The adoption of a field-theoretical approach to problems arising in the framework of electrical insulation is discussed with reference to six main topics, which have been addressed over the last 30 years. These include uniform field electrodes, Green's differential equation, electrode surface roughness, induced charge, electrostatic probes, and partial discharge transients, together with several follow-on aspects. Each topic is introduced and thereafter the progress achieved through the use of a field-theoretical approach is reviewed. Because the topics cover a wide spectrum of conditions, it is amply demonstrated that such an approach can lead to significant progress in many areas of electrical insulation.