

Geometric and Geometric-Like Processes: An Overview and Some Applications

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In the first part of this talk we introduce the geometric-like processes. The geometric process introduced by Lam (1988) can be used to model the occurrence of events with underlying monotonic trends. This type of trends can be observed in many practical problems in different areas of our everyday life, such as engineering, epidemiology, business, health, etc. In order to provide improved flexibility in modeling phenomena and situations involving monotonic trends, a variety of extensions of the geometric process have been proposed. This talk provides an overview of geometric and geometric-like processes. It includes some basic definitions, facts and references for these processes. A taxonomy of the geometric-like processes showing the connections between the various approaches taken by researchers in this area is discussed.

In the second part of the talk, we present a new compound geometric process and outline some of its properties and possible applications.