

<b>{ TC "BIBOGRAPHY" \ 1 } BIBLIOGRAPHY</b>

Al-Ibrahim, A.M.. Ph.D. Thesis, Mechanical Engineering, University of Wisconsin-Madison (1996). "Optimal Selection of Direct-Coupled Photovoltaic Pumping System in Solar Domestic Hot Water Systems."

Alghuwainem, S. M., (1992) "Steady-State Performance of DC-Motors Supplied from Photovoltaic Generators with Step-Up Converter," *IEEE Transactions on Energy Conversion*, Vol. 7, No. 2, June.pp. 343-349

Anis, W. R. and Metwally, H. M. B.. (1994) "Dynamic Performance of a Directly Coupled PV Pumping System," *Solar Energy*, Vol. 53, No. 4, pp. 369-377.

Anis. W. R. Mertens. and R. Vas Overstaeten, (1985) Coupling of a volumetric pump to a photovoltaic array, *Solar Cell Vol*14, pp.27-42 .

Appelbaum J. and J. Bany, (1979) Analysis of a direct coupled DC motor and a photovoltaic converter. *1st commission of European Community Conf. on Photovoltaic Solar Energy*. Luxembourg, Sept. 27-30, Reidel. Dordrecht. Netherlands

Appelbaum J. and J. Bany. (1979) "Performance analysis of DC motor photovoltaic converter system-I". *Solar Energy Vol*22, pp.439-445

Appelbaum, J.. (1986) "Starting and Steady-State Characteristics of DC Motors Powered by Solar Cell Generators," *IEEE Transactions on Energy Conversion*, Vol. EC-1, No. 1, March, pp. 17-25.

Appelbaum, J.. (1987) "The Quality of Load Matching of a Direct-Coupling Photovoltaic system,"*IEEE Transaction on Energy Conversion*, Vol. EC-2, No. 4. pp. 121-126

Appelbaum, J., and Bany, J., "DC Motor Characteristics From Solar Cell Supply," (1977) Photovoltaic Solar Energy Engineering Conference, Luxembourg, 1977, pp. 1243 - 1252.

Appelbaum, J., Chait, A., and Thompson, D. (1991) "Parametrization of Solar Cells and Array," *Proceedings of the ISES Conference*, Denver, Colorado, pp. 283-288.

- Appelbaum, J..(1981) "Performance Analysis of DC-Motor-Photovoltaic Converter System-2, Series and Shunt Excited Motor," *Solar Energy*, Vol. 27, pp.23-30
- Appelbaum, J.. (1986) "Starting and Steady-State Characteristics of DC Motors Powered By Solar Cell Generators," *IEEE Transactions on Energy Conversion*, New York, NY, EC-1, no.2, pp.17 - 25,
- Balasubramanian, V.. (1992) "Important Aspects of Configuring Stand-Alone Solar Photovoltaic Water Pumping Installations to Achieve High Reliability and System Efficiency," *6th International Photovoltaic Science and Engineering Conference*, New Delhi, India, pp. 963-968.
- Beckman, W. A., Thorton, J., Long, S. and Wood, B. D., (1994) "Control Problem in Solar Domestic Hot Water Systems," *Solar Energy*, Vol. 53, No. 3, pp. 233-236.
- Bendt, P., Collares-Pereira, M., and Rabl, A..(1981) "The Frequency Distribution of Daily Insolation Values," *Solar Energy*, Vol 27, No.5, pp. 23-28
- Braunstein, A. and Kornfeld, A., (1981) "Analysis of Solar Powered Electric Water Pumps," *Solar Energy*, Vol. 27, No. 3, pp. 235-240.
- Bucciarelli, L. L., et al., (1980) "The Energy Balance Associated with the Use of a Maximum Power Tracer in a 100-KW-Peak Power System," *14th IEEE Photovoltaic Specialist Conference*, San Diego, California, pp.1120-1127
- Burden, R. L., and Faires, J. D.. *Numerical Analysis*, Third Edition, Prindle, Weber & Schmidt, Boston, 1985.
- Buresch, M., *Photovoltaic Energy Systems*, McGraw-Hill, New York, 1983
- Chaurey, A., Sadaphal, P. M. and Tyagi, D.. (1992) "Performance evaluation of PV pumping system," *RERIC International Energy Journal*, Vol. 14, No. 2, December, pp. 57-63.
- Cheney, W. and Kincaid, D., *Numerical Mathematics and Computing*, Brooks/Cole Publishing Company, Pacific Grove, California, 1985.
- Chowdhury, B. H., Ula, S. and Stokes, K., (1993) "Photovoltaic-Powered Water Pumping-Design, and Implementation - Case-Studies in Wyoming," *IEEE Transactions on Energy Conversion*, Vol. 8, No. 4, pp. 646-652.
- Collares-Pereira, M., and Rabl, A.. (1977) "The Average Distribution of Solar Radiation - Correlations Between Diffuse and Hemispherical and Between Daily and Hourly Insolation Values," *Solar Energy*, Vol.20, No.3, pp. 483 - 493

- Cromer, C. J.. (1983) "Sizing and Matching a Photovoltaic Circulation System with a Solar Domestic Hot water System," Florida Solar Energy Center, Cape Canaveral, Florida, Report No. FSEC-PF-29-83,
- Czarnecki, J. T. and Read, W. R. W.. (1978) "Advances in Solar Water Heating for Domestic Use in Australia," *Solar Energy*, Vol. 20, No. 1, pp. 75-80.
- Dankoff, W..(1991) "Pump it Up! Using Solar Water Pumping for Reliable Water Supply Beyond the Power Lines," *SunWorld*, Vol. 15, No. 1, pp. 12-15.
- Davidson, J. H. and Duff, W. S ., (1991) "Comparison of Experimental and TRNSYS SRCC Ratings of a Generic Drain Back Solar Water System," United State Department of Energy, DoE Report No. SAN16306-29.
- Diarra, N'to, Diarra, Mamadou and Traore, Cheickna. (1989)"PV Systems Operation and Maintenance in Mali," *Proceedings of the 9th E. C. Photovoltaic Solar Energy Conference*, Freiburg, Germany, pp. 1080-1083.
- Duffie, J. A. and Beckman, W. A., *Solar Engineering of Thermal Processes*, John Wiley & Sons Inc., New York, 1991.
- Dunlop J.P., (1988) "analysis and design optimization of photovoltaic water pumping systems, *20th IEEE PVSC*, pp. 1182- 1187, Las Vegas, Sept. 26-30, 1988
- Erbs, D. G., "Models and Applications for Weather Statistics Related to Building Heating and Cooling Loads," Ph.D. Thesis, University of Wisconsin-Madison, Solar Energy Laboratory, 1984.
- F-CHART, 1985, *F-CHART User Manual*, F-Chart Software, Middleton, WI.
- Fam, W. Z. and Balachander, M. K., (1988) "Dynamic Performance of a DC Shunt Motor connected to a Photovoltaic Array," *IEEE Transactions on Energy Conversion*, Vol. 3, No. 3, pp.241-248.September,1988.
- Fam, W. Z. and Goswami, P., (1992) "Simulation and Testing of a Photovoltaic SolarPowered Water Pumping Systems," *Energy Sources*, Vol. 14, pp. 265-272.
- Fan, J. C. C., (1988) "Theoretical Temperature Dependence of Solar Cell Parameters," *Solar Cell*, Vol. 17, pp. 309-315.
- Fanney, A. H. and Klein, S. A.. (1988) "Thermal Performance Comparisons for Solar Hot Water Systems Subjected to Various Collector and Heat Exchanger Flow Rate," *Solar Energy*, Vol. 40, No.1, pp. 1 - 11.

- Gansler, R. A., "Assessment of Generated Meteorological Data for Use in Solar Energy Simulations," M.Sc. Thesis, Mechanical Engineering, University of Wisconsin-Madison, 1993.
- Gonzalez, C., and Weaver, R., (1980) "Circuit Design Considerations for Photovoltaic Modules and Systems," *IEEE Photovoltaics Specialists Conference*, pp. 528 - 535.
- Green, M. A. and Emery, K.. (1993) "Solar Cell Efficiency Tables, Progress in *Photovoltaics: Research and Application*, Vol. 1, pp. 25-29.
- Hollands, K. G., D'Andrea, L. J. and Morrison, I. D.. (1989) "Effect of Random Fluctuations in Ambient Air Temperature on Solar System Performance," *Solar Energy*, Vol. 42, No. 4, pp. 335-338.
- Hori, A., Kanematsu, K., Abe, T. and Hamakawa, Y..(1985) "An Optimal Design of Photovoltaic Direct Coupled Water Pumping System," *Conference Record of the 18th IEEE Specialists Conference*, pp. 1626-1631.
- Hsiao, Y. R. and Blevins, B. A., (1984) "Direct Coupling of Photovoltaic Power Source to Water Pumping System," *Solar Energy*, Vol. 32, No. 4, pp. 489-499
- Imamura, M. S., Helm, P. and Palz, W., *Photovoltaic System Technology*, A European Handbook, Commission of the European Communities.1991
- Karassik, et al., (1976) *Pump Handbook*, McGraw-Hill Book Company, New York.
- Karassik, I. J., and Carter, R., *Centrifugal Pumps: Selection, Operation, and Maintenance*, F. W. Dodge Corporation, New York, 1960
- Khouzam, K. (1989) Optimum matching of the photovoltaic array to DC motors driving centrifugal pumps. *Proc. 9th PVSE Conf.* pp. 176-179
- Kiatsiriroat, T., Nampkakai, P. and Hiranlabh, J.. (1993) "Performance Estimation of a PV Water-Pumping Systems Utilizability Function," *International Journal of Energy Research*, Vol. 17, pp. 305-310.
- Kilfoyle, D., "A Numerical Analysis Method for Computer Modeling Photovoltaic I- V Curves," *Proceedings of the ISES conference*, Denver, Colorado, 1991.
- Klein, S. A. and Alvarado, F. L., *EES Engineering Equation Solver, f-Chart Software*, Middleton, WI.1994.
- Klein, S. A. et al., *TRNSYS Users Manual*, Version 14.1, University of Wisconsin Engineering Experimental Station.1994.

- Klein, S. A.. (1977) "Calculation of Monthly Average Insolation on Tilted Surfaces," *Solar Energy*, Vol.19. pp. 325-329.
- Koner, P. K., Joshi, J. C. and Chopra, K. L..(1992a) "Designing Versatility of Photovoltaic Water Pump," *6th International Photovoltaic Science and Engineering Conference*, New Delhi, India, pp. 941-946.
- Koner, P. K., Joshi, J. C. and Chopra, K. L..(1992b) "Matching Analysis of Photovoltaic Powered DC-Motors and Centrifugal Pumps by Varying Motor Constant," *International Journal of Energy Research*, Vol. 16, pp. 301-313.
- Kreider, J. F., and Kreith, F., *Solar Energy Handbook*, McGraw-Hill, New York, 1981,
- Landsman, (1988) " Maximum power point trackers for photovoltaic arrays", *Proceedings of the 1988 Annual Meeting*, ASES, pp. 409-417, Cambridge, MA,
- Liu, S. T., Shih, K. and Wood, B. D., (1978) "Experimental Validation of the Solar Simulation Program TRNSYS for a Solar Domestic Hot Water Heating System," *Proceedings of the DoE Symposium on Systems Simulation and Economic Analysis for Solar Heating and Cooling*, San Diego, June 27-29.
- Loferski, J. J.. (1972) "An Introduction to the Physics of Solar Cells," in *Solar Cells, Outlook for Improved Efficiency*, National Academy of Sciences - Space Science Board, Washington, DC, pp. 47-53.
- Loxson, F. and Durongkaveroj, P.(1994) "Estimating the Performance of a Photovoltaic Pumping System," *Solar Energy*, Vol. 52, No. 2, pp. 215-219.
- McQuiston, G, and Parker, J.D., *Heating, Ventilating, and Air Conditioning: Analysis and Design*, Third Edition, John Wiley & Sons, New York, 1988
- Menicucci, D. F., and Fernandez, J. P., *User's Manual for PVFORM: A Photovoltaic System Simulation Program For Stand-Alone and Grid-Interactive Applications*, Sandia National Laboratories report SAND85-0376 UC-276, 1988.
- Parker, G. J.. (1976) "A Forced Circulation System for a Solar Water Heating," *Solar Energy*, Vol. 18, No.7, pp. 475-479.
- Photovoltaics: A manual of design and installation for practitioners, Colorado Mountain College/Appropriate Technology Associates, Carbondale, Colorado, 1987.
- Polman et al., (1986) "A New Method for the Evaluation of Solar Cell Parameters," *Solar Cell*, Vol. 17, pp. 241-251.

- Rauschenbach, H. S., *Solar Cell Array Handbook: the Principle and Technology of Photovoltaic Energy Conversion*, Van Nostrand Reinhold, New York, 1980.
- Robert A. Kichak, (1979) " Standard Power Regulator for the Multimission Modular Spacecraft", *Proceeding of the 14th intersociety Energy Conversion Engineering Conf.* Aug. pp. 987-996
- Roger, J. A. et al., (1977) "Calculations and In Situ Experimental Data on a Water Pumping System Directly Connected to a 1/2 kW Photovoltaic Converter Array," *Proceedings of the first E. C. Photovoltaic Solar Energy Conference, Luxembourg*, pp. 1211-1220.
- Roger, J. A. (1979) 'Theory of the Direct Coupling Between DC Motors and Photovoltaic Solar Arrays,' *Solar Energy*, P: 193 - 198.
- Rosenblum, L., Practical Aspects of Photovoltaic Technology, Applications, and Cost ( Revised), Report prepared for National Aeronautics and Space Administration (NASA), Lewis Research Center, NASA CR-174963, 1985
- Saied, M. M. and Jabori, . (1989). Optimal solar array configuration and DC motor file parameters for maximum annual output mechanical energy, *IEEE Trans. Energy Convers*, 4, pp. 449-465
- Salameh, Z., and Taylor, D. (1990) " Step Up Maximum Power Point Tracker for Photovoltaic Arrays", *Solar Energy*, Vol 44, pp. 57-61
- Schaefer, J. F., and O'Mara, B. E., (1984) ' The PV-Battery Marriage Or Are You Losing Valuable Energy Because Of A Built-In Incompatibility?,' *Photovoltaics International*, April/May 1984, pp. 24-25.
- Sharma et al., (1993) "Prediction of Solar Array Power Output Based on Limited Measured Data," *Solar Energy Materials and Solar Cells*, Vol. 29, pp. 67-76.
- Sharp, K., (1978) "Thermal Stratification in Liquid Sensible Heat Storage," M. Sc. Thesis in Mechanical Engineering, Colorado State University, Ft. Collins .
- Shepherd, C. M., Design of Primary and Secondary Cells: II an Equation Describing Battery Discharge, *Journal of the Electrochemical Society*, s pp. 657-661, July 1965
- Singer S. and J. Appelbaum, "Starting characteristics of direct current motors powered by solar cells." *IEEE Tran. on Energy Conversion*, Vol. 8, No.1, Mar. 1993
- Smith, J. H., and Reiter, L. R., "An In-Depth Review of Photovoltaic System Performance Models," The American Society of Mechanical Engineers, 84- WA/Sol-12, 1984.

Solarjack Solar Pumping Products, *Manufacturer's Catalog*, Jadco Mfg., Inc., 102 W. 8th St., Safford, AZ, 1995.

"Stand-Alone Photovoltaic Systems: *A Handbook of Recommended Design Practices*," Sandia National Laboratories, SAND87-7023, 1988.

**Error! No index entries found.**Starr, M. R. (1983) "An assessment of the Prospects for Photovoltaics in Europe," *International Journal of Solar Energy*, pp. 35-41

**Error! No index entries found.**Stoecker, W. F., *Design of Thermal Systems*, McGraw Hill, New York, 1980, pp. 113- 119.

Streeter, V. L. and Wylie, E. B., (1985) *Fluid Mechanics*, Eighth Edition, McGrawHill, Inc., New York

Suehroke, H., (1988) "The Performance Prediction of Solar Thermal Systems," Ph.D. Thesis, University of Western Australia.

Sze, S. M., *Physics of Semiconductor Devices*, Wiley-Interscience, New York, 1981, pp. 649-652.

Tabarra, M. and Bowman, N. T., (1985) "The Effect of Load Profiles on Stratified Solar Storage Tanks," *Proceedings of the 9th conference of ISES*, Montreal, Canada, pp. 863-866

Townsend, T. U., (1989) "A Method for Estimating the Long-Term Performance of Direct-Coupled Photovoltaic System," M.Sc. Thesis, Mechanical Engineering, U. of Wisconsin-Madison.

Veissid, N., Da Cruz, M, and Andrade, A., (1990) "A Method for the Determination of the Standard Deviations of the Solar Cell I-V Characteristic Parameters," *Solar Cell*, Vol. 28, pp. 351-357.

Weinberg, I., Swartz, C. K., and Hart, R. E., (1987) "Radiation and Temperature Effects in Gallium Arsenide, Indium Phosphide, and Silicon Solar Cells," NASA-TM- 89870, .

Whitaker, C. M. et al.. (1991) "Effects of Irradiance and Other Factors on PV Temperature Coefficients," *Conference Record of the 21th IEEE Photovoltaic Specialists Conference*, pp. 608-613.

White, F., (1994) *Fluid Mechanics*, Third Edition, McGraw-Hill, Inc., New York.

**Error! No index entries found.**Wijesooriya, P. D. and Duffy, J. J., (1992) "Stand-Alone PV System Sizing Based on Both Solar and Reliability Uncertainties," *Proceeding of the 1992 Annual Conference ASES*, Cocoa Beach, Florida, pp. 58-62.

**Error! No index entries found.** Winn, C. B. (1993) "Controls in Active Solar Energy Systems," Appeared in Active Solar Systems, Edited by L. George., MIT Press, pp. 81-150.

**Error! No index entries found.** Wolf, M., and Rauschenbach, H., "Series Resistance Effects On Solar Cell Measurements," *Advanced Energy Conversion*, 3: 455 - 479, 1961.

**Error! No index entries found.** Zimmerman, H. G., and Peterson, R. G., An Electrochemical Cell Equivalent Circuit for Storage Battery • Power System Calculations by Digital Computer, Intersect, v *Energy Conversion Engineering Conference*, Vol., Paper 709071, 1970

**Error! No index entries found.** Zinger, Z. (1981) Optimum operation of a combined system of solar cell array and DC motor. *IEEE Trans. power apparatus system* PAS-100, pp. 1193-1197, .