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Venezia

**Dipartimento  
di Scienze Ambientali  
Informatica e Statistica**

**DOTTORATO DI RICERCA IN SCIENZE AMBIENTALI**  
***PHD IN ENVIRONMENTAL SCIENCES***

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**Campus Scientifico via Torino (Mestre)**

**Could Earth turn into Venus?**

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**Abstract**

In recent years a few scientists have claimed that the burning of fossil fuels could lead to a form of extreme climate change that could leave Earth in an uninhabitable state similar to Venus: The Runaway Greenhouse. In this talk I will show that and explain why this is an unrealistic scenario for even the most extreme climate-change scenarios. I will first talk about the history of the Runaway Greenhouse, which is closely linked to the question of why Earth is a habitable planet and Venus a hot unhabitable place. I will show that the Runaway Greenhouse is a relevant process for affecting the habitability on geological time-scales through changes in the sun's luminosity, and for the search for life in other solar systems, but not for future climate change. I will also talk about other scenarios of how an Earth-like planet could eventually become uninhabitable on geological timescales.