa".

Grant to Faculty for Graduate Student Stipend, 11/95 – 11/96. San Jose State University Foundation grant to support Environmental Studies graduate student, Karen Kello, for research assistance on the project: "Wind Energy Resource Assessment for Eritrea, Africa".

Kearny Foundation of Soil Science Grant, F93 - F94. The Structure of Soil Heterogeneity and its Effect on Bulk Flow of Gas-Phase Contaminants Through Soil: A Study of the Scale Dependence of Soil Permeability to Air and its Causes. With J. Harte.

PUBLICATIONS

Articles in Peer-Reviewed Journals

V. Vossos, K. Garbesi, and H. Shen. (2014) "Energy Savings from Direct DC in U.S. Residential Buildings." *Energy and Buildings*, 68(2014) 223-231. Available online: <http://www.sciencedirect.com/science/article/pii/S0378778813005720>

K. Garbesi, R.G. Sextro, A.L. Robinson, J.D. Wooley, J.A. Owens, and W.W. Nazaroff (1996) "Scale dependence of soil permeability to air: Measurement method and field investigation", *Water Resources Research*, , 547-560.

K. Garbesi, R.G. Sextro, W.J. Fisk, M.P. Modera, and K.L. Revzan (1993) "Soil-Gas Entry into an Experimental Basement: Model-Measurement Comparisons and Seasonal Effects," *Environmental Science and Technology*, 466-473.

A.T. Hodgson, K. Garbesi, R.G. Sextro and J.M. Daisey (1992) "Transport of Volatile Organic Compounds from Soil into a Residential Basement," *Journal of the Air and Waste Management Association*, 277-283.

K. Garbesi and R.G. Sextro (1989) "Modeling and Field Evidence of Pressure-Driven Entry of Soil Gas into a House Through Permeable Below-Grade Walls," *Environmental Science and Technology*, , 1481-1487.

Encyclopedia Article

K. Garbesi, 'The Implications of Global Warming for Energy Production and Consumption,' in 'Theme 1.4. Natural Resource System Challenge II: Climate Change, Human Systems, and Policy' (Ed. A. Yotova)', in *Encyclopedia of Life Support Systems*

Kalliokowski, P., Jantunen, M. and Seppänen, O., Ed. Indoor Air '93: Helsinki, 1993, 651 – 653.

A.T. Hodgson, K. Garbesi, R.G. Sextro, and J.M. Daisey, "Transport of Volatile Organic Compounds from Soil into a Residential Basement," Paper no 88-95B.1 in: *Proceedings of the 81st Annual Meeting of the Air Pollution Control Association*, APCA, Pittsburgh, PA, 1988.

Conferences and Workshops

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Organizer and Moderator, *CSU Climate Action Planning Workshop*, This Way to Sustainability Conference, Chico State University, 10am – 4pm, November 6, 2009. Brought together about 40 faculty, staff, and students from across the CSU system and the Chancellor's office to collaborate on climate action planning system-wide. Students from my ENVT 3480 (Applied Field Studies) class summarized the current status of campus climate action planning statewide. The participants reached a series of agreements on recommended approaches to climate action planning at the CSU.

Organizer and Moderator, *Forging California's Path to Zero Net Energy*, an invited

K. Garbesi (Chair), *Renewable Energy Developments in California, Panel*, American Association of Geographers 2007 Annual Meeting, Hyatt Regency, San Francisco. April 19, 2007. Organizer and chair of panel discussion.

Public Meeting Presentations

B. Gerke, K. Garbesi *et al.*, *Preliminary Analysis for General Service Fluorescent Lamps and Incandescent Reflector Lamps (IRLs)*, Washington D.C., Forrester Building, Room 8E-

Theses and Dissertation

K. Garbesi, "Toward Resolving Model-Measurement Discrepancies of Radon Entry into Houses", Doctoral Dissertation University of California, Berkeley, December 1993. Also published as: Report No. LBL-34244 Rev., Lawrence Berkeley Laboratory, Berkeley, CA, October 1994, 169 pages.

K. Garbesi, "Experiments and Modeling of the Soil-Gas Transport of Volatile Organic Compounds Into a Residential Basement," MS Thesis, University of California, Berkeley, May 1988. Also published as: Report No. LBL-25519, revised, Lawrence Berkeley Laboratory, Berkeley, CA. 1988, 97 pages.

http://www1.eere.energy.gov/buildings/appliance_standards/pdfs/experience_curve_appliance_price_forecasting_3-16-11.pdf

Research Reports

K Garbesi, J. Buckholz, B. Meleg, *Cal State East Bay Climate Action Plan 2018*, April 30, 2018. 113 pages. ([online](#))

Buckholz, J. and K. Garbesi, *Academic Year 2013/2014 Greenhouse Gas Inventory*. California Staty

Webinars

K. Garbesi (Convenor and Co-host) *National Webinar: Max Tech and Beyond Design Competition of Ultra-Low-Energy-Use Appliances and Equipment*, May 16 and May 29, 2014. Ten faculty-lead student design teams at U.S. Universities presented the results of their prototype development and testing to judges from the U.S. Department of Energy, private, and government sectors.

K. Garbesi (Convenor and Co-host) *National Webinar: Max Tech and Beyond Design Competition of Ultra-Low-Energy-Use Appliances and Equipment*, May 23, 2013. Nine faculty-lead student design teams at U.S. Universities presented the results of their prototype development and testing to judges from the U.S. Department of Energy, private, and government sectors.

K. Garbesi (Convenor and Co-host) *National Webinar: Max Tech and Beyond Design Competition of Ultra-Low-Energy-Use Appliances and Equipment*, May 23, 2012. Nine faculty-lead student design teams at U.S. Universities presented the results of their prototype development and testing to judges from the U.S. Department of Energy, private, and government sectors.

K. Garbesi (Convenor) *Direct-DC Power Systems for Efficiency and Renewable Energy Integration: National Webinar*, Thursday November 3, 2011, 1:00–3:00pm Eastern Time. Overview: Viability of using direct current (DC) generated by on-site renewable energy (RE) systems directly in its DC form to supply DC loads in residential and small commercial buildings. (1) The Role of DC in the Future Building Electric Power System, (2) The Energy Savings Potential of Direct DC, and (3) DC Power Standards and the Emerging Market. Geared toward building industry professionals, and energy and IT managers in critical facilities and data centers. Speakers Chris Marnay (LBNL), Vagelis Vossos (LBNL), Paul Savage (EMerge Alliance , Nextek Power Systems)

Web Curriculum

I created this web course to university students and professionals in the resource management fields to assess carbon emissions from

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K. Garbesi, “Nuclear Not an Option,” Commentary in *The Pioneer*, April 19, 2001, page 4.

K. Garbesi, “Cesar Chavez a Unifier,” Commentary in *The Pioneer*, March 29, 2001, page 4.

K. Garbesi, “California’s Restructured Electricity Market: An Example Not to Follow”, Invited Submission to the Switzer Fellowship Newsletter, (2): (web page distribution, <http://www.switzernetwork.org>, 3 pages), 1998.

INVITED TALKS & Guest Lectures (See also Conference Talks)

(see also Conference Presentations and Professional Service)

Invited Panelist: BEREC Energy Summit. Empowering the Energy Transition Through DEI.

Invited Talk, PV Solar Alliance, Industry Forum: “The Potential for Solar Electricity Generation in San Francisco”, California PV Alliance Solar Forum, December 14, 2001, Pacific Energy Center, San Francisco, 2:00 – 2:30.

Invited Laboratory Talk at UCB: “Electricity Deregulation in California—The Erosion of Public Goods”, November 7, 2001. 12:00 – 1:30. Renewable and Appropriate Energy Laboratory, UC Berkeley.

Guest Lecture/Demo at Hilltop School: “Solar Energy for Heating, Cooking and Electricity”, August 12 (1st grade) and August 15 (2nd grade) at Hilltop School on solar energy, how it works, and what it can be used for. The lecture also taught the fundamentals of electricity. The kids hooked up solar electric (PV) panels and oriented them for optimal water pumping efficiency. We also made cookies in a

Invited Talk, Environmental Engineering, Princeton University: “Where was all that Radon Coming From? New Insights into Soil-Gas Transport of Radon into Houses”. Major Talk, Department of Civil and Environmental Engineering, Water Resources Program, Princeton University, February 7, 1994.

