
New technologies in photovoltaic technology: reconfiguration systems for photovoltaic plants

Romano Pietro^{*1}, Fabio Viola , and Eleonora Riva Sanseverino[†]

¹DEIM Palermo University (DEIM) – Viale delle Scienze, Edificio 9, 90128 Palermo, Italy

Abstract

In this work, a reconfiguration system designed to maximize the output power from a partially shaded photovoltaic (PV) system is presented. The first measures derived from an optimized photovoltaic installation on the roof of our electrical engineering department are shown. Such measures show the output of a novel monitoring system that estimates the irradiation based on temperature, current and voltage measurements. The estimated irradiation is used as input for a reconfiguration hardware installation that provides optimized interconnecting configurations, thus giving rise to the output power maximization in partially shaded conditions.

*Speaker

†Corresponding author: eleonora.rivasanseverino@unipa.it