MURRAY MILNE

Research Professor, UCLA Department of Architecture & Urban Planning **Registered Architect**, State of California (C 10305)

EDUCATION

University of Michigan, B.S. Mechanical Engineering, 1959 University of Michigan, M.S. Industrial Engineering, 1961 University of California, Berkeley, M.Arch., 1965

ACADEMIC EXPERIENCE

Assistant Professor, Department of Architecture, University of Oregon, 1965-66 Assistant Professor, Department of Architecture, Yale University, 1966-69 Associate Professor, Architecture/Urban Design, UCLA, 1969-76 Associate Dean, School of Architecture & Urban Planning, UCLA, 1971-75 Professor, Architecture/Urban Design, UCLA, 1976-1994 Professor Emeritus, Architecture/Urban Design, UCLA, 1994-present Research Professor, Architecture/Urban Design, UCLA, 1994-present Visiting Professor, School of Architecture, USC, 2001-present

AWARDS AND HONORS

- AIA/<u>Sunset Magazine</u> Western Homes Awards Competition, Merit Award for Malibu Project, 1977-78.
- <u>Architectural Record Magazine</u>, Malibu Project Selected as One of Six Apartments of the Year, 1978.
- Guggenheim Fellow, 1980-81, "Energy and Architectural Aesthetics".
- Oakland Museum, "Solar Age Architecture," Malibu Condominiums selected as One of Six Best Solar Buildings in California, exhibition at March 10 to June 28, 1981.
- <u>Progressive Architecture</u> Award Citation, 30th Annual P/A Awards Program, 1983, for "Teaching Passive Solar Design in Architecture", a Research Project conducted by a team of Eleven Universities.
- <u>Progressive Architecture</u> Award Citation, 34th Annual P/A Awards Program, 1987, for "SOLAR-5, A <u>Micro-Computer Design Tool</u>".
- California Energy Commission, Special Commendation for Development of SOLAR-5, selected as one of the two most significant energy innovations in California in 1987.

U.S. Department of Energy, SOLAR-5 selected as one of the nine National Energy Innovation Awards, presented by Secretary of Energy, John Harrington, October 20, 1987.

U.S. Department of Energy Daylighting Experts Team, appointed December 1991.

Design for Excellence Competition, Invited to Serve on Design Jury, 1992.

Leading Edge Design Competition, Professional Division, Certificate of Commendation, "Integration of Energy-Responsive Design", 1992, awarded for the Coastline Drive Condominiums, 1992.

AIA Design Awards, Valley Chapter, Invited to Serve on Design Jury, 1993.

Department of Energy Experts Group on Energy Design Tools, Invited participant, Washington, D.C., June 1993.

AIA Design Awards, Santa Barbara Chapter, Invited to serve on Design Jury, 1994.

Leading Edge Design Competition, Student Division, Faculty Advisor for First Place Projects in 1992 (Burhan Tjakra), 1993 (Adham Refaat), 1994 (Will Shephird), 1995 (Vikas Shrestha), 1997, (Anupama Kohli), 1999 Highest Award Co-Winners (Pablo LaRoche, Andrew Obermeyer, Rodrigo Rivero, Katharina Schendl)

Winner of the 2001 Passive Pioneer Award, American Solar Energy Society, April 24, 2001 Named a Fellow of the American Solar Energy Society, 2003

PRIVATE ARCHITECTURAL DESIGN PRACTICE

Eight Unit Condominium, Malibu, California

Randak Residence Addition, Woodland Hills, California

Hanging Lamp With Low Surface Brightness (manufactured and distributed by Ron Rezek/Lighting)

Siegel Residence Addition, Bel Air, California

Dakin-Johnson-Justice Residence, Key Largo, Florida

Energy Efficient Office Building Competition, Sacramento, California

Coastline Drive Condominiums, Four Units, Malibu, California

CONSULTANCIES

American Institute of Architects (Energy and Design Education Programs)

Albert C. Martin & Associates, Architects (Computer Applications)

Malcolm Lewis & Associates, Engineers (Climatological Site Analysis for Warner Center Office Towers)

Welton Becket & Associates, Architects (Energy Analysis and Daylighting Experimental Studies for the Ronald Reagan State Office Building, Downtown Los Angeles)

John Wiley and Sons, Publisher (Textbook Technical Review)

Wiley Professional Software (Software Evaluation)

University of Southern California (Development of Daylighting Design Tool Software)

California Polytechnic University in Pomona (Evaluation of Computer Aided Design Curriculum)
Miralles Associates, Architects, (Evaluation of Daylighting and Energy Performance for the
Department of Water and Power Facility)

Van Nostrand Reinhold (Technical Book Proposal Evaluations)

Power-DOE Project, EPRI (Computer Interface Design)

AJL Lumsden Associates (Energy Design Performance Simulation for the Korea Energy Center Building)

Fields Devereaux Architects and Engineers (Energy Design Performance for the Oak Park Library and the Lakeview Terrace Library)

CTG Energetics (Skylight Studies for the Monterey Bay Aquarium Addition)

Greenworks (Skylight Model Testing and Daylight Analysis for Atrium in a Three Story Office Building)

PROFESSIONAL AND UNIVERSITY SERVICE

Design Methods Group: National Advisory Board, 1968-70 Environment and Behavior: National Editorial Board, 1969-71 Academic Senate Committee on Computing, Chairman, 1972-74 Campus Computing Policy Committee, Chairman, 1972-74

Campus Energy Conservation Committee, 1978-79

National Passive Design Tool Advisory Group, Executive Committee, 1980-81

Passive Solar Journal, Reviewer and Advisor, 1982-1986

Association for Computer Aided Design in Architecture (ACADIA), Technical Reviewer, 1991-

ACSA Architectural Technology Conference, Technical Reviewer, 1992-

University Energy Research Group, Board of Directors, 1993-95

TEACHING DUTIES: Courses taught at UCLA since 1969

| 224 | Methodology: Design Theory |
|------|--|
| 226A | Computer Applications in Architecture and Urban Planning |
| 227A | Computer Graphics |
| 227B | Computer Aided Design (formerly 228) |
| 242 | Climate Responsive Design |
| 243 | Energy Modeling |
| 282A | Image and Cultural Symbolization (formerly 254) |
| 289 | Pro-Seminar on Building Climatology |
| 401 | Projects in Architecture |
| 403G | Projects in Design Methodology |
| 403H | Projects in Computer Aided Design |

MURRAY MILNE, Research Professor, UCLA Department of Architecture and Urban Design

| 413 | Design with Landscape |
|-----|--|
| 414 | Major Building Design (formerly 413) |
| 441 | Environmental Control Systems (formerly 424) |
| 442 | Building Climatology (formerly 423) |
| 444 | Light and the Visual Environment (formerly 424) |
| 445 | Sound and the Auditory Environment (formerly 424) |
| 496 | Special Projects in Architecture |
| 596 | Directed Independent Research and Study in |
| | Architecture/Urban Design |
| 598 | Preparation in Architecture/Urban Design for Master's Thesis |

PRIOR PROFESSIONAL EXPERIENCE

| 1955-1959 | Design Engineer, General Motors Engineering Staff |
|-----------|---|
| 1959-1961 | Design Engineer, General Motors Styling Staff, Research Studio |
| 1961-1962 | Research Engineer, North American Aviation, B-70/SST Project |
| 1963-1964 | Senior Research Engineer, North American Aviation, Apollo Project |

BIBLIOGRAPHY

Books

<u>Computer Graphics in Architecture and Design</u>, Murray Milne, editor, published by the Yale School of Art and Architecture, New Haven, Conn., 1969, 116 p. Paperback.

Reviewed in:

Architectural and Engineering News, September 1969.

Journal of American Institute of Planners, March 1970, pp. 135-137.

Journal of Architectural Science, March 1970, pp. 42-43.

<u>Residential Water Conservation</u>, Murray Milne, Water Resources Center, University of California, Davis, California, Report 35, 423 pages, March 1976, (Second revised edition March 1977).

Reviewed in:

CoEvolution Quarterly, p. 38, 1977.

Sunset Magazine, p. 154, September, 1977.

Los Angeles Magazine, August, 1977.

Whole Earth Catalog, 1980.

<u>Residential Water Re-Use</u>, Murray Milne, Water Resources Center, University of California, Davis, California, 542 pages, Report 46, September 1979.

Reviewed in:

Los Angeles Times, p. 1 & 2, October 22,1980.

Sacramento Bee, p. D7, November 2, 1980.

Whole Earth Catalog, 1980.

Engineering Times, p. 1,3 January 1981.

Papers

"Computer Aided Design," with thirteen students, published by Department of Architecture, University of Oregon, 1966.

"Architectural Applications of Computer Based Network Analysis Models," <u>AIA Architects Researchers Conference</u>, October 1967.

"The Cal-Oregon Experiment in Design Education, the Death of the Beaux-Arts," with Charles Rusch, American Institute of Architects Journal, March 1968.

"Environmental Control Curriculum at Yale," <u>Building Technology Workshop</u> edited by Walter A. Gatham, University of New Mexico Press, 1968.

"State of the Art: The Imminent Revolution in Architectural Theory," <u>The Student Publication of the School of Design</u>, North Carolina State University, 1969.

Computer Graphics in Architecture and Design (see books listed separately above), 1969.

"CLUSTR: A Structure Finding Algorithm," <u>Emerging Methods in Environmental Design and Planning</u>, edited by Gary Moore, M.I.T. Press, 1970, pp. 126-132.

"Graphic Communication," <u>Design Methods Group Newsletter</u>, Vol. 4, June/September 1970, p. 20.

"Workshop on Decision Models," <u>EDRA1</u>, <u>Proceedings of the First Annual Environmental Design Research Association Conference</u>, edited by Henry Sanoff and Sidney Cohn, 1970, pp. 327-328.

"From Pencil Points to Computer Graphics," Progressive Architecture, June 1970, pp. 168-177.

Book review of the <u>Architecture Machine</u>, by Nicholas Negroponte, in <u>Progressive Architecture</u>, July 1971, pp. 98-120.

"CLUSTR: A Program for Structuring Design Problems," <u>Proceedings of Eighth Annual Design Automation Workshop</u> (SHARE, ACM, IEE), June 28, 1971, pp. 242-249.

"The Beginnings of a Theory of Environmental Control," the <u>Proceedings of the Third Environmental Design Research Association and Eighth Architects Research Conference</u> (EDRA3/AR8), UCLA, January 1972, edited by William Mitchell, 25, 4 1-5.

<u>SHADOW: Program Documentation</u>, with Robin Liggett, Center for Computer Based Behavioral Studies, UCLA, 1972.

<u>CLUSTR</u>: An Interactive Program for Structuring Transportation System Design Criteria, prepared as part of a Research and Training Program sponsored by the Urban Mass Transportation Administration of the Department of Transportation, with W. Lawrence Harvey, UCLA School of Architecture and Urban Planning, June 1972, 21 pp.

<u>CLUSTR: Program Documentation</u>, with W. Lawrence Harvey, Center for Computer Based Behavioral Studies, UCLA, 1972.

An Approach to Problem Definition, with Application to the Quality of Working Life (Journal Draft), with James Dyer, and Marvin Hoffenberg, 1973.

"Structure of Urban Problems," <u>Proceedings of the Sixth Hawaii International Conference on Systems Science</u>, Western Periodical Publications Co., 1973.

Greek Translation: "CLUSTR, a Program for Structuring Design Problems," <u>Architecture in Greece</u>, Annual Review, Athens, August 1973, p. 138-140.

<u>GREEK Village: The Rules of Urban Growth</u>, with Paul Desmarais, prepared as part of a Research and Training Program sponsored by the Urban Mass Transportation Administration of the Department of Transportation, School of Architecture and Urban Planning, UCLA, 1974.

"Path Choosing and Place Choosing," with Ross McPhee, Senate Research Grant Report, UCLA School of Architecture and Urban Planning, 1975.

<u>Prototype Transit Station Design</u>, prepared as part of a Research and Training Program sponsored by the Urban Mass Transportation Administration of the Department of Transportation, with Eric Sauda, UCLA School of Architecture and Urban Planning, 1975.

"Building in Brushfire Areas: How to Design Residential Structures to Withstand Wildland Fires in Southern California", with Kenneth Liu (in progress).

Residential Water Conservation, (See books listed separately above). First Edition, March 1976; Second Edition, April 1977.

"Whatever Became of Design Methodology?", chapter in <u>Computer Aids to Design and Architecture</u>, Nicholas Negroponte (editor), Petrocelli Books, 1976.

"Sun Motion and Control of Incident Solar Radiation," Chapter 10 in <u>Man, Climate and Architecture</u>, Second Edition, Baruch Givoni, Elsevier, New York, 1976.

"The Future is Now," <u>Proceedings of the Urban Water Conservation Conference</u>, California Department of Water Resources, January 1976, Los Angeles.

"Educators Roundtable," (contributor) Energy and Architecture issue of <u>Journal of Architectural</u> <u>Education</u>, Donald Watson (guest editor), Vol. XXX, Number 3, February 1977.

"Why Conserve," <u>Proceedings of Governor's Drought Conference</u>, California Department of Water Resources, March 1977, Los Angeles.

"Computer Aided Design of Windows as Solar Collectors," <u>Proceedings of International Solar Energy Society</u>, June 6-10, 1977, Orlando, Florida.

Invited Testimony, Drought Hearings, Committee on Interior and Insular Affairs, U.S. House of Representatives, September 26, 1977.

"Study Puts Stopper on Water Losses," Ray Lipton, Interview in <u>Los Angeles Times</u>, Sunday, October 9, 1977.

"Computer Aided Architectural Design in the United States," IBM Research Center Conference, Amagi Homestead, December 1977, Ito, Japan.

"Residential Water Conservation in the United States, <u>International Conference on Water Resources Engineering</u>, January 10-13, 1978, Bangkok, Thailand.

"The Computer Aided Design of Windows as Passive Solar Collectors," <u>International Solar Energy Society Conference</u>, January 16-21, 1978, New Delhi, India.

"An Interactive Computer-Aided System for Passive Solar Design," <u>Proceedings of 2nd Annual Passive Solar Conference</u>, AS/ISES, March 1978, Philadelphia, PA.

"SOLAR-5: An Interactive Computer-Aided System for Passive Solar Design," University of Wisconsin Engineering Extension Conference, October 1978, Madison, Wisconsin.

"Coastline Condominiums:, <u>Architectural Record: Record Homes and Multi-Family Projects of 1978</u>, Mid May 1978, p. 124+ (publication of Malibu project selected as one of the six best multi-family projects of the year).

"Residential Water Conservation in the United States", <u>Water Resources Journal</u> United Nations, Geneva, December 1978.

"Architectural Design Based on Climate", with Baruch Givoni, Chapter 6 in <u>Energy Conservation</u> through Building Design, Donald Watson, Editor, McGraw-Hill, New York, 1979

"SOLAR-5: An Interactive Computer-Aided Passive Solar Design System," with Shin Yoshikawa, <u>Proceedings of the 3rd Annual Passive Solar Conference</u>, AS/ISES, San Jose, CA, January 1979.

Nikkei Architecture, Japan (Malibu Condominium Project) published, pp. 102-107, February, 1979.

Climate and Architecture Conference Proceedings, invited speaker, American Institute of Architects, Washington, D.C., February 1979.

"SOLAR-5: A Passive Solar Schematic Design Tool", invited presentation at Design Tools Briefing, SERI (National Solar Energy Research Institute), Golden, Colorado, March 5, 1979.

"Three Solar Urban Futures: Characterization of a Future Community Under Three Energy Supply Scenarios," with Marvin Adelson and Ruthann Corwin, <u>Proceedings of the First Conference on Community Renewable Energy Systems</u>, p. 394-405, Solar Energy Research Institute, University of Colorado, Boulder, Colorado, August 20-21, 1979.

Residential Water Re-Use, (See books listed separately above), September 1979.

<u>Three Solar Urban Futures: Characterization of a Future Community Under Three Energy Supply Scenarios</u>, 131 pages, Research Project funded by the U.S. Department of Energy, with Marvin Adelson and Ruthann Corwin, Urban Innovations Group, DOE/EV-0052/1; UC-11, 13, 95 p; October 1979.

"Solar City 2025: The Impact of Passive Buildings," with Joel Lakin, <u>Proceedings of the Fourth National Passive Solar Conference</u>, p. 307-311, International Solar Energy Society, Kansas City, Missouri, October 3-5, 1979.

Press Briefing for U.S. Department of Energy, presented the research work on the Three Solar Urban Future Project, Washington, D.C., October 16, 1979.

"Design Tools for Passive Solar Systems: Interactive Computer Modeling", lecture, University of Wisconsin, November 5-6, 1979.

Testimony at the Department of Energy Hearings on Proposed Federal Building Energy Performance Standards (BEPS), 3 p., Los Angeles, California, April 23, 1980.

"SOLAR-5: An Interactive Computer-Aided Passive Solar Building Design System," <u>Computer Graphics</u>, Murray A. Milne and Shin Yoshikawa, Vol. 2, No. 8, p. 44, September 1979.

"User-Friendly Interactive Design," lecture, Yale University, School of Architecture, October 1979.

"Researching in the 80's," <u>Research & Design</u>, Quarterly of the AIA Research Corporation, Spring 1980 (one of twelve contributors).

"Malibu Condominium," <u>L.A. Architect</u>, Special Energy Insert, by John Mutlow, June 1980. "Eight-Unit Coastline Condominium", <u>A Survey of Passive Solar Homes</u>, U.S. Department of Housing and Urban Development, p. 15, HUD-PDR-589, August 1980.

"Residential Water Conservation" and "Residential Water Re-Use", both reviewed in <u>The New Whole Earth Catalog</u>, p. 244., Random House, 1980.

"A Friendly Interface", Slide lecture at Takanaka Komutem, Tokyo, Japan, May 1, 1981.

"Energy in Design: Techniques," Presented at The American Institute of Architects National Convention, May 18, 1981, Minneapolis, Minn.

<u>Energy Conserving Design Curriculum (ECDC)</u>: One of three consultants retained by AIA Research Corporation to write the AIA National Professional Development Program, 1990-91.

"SOLAR 4.6, A Conceptual Computer Aid in Energy Conserving Design" <u>Proceedings of the International Solar Energy Society Conference</u>, with Joel Lakin, pp. 92-96., Philadelphia, PA., May, 26-30, 1981.

"Energy in Architecture Workshop" one of the five initial faculty members, Level 2 of the AIA Professional Development Program, Fort Collins, Colorado, June 12-13, 1981.

"Interactive Computer Models for Teaching Energy Conserving Design", Summer Institute on Energy and Design, sponsored by the Association of Collegiate Schools of Architecture and the Department of Energy, August 4-5, 1981.

<u>Learning Intuitive Passive Solar Design</u>, with a Little Help from a Computer, SOLAR-2 and <u>SOLAR-3 Workbook</u>, with Robin Liggett, Bill Jepson, Bruce Herrmann, Erin Rae Hoffer, Debra Merrill, and a foreword by Baruch Givoni, jointly published by the Association of Collegiate Schools of Architecture, Washington D.C., and the UCLA Graduate School of Architecture and Urban Planning, September 1981.

"Changing Water Conservation Patterns" and "Site Planning and Water Conservation Measures", Monterey Peninsula Water Management District Water Conservation Forum, Monterey, California, October 31, 1981.

Quoted in, "Water Saving Methods Told at Peninsula Forum" Peninsula Herald, p. 3A, November 1, 1981.

"U.C.L.A., Learning Intuitive Passive Solar Design, with a little help from a computer"; Reviewed in <u>Project Journal: Teaching Passive Design in Architecture</u>, Donald Prowler and Harrison Fraker, University of Pennsylvania, November 1981.

"SOLAR-5, A User-Friendly Computer-Aided Energy Conserving Design Tool", <u>CAD 82 Fifth Annual Conference in Computers in Design Engineering</u>, March 1982, Brighton, England.

<u>Apartments, Town Houses, and Condominium</u>, edited by Mildred Schmertz, (Malibu Condominium Project, published on pages 94-95), third edition, McGraw Hill, 1982.

Solar Age Architecture: Six California Buildings, Therese Thau Heyman, Warren Radford, and Holly Lyman Antolini, (Malibu Condominium Project selected as one of six best California Solar Buildings), The Oakland Museum, March 10 - June 28, 1981 (catalogue published August 1981).

"Teaching Energy + Design: Computer Assisted Learning" 1982 ACSA Summer Institute, Teaching Innovations in Architectural Technology: Design + Energy, M.I.T., July 24-28, 1982.

"Position Paper: Interactive Computer Graphics", <u>Second International Energy Experts Meeting</u>, <u>P.L.E.A.</u>, Bermuda, September 9-11, 1982.

"A Friendly Computer-Aided Building Envelope Design System", with Ronald Emanuele and Redha Benbouali, <u>The Thermal Performance of Exterior Envelopes of Buildings Conference</u>, sponsored by ASHRAE and DOE, Las Vegas, Nevada, December 1982.

"An Interactive Computer Graphic Daylighting Design Tool," with Robin Liggett, Carol-Lynn Campbell, Li-Chu Lin, Yau-Tang Tsay. <u>Proceedings of the International Daylighting Conference</u>, Phoenix, February 16-18, 1983.

Computer Methods in Architectural Offices. Conference Round Table Discussant, UCLA Faculty Center, March 16, 1983.

"Computer Aided Energy Conserving Design," Address before the Northern Nevada Chapter of the A.I.A., November 10, 1983.

"A User-Friendly Computer-Aided Energy Conserving Design System," presented at the Seminar on Energy Analysis Computer Programs - The User Interface, <u>ASHRAE National Conference</u>, Atlanta, Georgia, January 20 - February 1, 1984.

SOLAR-5 Users Manual, A Friendly Computer-Aided Passive Solar Design Tool, with Ron Emanuele, Redha Benbouali, Yasuo Endo, Rosemary Howley, Ranjit Makkuni, UCLA Graduate School of Architecture and Urban Planning, 134 p., March 1984.

<u>SOLAR-5 Passive Energy Building Design Tool</u>, (NESC No. 9542) Software distributed by National Energy Software Center, later reorganized as the Energy Science and Technology Software Center, US/DOE, Office of Scientific and Technical Information, Oak Ridge, TN 37031.

"Computers in the Design Process", University of Oregon Evening Lecture Series, May 15, 1984.

"A Building Energy Design Tool that Draws Pictures of Thermal Performance", <u>CAMP-84</u> <u>International Conference on Computer Graphics Applications in Management and Productivity and Planning</u>, Berlin, West Germany, (received award for Best Technical Presentation) September 1984.

"Ten Principles for the Design of User-Friendly Design Tools", <u>Proceedings of the First National Conference on Microcomputer Applications for Conservation and Renewable Energy</u>, Tucson, Arizona, February 1985.

"Critique of `Learning Intuitive Passive Solar Design'", in <u>Architecture, Energy and Education, Case Studies in the Evaluation of the Teaching Passive Design in Architecture Workbook Series, by Robert G. Shibley, Laura Poltroneri and Ronny Bosenberg, The Association of Collegiate Schools of Architecture, February 1985.</u>

"Interview: UCLA Professor Murray Milne", <u>Computer Aided Design Journal</u>, Japan, (in Japanese), January 1986.

"A Micro-Computer Design Tool for Learning Energy Conservation", <u>Proceedings of the IBM Academic Information Systems Advanced Education Project Conference</u> (IBM/AEP), San Diego, April 1986.

"The Passive Solar Sunset: Predicting Our Own Demise", Guest Editorial, <u>Passive Solar Journal</u>, Guest Editorial, Vol. 3., 1986.

"Natural Light in Buildings", slide lecture presented in the Southern California Edison Daylighting Design Workshop Series.

November 8, 1985 at Santa Barbara November 22, 1985 at UCLA

July 18, 1986 at Catalina Island August 8, 1986 at Laguna Niguel May 25, 1990 at Beverly Hills

"Daylighting Design Tools: I and II", Session Chairman and Technical Review Referee, Second International Daylighting Conference, Long Beach, California, November, 1986.

"Fenestration Design Tool: A Micro-Computer Program for Designers", with Gregg P. Ander and Marc Schiler, <u>Proceedings of The Second International Daylighting Conference</u>, Long Beach, California, November, 1986.

Micro Computer Design Tools described by other authors in:

- "Book Reviews, Energy Resources That Last", Tom Vonier, <u>Journal of Architectural Education</u>, Vol. 37, No. 3/F, Spring/Summer 1984.
- <u>Pioneers of CAD in Architecture</u>, edited by Alfred M. Kemper, Hurland Swenson Publishers, 1985.
- "The New Software: Math for Architects, Staging for Hamlet, and Inter Graphic Examples", <u>Journal of Higher Education</u>, July 2, 1986.
- <u>CADD Made Easy</u>, A <u>Comprehensive Guide For Architects and Engineers</u>, Anthony Radford and Garry Stevens, McGraw-Hill Book Company, 1987.
- Computer Daily, p. 7, Vol. 16, 100, 55, March 24, 1987.
- "Polite Software is Sensitive to Human Feelings, UCLA Architect Creates computer Program for 'Right-Brained Thinkers'," by Tom Tugend, UCLA News, March 1987.
- "Los Angeles Computer Program Created for 'Right-Brained Thinkers',
- "Report of The President of the University to the Regents of the University of California, p. 25, 26, May 15, 1987.
- "GSAUP Professor Designs Energy Analysis Program", <u>Architecture and Planning</u>, p. 20-21, Fall 1987.
- "Refining Window Energy Performance", Richard Rush, <u>Building Design and Construction</u>, p. 148-153, December 1987.
- "SOLAR-5: Computer Program for Architects" National Awards Program for Energy

 <u>Innovation Project Descriptions 1987</u>, United States Department of Energy,

 DOE/CE-OZ14, May 1986.
- "The Computer Department", David Lord, Architectural Lighting, December 1987.
- "Toward More Energy-Efficient Buildings A Menu of Micro Computer Software Tools," Marilyn Brown and Richard Braun, <u>Building Design and Construction</u>, 1988.
- "Murray Milne Wins Software Award", ACADIA Newsletter, vol. 7, no. 3, June 1988.
- "Software Reviews: Daylighting and Energy Analysis Programs", David Lord, <u>Architectural Lighting</u>, August 1988.
- "SOLAR-5: Computer Program for Architects", <u>California Awards for Energy Innovation</u>, California Energy Commission, February 1990.

- "From Research to Practice", <u>ACADIA Newsletter</u>, Vol. 9, no. 5, October 1990.
- Total Teach: Meeting Review, ACADIA Quarterly, Richard Rush, V. 12, No.4, Fall 1993
- "CAD at New Jersey Institute of Technology", Glen Golden and Stephen Zdepski, <u>ACADIA Newsletter</u>, Vol. 9, No. 5, October, 1990.
- "CAD Goes to College", B.J. Novitski, Architecture, January, 1991.

<u>SOLAR-5 Users Manual</u>, (Micro-Computer Program) with Rosemary Howley and Den Wun Lin, Funded by the U.S. Department of Energy, 89 pages and two floppy disks, Graduate School of Architecture and Urban Planning, UCLA, August 1986.

<u>DAYLIT</u>, <u>Users Manual</u>, (Micro Computer Program, Beta Test Version), with Marc Schiler, Rosemary Howley, Cherng-Rong Sheu, Shang-Jean Hwang, Kwok Chan, funded by Southern California Edison, Graduate School of Architecture and Urban Planning, UCLA, 60 pages and two floppy disks, September 1986.

<u>DATALIT Users Manual</u>, (Micro Computer Program, Beta Test Version), with Olga Popovic, C. Andrew Cooke, and Chris Landis, funded by Southern California Edison, Graduate School of Architecture and Urban Planning, UCLA, 38 pages and one floppy disks, 1987.

"Heating Strategies in Indigenous Scandinavian Dwellings," with Barbara Pillsbury, presented at the <u>International Conference on Traditional Dwellings and Settlement Patterns</u>, Berkeley, California, March, 1988.

"Climate Consultant, A Micro-Computer Program to Aid Architectural Design," with Mark Clayton, Alex Acenas, and Yon Kim presented at the <u>Third National Conference on Microcomputer Applications in Energy Conservation</u>, Tucson, Arizona, November, 1988.

"SOLAR-5 Update: Work in Progress for the New Release", with Michael Vasser and Vijay Sehgal, Proceedings of the <u>Third National Conference on Microcomputer Applications in Energy Conservation</u>, Tucson, Arizona, November, 1988.

"Computers: Round Table Tackles the Difficult Issues," a two-part series, based on an invited panel with ten others, Architectural Record, February, 1989 and April 1989.

"Teaching Building Climatology: SOLAR-5 and a Few Other Energy Models", day-long workshop, ACSA Summer Energy Educators Institute, sponsored by U.S. Department of Energy, University of Washington, Seattle, Washington, July 1989.

"A Passive Solar Energy Program for PMDG, Predictive Model for Direct Gain", with Kechung Chou, Abdullah Kassim, and Baruch Givoni, Proceedings of the <u>Fourth National Conference on Microcomputer Applications in Energy</u>, Tucson, Arizona, April 1990.

"OPAQUE, a Microcomputer Tool for Designing Climate Responsive Opaque Building Elements," with Nassar Aboulela, Proceedings of the <u>Fourth National Conference on Microcomputer Applications in Energy</u>, Tucson, Arizona, April 1990.

"Energy Conserving Design Curriculum (ECDC)": One of three consultants retained by AIA Research Corporation to write the AIA National Professional Development Program, 1990-91.

"Tools for Designing Climate Responsive Buildings" with Tarek Labib, Proceedings of the <u>Acadia '90 Conference</u>, Association for Computer Aided Design in Architecture, Big Sky, Montana, October 6, 1990.

"Lighting Education," Panel Member, Lighting World Conference, Los Angeles, California, October 20, 1990.

"Content-Based Graphic Input System", with Yasuo Endo and Shinji Akimichi, Fourth International Conference on Computing in Civic and Building Engineering, Tokyo, July 1991.

"Interactive Graphic Input for Daylighting and Energy Simulation", with Marc Schiler, <u>Proceedings of the American Solar Energy Society Conference</u>, Denver, July 1991.

"Design Tools: Future Design Environments for Visualizing Building Performance," Proceedings of the <u>CAAD Futures '91</u>, <u>International Conference for Computer Aided Architectural Design</u>, Gerhard Schmitt, Editor, Zurich, Switzerland, July 1991.

"An Interactive Graphic Interface for Daylighting Design with SUPERLITE", with Marc Schiler and Upadi Yuliatmo, <u>International Building Performance Simulation Association</u>, Second World Congress, Nice, France, August 1991.

"Virtual Reality", session chairman and technical review referee, ACADIA 91, The Association for Computer-Aided Design in Architecture, National Conference, Los Angeles, California, October 1991.

"Designing Climate Responsive Buildings," presented at the Australia Design Seminars, at the College of Fine Arts, University of New South Wales, Sidney, July 19, 1992, and at the Royal Melborne Institute of Technology, July 29, 1992.

"Designing the Well Tempered Museum: Computer Models and Design Tools", <u>Proceedings of the Expert's Workshop on Appropriate Design and the Use of Alternative Technologies in Environmental Control for Cultural Institutions with Special Reference to the Tropics, The Getty Conservation Institute, October 17-18, 1992</u>

"Modeling" session chair, and technical review referee ACADIA '92, Association for Computer-Aided Design in Architecture Conference, Charleston, South Carolina, October 1992.

"Integrating Design and Technology, a New Paradigm for the 21st Century", <u>Proceedings of the Association of Collegiate Schools of Architecture Western Regional Conference</u>, San Luis Obispo, California, October 1992.

"A Design Tool For Picturing Energy Costs", <u>Proceedings of ASES 93, American Solar Energy Society Conference</u>, Washington, D.C., April 28, 1993.

"Micro-Computer Design Tools," Presentation at Total-Teach, AEC Systems Conference, Anaheim, CA, June 1993.

"Context Based Graphic Input System," with Yasuo Endo and Shinji Akamichi, <u>HCI '93, Human Computer Interaction Proceedings</u>, Orlando, Florida, August 1993.

"Tools for Designing Climate Responsive Buildings, <u>Progressive Architecture</u>, August 1993.

"Climate Consultant 2.0: A New Design Tool for Climate Responsive Design", with Yung-Hsin Li, <u>Proceedings of the Association of Collegiate Schools of Architecture Technology Conference</u>, Ann Arbor, MI, January 1994.

"Design Tools Workshop: SOLAR 5.2 and Climate Consultant", with Carlos Gomez, <u>Proceedings of the Association of Collegiate Schools of Architecture Technology Conference</u>, Ann Arbor, MI, January, 1994.

"Software Applications in Environmental Technology", Session Chairman, <u>Proceedings of the Association of Collegiate Schools of Architecture Technology Conference</u>, Ann Arbor, MI, January, 1994.

"Office Lighting Design in the United States," <u>Proceedings of the Duality of Interior Lighting Seminar</u>, China Junior College of Industrial & Commercial Management, Taipei, Taiwan, May 28, 1994.

"High-Mass Buildings in Hot Humid Climates: Two Historical American Prototypes", <u>Proceedings of the Passive and Low Energy Association Conference (PLEA)</u>, Dead Sea, Israel, July 1994.

"Visualizing the Passive Performance of Windows," Murray Milne and Carlos Gomez, <u>Proceedings of Passive and Low Energy Association (PLEA)</u>, Dead Sea, Israel, July 1995.

"SOLAR2", "SOLAR5", and "Climate Consultant", in the <u>Total Teach CDRom</u>, Richard Rush Editor, Published by the National Institute of Building Science, Washington, D.C. 1995

"Lessons from Asia/Pacific Vernacular Buildings", <u>Proceedings of the International Symposium on Asia Pacific Architecture</u>, University of Hawaii East-West Center, March 22-25, 1995

"Vernacular Appropriateness in Architecture" Symposium, International Symposium on Asia Pacific Architecture, University of Hawaii East-West Center, March 22-25, 1995

"Taking a Building's Temperature: Measured Vs. Simulated Performance", <u>Vital Signs Project</u>, presented at the SBSE Summer Workshop, PG&E Energy Center, San Francisco, August 2-5, 1995

"Proposal for a National Academy of Architectural Science", <u>Proceedings of the European Association of Architectural Education (EAAE)</u>, Delft, Holland, February, 1996

"Picturing the Hidden Environmental Benefits of Passive Building Design Decisions", with Carlos F. Gomez and Guillemette Epailly, <u>ASES-96: Proceedings of the 1996 American Solar Energy Society Conference</u>, Ashville, North Carolina, April, 1996

"Designing High Performance Buildings", Hands-on Computer Workshop for Design Professionals, Presented at the American Solar Energy Society Conference in:

Ashville, North Carolina, April, 1996 Washington, D.C., April, 1997 Portland Maine, June 17, 1999 Madison, Wisconsin, June. 2000 June 18, 2002, Reno, Nevada June 2003, Austin, Texas June 2004, Portland Oregon

"Air Pollution Implications of Building Design Decisions", Presentation at the South Coast Air Quality Management District (SC-AQMD), May, 1996

"www.aud.ucla.edu/energy-design-tools", Web Site to allow free downloading of all the Energy Design Tools developed at UCLA, 1996

"Solar-5 at the University of California at Los Angeles", by Nancy Soloman, <u>Architecture</u>, August, 1996

"New Developments in SOLAR-5.4; Modeling the Performance of the Rocky Mountain Institute Home Office", Seminar Presented at the National Renewable Energy Laboratory, Golden, Colorado, February, 1997

"Designing a Sustainable Library for Oak Park: Modeling Air Pollution and Energy Performance", <u>Proceedings of the American Solar Energy Society Conference (ASES)</u>, Washington, D.C., April, 1997

"Students Talk Back: Experiences using a 'User-Friendly' Energy Design Tool", Forum Organizer and Moderator, American Solar Energy Society Conference (ASES), Washington, D.C., April, 1997

"Designing High Performance Buildings", Hands-on Computer Workshop for Design Professionals, Presented at SBSE-97, Society of Building Science Educators, Santa Barbara, California, July 11, 1997

"Design for a Sustainable Future", Presentation with Catherine McGuire, AIA, at the 1997 AIA Central States Region Convention, Des Moines, Iowa, October 17, 1997

"Designing High Performance Solar Buildings", Workshop presented with Professors Nate Krug and William Bonner of the University of Nebraska, at the Joslyn Castle Institute for Sustainable Communities, Omaha, Nebraska, November 14, 1997

"Bioclimatic Design", with Donald Watson, Chapter 3 in <u>Time Saver Standards</u>, 7th Edition, McGraw Hill, 1998

"Daylight Prediction Techniques in Energy Design Tools", with Jennifer Zurich, <u>Proceedings of the International Daylighting Design Conference</u>, Ottawa, May 10-13, 1998

"Energy Conservation Design Recommendations", Oak Park Library Project, for Fields Devereaux Architects and Engineers, Los Angeles, October 5, 1998

Visiting Curriculum Review Committee, Department of Architecture, University of North Carolina Charlotte, February 12-13, 1999

"Picturing Thermal Comfort in Vernacular Architecture", Aga Kahn Program for Islamic Architecture at Harvard and Massachusetts Institute of Technology, March 15, 1999

"Planning for a State-of-the-Art Office", quoted by Katherine Salant, syndicated, page K6, Los Angeles Times, Sunday, April 18, 1999

"An Internet Tool for Designing Energy Efficient Homes", with Carlos Gomez, et.al., <u>Proceedings of the American Solar Energy Association Conference</u>, Portland, Maine, June 13-16, 1999

"Advanced Technical Education in the New Millennium; The Academy of Architectural Sciences, a New Post-Graduate Virtual University", <u>Proceedings of the Association of Collegiate Schools of Architecture Technology Conference</u> (CD Rom), Montreal, Quebec, June 27-30, 1999

"Project REED: Building Performance Simulation for the Masses", with Carlos Gomez, et.al., <u>Proceedings of the International Building Performance Simulation Association Conference</u>, Kyoto, Japan, September 13-15, 1999

"ENERGY MORPH, an Animated Design Tool", with Carlos Gomez, Yoshi Kobayashi, Proceedings of the American Solar Energy Society, Madison, Wisconsin, June. 2000

"Can the Internet Help Create Energy Efficient Housing on a Global Scale", with Carlos Gomez, Yoshihiro Kobayashi, <u>Proceedings of PLEA 2000, the Passive and Low Energy Architecture Association</u>, Cambridge, England, July 2000

"Teaching Issues, Tools, and Methodologies for Sustainability", <u>Proceedings of TIA 2000</u>, The Conference on Technical Instruction in Architecture, Oxford, England, July 10-12, 2000

"A Drag-and-Drop Energy Design Tool", with Carlos Gomez, Yoshihiro Kobayashi, Jennifer Zurich, Deborah Weintraub, Hernando Miranda, <u>Proceedings of the American Solar Energy Society</u>, April, 2001

"Designing High Performance Buildings Using HEED and SOLAR-5 Workshop", presented for the City of Los Angeles Architectural Division, Sustainable Design Implementation Program, June 8, 2001

- "Strategies to Visulaize the Cooling Performance of Buildings", with Carlos Gomez, and Yoshihiro Kobayashi, <u>Cooling Frontiers</u>, the <u>Advanced edge of Cooling Research and Applications in the Build Environment</u>, College of Architecture and Environmental Design, Arizona State University, October, 2001
- "HEED, Home Energy Efficient Design", with Carlos Gomez, Yoshihiro Kobayashi, Jennifer Zurick, Deborah Weintraub, Hernando Mmiranda, <u>Proceedings of PLEA 2001</u>, the <u>Passive and Low Energy Architecture Association</u>, Florianopolis, Brazil, November 2001
- "A Climate Responsive School in Southern California", with Pablo La Roche, Andrew Obermeyer, Rodrigo Rivero, Katharina Schendl, and Alan Locke, <u>Proceedings of PLEA 2001</u>, the Passive and Low Energy Architecture Association, Florianopolis, Brazil, November 2001
- "Visualizing Building Energy Performance" and "Designing Your Own High-Performance Building", presented at the Municipal Green Building Conference and Expo, March 19, 2002, Sponsored by the U.S. Green Building Council and Southern California Gas Company.
- "Designing High Performance Buildings with HEED", Workshop presented at ED6, EnviroDesign 6, April 4, 2002, Seattle, Washington
- "Climates of Southern California", presented for the Los Angeles Committee on the Environment, May 16, 2002 (special tool created:www.aur.ucla.edu/energy-design-tools: Climate Consultant-SC).
- "HEED Succeds Solar-5", (describing experience using HEED), by Bruce Haglund, University of Idaho, <u>Home Energy</u>, May/June, 2002
- "Using HEED to Design Energy Efficient Affordable Housing", with Carlos Gomez, Yoshi Kobayashi, Tim Kohut, and Paki Muthig, <u>Proceedings of ASES 2002</u>, June 18, 2002, Reno, Nevada
- "Designing High-Performance Buildings", Computer-based Workshop presented at the Second Annual Municipal Green Building Conference and Expo, April 2, 2003, Sponsored by the U.S. Green Building Council and Southern California Gas Company.
- "Heeding the Needs of Home Improvement Decision-Makers", with Carlos Gomez, and Pablo LaRoche, <u>Proceedings of the American Solar Energy Society 2003</u>, June 2003, Austin, Texas
- "Effects of Window Size and Mass on Thermal comfort Using an Intelligent Ventilation Controller", with Pablo LaRoche, <u>Proceedings of the American Solar Energy Society 2003</u>, June 2003, Austin, Texas

- "Sizing Skylights for Daylighting Landscaping in an Atrium", with James Weiner, <u>Proceedings of the American Solar Energy Society 2003</u>, June 2003, Austin, Texas
- "HEED, A Free User-Friendly Design Tool for Optimizing Energy Performance in Small Buildings", with James Weiner, Poster, U.S Green Building Council Conference, November, 2003, Pittsburg, PA
- "Using HEED to Design Energy-Efficient Affordable Housing", with Tim Kohut, <u>Home Energy Journal</u>, Spring 2004
- "Customizing HEED for a Small Utility District", with Jim Barnett, and Carlos Gomez, and Pablo LaRoche, <u>Proceedings of the American Solar Energy Society 2004</u>, June 2004, Portland Oregon
- "Automatic Sun Shades, An Experimental Study", with Pablo LaRoche, <u>Proceedings of the 2004 American Solar Energy Society Conference</u>, June 2004, Portland Oregon
- "Effects of Window Size and Thermal Mass on Building Comfort Using an Intelligent Ventilation Controller", with Pablo LaRoche, <u>Solar Energy Journal</u>, Elsevier, 77 (2004) p421-434
- "A Free User-Friendly Design Tool that Shows How To Reduce Cooling Energy in Buildings," with Carlos Gomez, Pablo LaRoche, and Jessica Morton, <u>Proceedings of the International Cooling Conference</u>, May 2005, Santorini, Italy
- "Effects of Combining Smart Shading and Ventilation on Thermal Comfort, with Pablo LaRoche, <u>Proceedings of the 2005 American Solar Energy Society Conference</u>, August 2005, Orlando, Florida

Why Design Matters: Comparing Three Passive Coolingt Strategies in Sixteen Different Climate Zones, with Carlos Gomez, Pablo LaRoche, and Jessica Morton, <u>Proceedings of the 2005</u> <u>American Solar Energy Society Conference</u>, August 2005, Orlando, Florida

Energy Efficient Affordable Housing; Validating HEED's Prediction of Indoor Comfort, with Jessica Morton and Tim Kohut, , <u>Proceedings of the 2006 American Solar Energy Society Conference</u>, July 2006, Denver Colorado