The talk will address the role of Dirichlet and resistance forms in analysis and probability on fractals. The existence and uniqueness of the Dirichlet form on the Sierpinski gaskets and carpets, and related questions, such as resistance and Hölder estimates, will be discussed (based on a joint work with Marin Barlow, Richard Bass, Takashi Kumagai). The second part of the talk will be about a new but related topic of bounded variation functions on fractals (based on a joint work in progress with Patricia Alonso-Ruiz, Fabrice Baudoin, Li Chen, Luke Rogers, Nageswari Shanmugalingam). (Received July 10, 2019)