PROVA 1

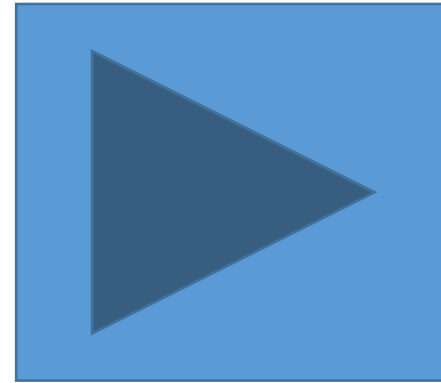**PROVA 2**

PROVA 1

DOMANDE

1. IL CANDIDATO ILLUSTRI LE PRINCIPALI FASI PREVISTE DAL METODO "LIFE CYCLE ASSESSMENT" SECONDO GLI STANDARD INTERNAZIONALI ISO 14040/44

2. IL CANDIDATO ILLUSTRI I PRINCIPALI FONDAMENTI DEL BIM E DELLA RELATIVA INTEGRAZIONE DI MODELLI ENERGETICI

CONOSCENZA LINGUA INGLESE - IL CANDIDATO LEGGA E TRADUCA IL BRANO TRATTO DA: *Chuanqi Zhu, Wei Tian, Baoquan Yin, Zhanyong Li, Jiaxin Shi, Uncertainty calibration of building energy models by combining approximate Bayesian computation and machine learning algorithms. Applied Energy, Volume 268, 2020, 115025, ISSN 0306-2619.*

An accurate building energy model is often required to evaluate the effects of various energy efficiency measures during the process of building retrofit. Hence, there has been an increasing interest in model calibration to obtain reliable building energy models. The calibration of building energy models is to tune input parameters in a simulation model to minimize the discrepancies between predicted and observed energy data. The methods of building model calibration can be classified into two broad categories: manual and automated methods. The manual calibration method is a timeconsuming process to run simulation engines, calculate the discrepancy between simulation and observed data, and then change input parameters to meet the requirement for building energy models.

CONOSCENZE INFORMATICHE

IL CANDIDATO ILLUSTRI LE MODALITÀ CON CUI GESTIRE ANALISI DI SENSITIVITÀ E DI INCERTEZZA CON IL LINGUAGGIO PYTHON, ANCHE MEDIANTE LA STESURA DI ALCUNE RIGHE DI CODICE UTILI AL CARICAMENTO ED AL RICHIAMO DELLE SPECIFICHE FUNZIONI.

PROVA 2

DOMANDE

1. IL CANDIDATO ILLUSTRI I PRINCIPALI SISTEMI DI ETICHETTATURA AMBIENTALE, CON PARTICOLARE RIFERIMENTO A PRODOTTI EDILIZI

2. IL CANDIDATO ILLUSTRI UN ESEMPIO DI PROCESSO DI CALIBRAZIONE DI UN MODELLO DI UN EDIFICIO AI FINI DI UNA ANALISI DEI CONSUMI ENERGETICI

CONOSCENZA LINGUA INGLESE - IL CANDIDATO LEGGA E TRADUCA IL BRANO TRATTO DA: *Di Giuseppe E (2019), A parametric building design tool for assessing energy savings and life cycle costs. Proceedings of the Institution of Civil Engineers – Engineering Sustainability 172(6): 283–292.*

In the light of the European and national regulations on the buildings' energy performance, the designer comes up today against the need to choose among alternative building design solutions and construction technologies, having to assess their effectiveness according to several points of view, such as the energy savings and the life cycle economic impact. Decision support tools for buildings construction should address a complex set of social, environmental and economic issues, and building designers are increasingly called to research for design strategies for reducing embodied energy and carbon dioxide emissions. […] The work entails the development of a combined methodology for parametric building energy simulation and probabilistic cost estimation for the assessment of several design options and their combination.

CONOSCENZE INFORMATICHE

IL CANDIDATO ELENCHI E DESCRIVA LE LIBRERIE DI SUA CONOSCENZA UTILI ALL'ANALISI DI SENSITIVITÀ CON IL LINGUAGGIO PYTHON.