Explosive death in direct and indirectly coupled oscillators: Review

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**Abstract**. The transition in the dynamical behavior in the coupled system has several applications in science. The phase transitions of synchronization and oscillation suppression have both been thoroughly researched for a very long time. The second-order transition, which is continuous and reversible, is demonstrated by the standard results in the vast majority of cases in the coupled system. Recently, the first-order transition reported in oscillation suppression have been reported in the complex network of the coupled oscillators through direct and indirect interaction. Explosive death is a transition that is not only abrupt but also irreversible in its parameters. We currently have a very good grasp of first order transition in oscillation death in networked systems and a variety of significant contributions and advancements have substantially improved it. Here, we aim to provide a review on the explosive death in various direct and indirect coupled oscillator scenarios while reviewing the previous findings.

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