**Indicators of air temperature variability for describing climate change: application in two locations in Athens**

With its effects being now worldwide apparent, climate change constitutes the greatest challenge to the global ecosystem, the survival of which requires its adaptation. In this context, research has a key role to play in understanding the development of the ongoing climatic changes as to facilitate a more effective adaptation process. Climate change is being approached either through macroscopic phenomena such as arctic sea ice decline and sea level rise, or through indicators referring directly to meteorological factors such as air temperature, precipitation and so for. One open question is if the variability of the meteorological parameters is a part of the ongoing climate change and to what extent.

This work is focusing on the quantification of the variability of air temperature using fourteen metrics. The list of the metrics used includes some typical variability metrics (e.g. daily air temperature maximum difference) as well as introduces some new ones, not found in the relevant literature (e.g. number, duration and rate of increase/decrease of mean daily air temperature). These metrics are based on the data of two meteorological stations in Athens, Greece, one located within the city and another in a suburban area. At this stage, the analysis is done on an annual basis, covering a period of approximately sixty years in the very recent past. Its aim is two-fold: first, to examine the attitude of these metrics and their effectiveness as indicators to describe the impact of climate change on the air temperature variability, and second, to identify potential tendencies characterising the variability of air temperature in Athens.