

Abstract: As we hurtle through the 21st century, it is now crystal clear that scientists, engineers, and technologists the world over need to intensify their efforts towards mitigating the climate crisis on a global scale. Towards this end, the long-established prominent trends of downsizing, lightweighting and efficiency improvement are now front and centre for all sustainable mobility applications. Electric machines as a field of research has a long and an illustrious history; be they Michael Faraday's experiments in electromagnetic induction of 1830s or Galileo Ferraris' experiments with early induction machines in 1880s. And yet, nearly two centuries on, we continue to make significant new discoveries in this research field. This presentation journeys through a few modern and innovative solutions in electric machine design and applications to achieve the kind of sustainable mobility that the world needs and deserves.