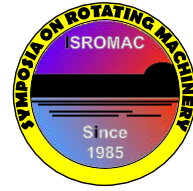


Uncertainty quantification of leakages in a multistage simulation and comparison with experiments

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Long Abstract

Introduction

The present work shows the impact of leakages uncertainties in multistage gas turbines. An innovative UQ technique based on NIPC is used to account experimental and numerical inputs.

The unsteady numerical results are compared with experiments.

The work highlights the importance of unknown data in CFD predictions and how this affects components interaction

1. Methods

An innovative uncertainty quantification technique is used to evaluate the impact of leakage uncertainties in a multistage turbine. The method used can combine different input uncertainties, such as experimental data or discontinuous distributions.

The methodology is applied to the study of a multistage turbine varying the gap and estimating the impact on the aerodynamics performances

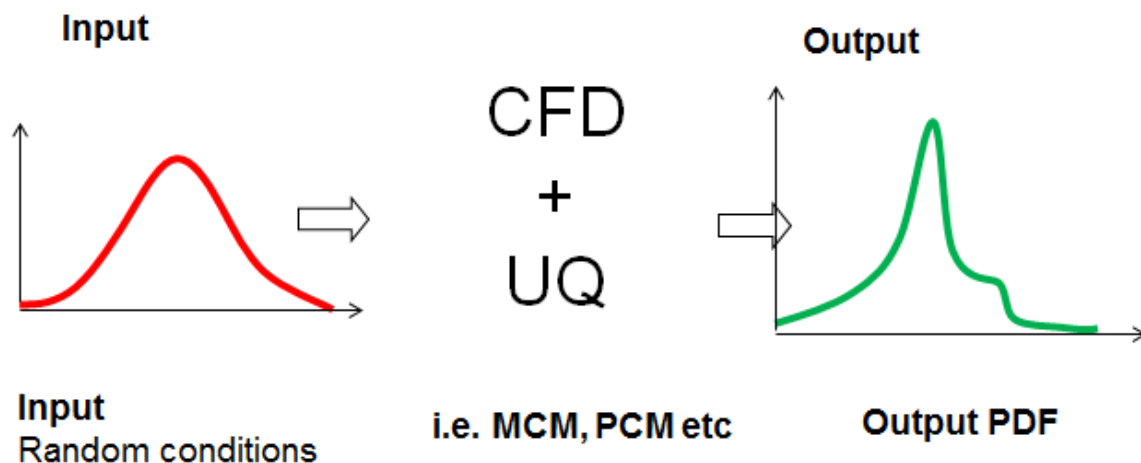


Figure 1. UQ Simulation

