White dwarf asteroseismology: an updated overview

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Abstract / Most of low and intermediate-mass stars that populate the Universe will end their lives as white dwarf stars. These ancient stellar remnants have encrypted inside a precious record of the evolutionary history of the progenitor stars, providing a wealth of information about the evolution of stars, star formation, and the age of a variety of stellar populations, such as our Galaxy and open and globular clusters. While some information like surface chemical composition, temperature and gravity of white dwarfs can be inferred from spectroscopy, the internal structure of these compact stars can be unveiled only by means of asteroseismology, an approach based on the confrontation between the observed pulsation periods of variable stars and appropriate theoretical models. In this communication, we first briefly describe the various families of pulsating white dwarfs known up to day, and then we present some of the latest findings in this active field of research.

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