

## PONGSAK CHAISUPARASMIKUL

International Assoc. AIA, Registered architect in Thailand, ASHRAE ISES, ASES

### **OBJECTIVE:**

Design, analyze and consult the sustainable and environmental responsive projects while utilize the specialized skills in computation energy simulation models. My goal is to provide human beings with the highest quality of living and working conditions and comfort without harmful to the natural environment, using the innovative sustainable design solutions for the buildings, urban environment and landscape, through the energy efficiency, energy cost budget, and programming.

### **EDUCATION:**

PhD in Architecture, Illinois Institute of Technology, Chicago, Illinois, expected graduation December 2004: Dissertation; "Software Program to Visualize Energy Efficient Design in Building".

Master of Science in Community and Regional Planning, The University of Texas at Austin, Texas, September 1979-December 1981

Bachelor of Architecture, The University of Texas at Austin, Texas: September 1974-May 1979

1998-2004: Illinois Institute of Technology, Chicago, Illinois, received the distinguished recommendation from the Energy Research Institute (ERI) in Thailand. *Teaching Assistant* at the College of Architecture, Energy Efficient Building Design (2003-2004), Mechanical and Electrical System I, II for Architects (1999-2004), Structure II for Architects (1999)

June 18, 2004; Sustainable Building Design: Application of Natural Ventilation using Computational Fluid Dynamics Short Course for Designers, BP Naperville, Illinois, U.S.A.

May 1-30, 2004: PhD course in Solar Heating as a Renewable Energy, Riga Technical University, Riga, Latvia.

June 1-30, 2003: PhD course in Solar Heating as a Renewable Energy, Denmark Technical University, Lyngby, Denmark.

October 2-November 20, 2003: Heating, Ventilating Air Conditioning and Refrigeration Seminars, Illinois, U.S.A.

### **WORKING EXPERIENCES:**

#### **In U.S.A. (2000-2004)**

2003-2004: College of Architecture, Illinois Institute of Technology, Chicago, IL, perform the energy model and simulation of the Chicago Center for Green Technology, this city owned building has received LEED's certified platinum award, located at 445 N. Sacramento, Chicago, IL. Energy modelling used DOE-2.1E, e-Quest and Power-DOE, compared with monitoring and verification with measurement.

2001-2002: Facilities Research Inc., Chicago, IL, perform the energy analysis and simulation model of the Loyola University's 10 existing retrofit buildings, which include 25E.Pearson, Damen, Cudahy, Skyscraper, Sullivan, and Illinois Institute of Technology's 16 existing buildings, which: were included Crown Hall, Engineering-1, Main building. Energy modeling used DOE-2.1E and converted the input model into DOE-2.2; the front-end softwares were e-Quest and Power-DOE. Results were energy uses and the ability to identify the problems and potential of energy savings justification for the energy cost budget and lifecycle cost.

2000: Skidmore Owings and Merrill, Chicago, IL, perform the energy analysis and simulation model of the newly design Long Center for the Performing Art, Austin, Texas, which is a green building, and the Electronic Art Center, California, which is an office building Energy modeling used DOE-2.1E engine. First simulate the load profiles with HCCV program, and then perform detailed energy simulation with DOE2.1E in order to evaluate energy performance and demand impacts.

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### In Thailand (1982-1998)

1994-1998: PA Consult and Design Company Limited, Bangkok: *Senior Architect*, responsible for the architectural design with environmental concept and design development. Projects were included the "Veloil" Oil Lubrication Factory, the "Best Care" Health Care Facilities for elderly and children, the three Private Residences, the master plan proposals for three Regional Government's Centers, and the design proposal for the Neighborhood Community Housing Projects in old historical part of Bangkok..

1993-1996: Projects System International (Thailand) Company Ltd, and Sathorn Thani Company Ltd., Bangkok: *Project Consulting*, responsible for the construction development of the "Tisco" Financial and Office building, located at the central new downtown of Bangkok; "Rangsit Market" at the northern suburb of Bangkok, and interior planning and supervision of the Regent Hotel's 163 guestrooms renovation.

1991-1993: Pesik International Inc., Bangkok: *CAD Consultant*, responsible for developing the customization of AutoCAD application (AutoLisp), for the purpose of improving the design process through improving the method and process of producing the working drawings and specifications. Project were included the "Bann Taling Ngam" Resort and Hotel, located in the Samui Island, southern part of Thailand.

1989-1991: Santaya and Associates Company Ltd, Bangkok: *Architect*, responsible for the architectural preliminary design and design development. Projects were included the "Kakkanang" Medical Hospital, university owned hospital in the central part of Bangkok, and the master plan for the "Ratanakosintr" Country Club. Supervised the project drawings and specification; explained the architectural and technical issues to the clients and consultants, and clarified the detail drawings to the contractors.

1987-1989: Consultants of Technology Company Ltd., Bangkok: *Junior Architect*, responsible for the architectural design, design development, specifications writing, and detail drawings. Projects were included the three residential Condominiums, the "Jaesorn" National Park's Tourist Country Club, in Lampang Province.

1982-1987: Department of Town and Country Planning: *Urban Planner*, responsible for the design master plan of the Bangkok Metropolitan Region, City of Pattaya, and City of Lampang. Implement the master plan for the City of Lampang. Draw up the codes and regulations that would enforce the plan. Present the plan to the public and authorities.

### SKILLS AND EXPERTISES:

Analyzed the energy efficiency and energy cost budget, and perform the simulation models for the building and environmental design, both quantitative and qualitative performance based simulation, to offer the new approach of design.

Design computing as the numbers in energy efficiency and sustainable design. Use parametric and macro models for the design schemes would be able to help in making the better design and execution of the project.

Developed the method that used results from monitoring-verification to compare with the computer models.

Created the solar energy and daylight prediction models, wrote the customized models and ran the simulation on DOE-2.1E, converted to DOE-2.2 as a processor engine, brought the simulation results into the statistical modeling SPSS, analyzed the results, and created the new model.

### Method

Used e-Quest and Power-DOE, which are the DOE-2.2 software program, as a preprocessor and graphics input data, wrote the customized models in DOE-2.1E, converted to DOE-2.2 and ran the

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simulation on as a processor engine, brought the simulation output results into the data base or output post-processor. Wrote the program in Visual Basic and Basic programming to create the new software program that is capable to interface and visualize all the graphic results.

### **ACADEMIC EXPERIENCES IN U.S.A., NORTHERN EUROPE AND THAILAND:**

1993-1998: *Studio Professor*, Rangsit University; Faculty of Architecture, developed the courses and taught the architectural design using CAD Bentley's Microstation, the software program that collaborate with Bentley's group from Malaysia.

1987-1989: *Visiting Professor*, Khon-Kaen University; Faculty of Architecture, taught the architectural design.

### **RESEARCH SKILLS ON ENERGY EFFICIENT AND SUSTAINABLE DESIGN**

1. "The Solar Energy Prediction Model incorporated Day Lighting using Hypothetical Module", Paper for ISES Solar World Congress, Gothenburg, Sweden, June 14-19, 2003. Simplified Building Energy Performance Prediction by Modeling and Simulation. About the Topic: Solar Energy prediction model is a model designed to calculate solar energy performance due to the architectural input parametric change. Architects can quickly manipulated their designs and study of many alternative solutions. Design of solar radiation energy incorporated day lighting allows the balancing loads between interior lighting, heating and cooling energy. Abstract and Paper.
2. "The Solar Radiation Measurement and Modeling: A Review State of the Art", Department of Civil Engineering, Technical University of Denmark, Lyngby, Denmark, June 20-28, 2003. Solar Radiation Measurement and Modeling. About the Topic: The purpose of this report was to work out a state of the art review report based on the subject "Solar Radiation Measurement and Modeling"
3. "Selection of Materials for Energy Conservation", Paper for Conference on Energy and Environment, Bangkok Convention Center, Central Plaza Hotel, Bangkok Thailand, October 18 1997.
4. "Effects of Thermal Mass and Insulation on Energy Conservation", Paper for Conference of Building Energy Conservation Code Practice, Sol Twin Hotel, Bangkok Thailand, September 12 1995.
5. "The Research Experiment of Various Wall Types by Comparing inside the Experimental Chamber Controlled Temperature" 1998 (Unpublished).
6. "Implementation of the Master Plan Process and Execution of the Specific Plan", Department of Town and Country Planning, Ministry of Interior, 1989 (Unpublished).

### **PROFESSIONAL REGISTRATION AND AFFILIATIONS:**

Registered Architect in Thailand.

International Associate Member, American Institute of Architect (AIA)

Associate Member, American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)

Member, International Solar Energy Society (ISES)

Member, American Solar Energy Society (ASES)

**PONGSAK CHAISUPARASMIKUL**

International Assoc. AIA, Registered architect in Thailand, ASHRAE ISES, ASES

Life Time Member, Association of Siamese Architect under Royal Patronage

**AWARDS, HONOR AND SCHOLAR:**

Received the distinguished recommendation from the Energy Research Institute (ERI) in Thailand, 1998

Elected as Chairman for the Board of Special Program, Council of the Faculties, Khon-Kaen University

Invited as a joint Lecturer for the seminar “Project Planning and Construction Management”; Organized by Simon Lim Research Institute, Bangkok, Thailand, 1994.

Received the grant from the Japan Society for the Promotion Science (JSPS) to conduct the research study survey on Urban Development and Redevelopment Projects of the following Japanese cities, Kyoto, Osaka, Kobe, Senri NewTown and Tokyo, Japan, 1989.

Received the Certificate of Appointment for serving as an Austin On Going Goals Assembly Committee member; City of Austin Council, Austin, Texas, U.S.A., 1980.

**REFERENCES**

Available upon Request