Tangency and the Intermediate Value Theorem: some new findings, applications and memories

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I will focus on presenting and discussing various results, including several new findings, related to Bolzano's intermediate value theorem and its extensions. My aim is to offer a unified approach to these issues, consistently relying on the concept of tangency—a geometric property strongly supported by topological arguments that constitutes one of the central tools in nonlinear functional analysis. The legacy of Bolzano and his followers remains significant and vibrant, serving as one of the cornerstones of contemporary mathematics. Additionally, I will share a few personal remarks and memories concerning mathematics and the individuals I have been fortunate enough to meet.