In the past decade, Bitcoin has become an emerging asset class well known to most people because of their extraordinary return potential in phases of extreme price growth and their unpredictable massive crashes. Due to the sharp change and large volatility of Bitcoin price, the conventional financial bubble detecting methods do not provide an effective identification of Bitcoin bubbles. We propose the adaptive multilevel time series detection methodology based on the Log Periodic Power Law Singularity (LPPLS) model to effectively predict the bubble crashes of Bitcoin. Our analysis shows that the LPPLS confidence indicator based on this new method is an outstanding instrument in effectively detecting the bubbles and accurately forecasting the bubble crashes, even if a bubble exists in a short time. In addition, we discover that the short-term LPPLS confidence indicator greatly affected by the extreme fluctuations of Bitcoin price can provide some useful insights into the bubble status on a shorter time scale, and the long-term LPPLS confidence indicator has a stable performance in terms of effectively monitoring the bubble status on a longer time scale. The adaptive multilevel time series detection methodology can provide real-time detection of bubbles and advanced forecast of crashes to warn of the imminent risk in not only the cryptocurrency market but also other financial markets. Joint work with Prof. Wei Zhu, The State University of New York at Stony Brook.