

Chris Gueymard



Dr. Gueymard has been active in solar energy applications for 35+ years and he developed an internationally recognized expertise in the fields of solar resource assessment, solar radiation modeling, radiometry, and their applications for energy production or energy conservation in buildings.

Dr. Gueymard is a former Research Scientist at the Florida Solar Energy Center, and now president of Solar Consulting Services, based in Florida. He obtained a Ph.D. from the University of Montreal, Canada. His 160+ scientific publications include contributions to various textbooks, such as *Solar Energy—The State of the Art* (2001), *Solar Radiation and Daylight Models* (2004), *Modeling Solar Radiation at the Earth's Surface* (2008), and *Solar Cells and their Applications* (2010), as well as editorship of the forthcoming *Encyclopedia of Sustainability Science and Technology*.

For many years, he has collaborated closely with NREL on various projects, including the National Solar Radiation Data Base, the development of improved aerosol products for better irradiance prediction, and the characterization of solar radiation variability.

Some of the solar radiation models he has developed are being widely used by the international solar energy community. In particular, his work on spectral solar radiation has led to the successful development of the SMARTS radiative transfer model, which is at the core of spectral irradiance standards published by ASTM and IEC (for photovoltaic and other applications), and of spectral correction methods regularly used by the CPV industry for improved performance predictions of their high-efficiency multijunction cells.

He has been regularly serving on various technical committees for such organizations as ASHRAE, ASTM, CIE, ASES, and the National Fenestration Rating Council. He served as vice-chair of the annual Optical Modeling and Measurements for Solar Energy Systems conference of SPIE. He is also serving as referee for the European organization for CSP research (SOLLAB/SFERA), and for various scientific journals, conferences and doctoral theses. He is currently Associate Editor of the major scientific journal in the field, *Solar Energy*.

His presentation will be on: **Solar resource assessment and forecasting: Recent achievements, bankability pressures, and current challenges**