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Titolo	The Legacy of Felix Klein [[electronic resource] /] / edited by Hans-Georg Weigand, William McCallum, Marta Menghini, Michael Neubrand, Gert Schubring
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Nota di contenuto	I Introduction -- Felix Klein – Mathematician, Academic Organizer, Educational Reformer -- What is or what might be the legacy of Felix Klein? -- II . Functional Thinking -- Functional thinking: The history of a didactical principle -- Teachers' meanings for function and function notation in south korea and the United States -- Is the real number line something to be built, or occupied? -- Coherence and fidelity of the function concept in school mathematics -- Strand III: Intuitive thinking and visualization -- Aspects of "Anschauung" in the work of Felix Klein -- The road of the german book praktische analysis into japanese secondary school mathematics textbooks (1943-1944) -- An influence of the felix klein movement on the far east -- Felix Klein's mathematical heritage seen through 3D models -- The modernity of the meraner lehrplan for teaching geometry today in grades 10-11: Exploiting the power of dynamic geometry systems -- IV. Elementary mathematics from a higher standpoint—conception, realization, and

impact on teacher education -- Klein's conception of 'Elementary Mathematics from a Higher Standpoint' -- Precision mathematics and approximation mathematics: the conceptual and educational role of their comparison -- Examples of Klein's practice elementary mathematics from a higher standpoint: volume I -- A double discontinuity and a triple approach: Felix Klein's perspective on mathematics teacher education.

Sommario/riassunto

This open access book provides an overview of Felix Klein's ideas, highlighting developments in university teaching and school mathematics related to Klein's thoughts, stemming from the last century. It discusses the meaning, importance and the legacy of Klein's ideas today and in the future, within an international, global context. Presenting extended versions of the talks at the Thematic Afternoon at ICME-13, the book shows that many of Klein's ideas can be reinterpreted in the context of the current situation, and offers tips and advice for dealing with current problems in teacher education and teaching mathematics in secondary schools. It proves that old ideas are timeless, but that it takes competent, committed and assertive individuals to bring these ideas to life. Throughout his professional life, Felix Klein emphasised the importance of reflecting upon mathematics teaching and learning from both a mathematical and a psychological or educational point of view. He also strongly promoted the modernisation of mathematics in the classroom, and developed ideas on university lectures for student teachers, which he later consolidated at the beginning of the last century in the three books on elementary mathematics from a higher standpoint.
