

SISSA: Seminari di Storia della Scienza

23 novembre 2016, ore 15.00

SISSA , aula 138

VIA Bonomea 265, Trieste

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'... a paper ... I hold to be great guns': How Maxwell discovered the Laws of Electromagnetism

Summary

2015 was the 150th anniversary of Maxwell's great paper 'A dynamical theory of the electromagnetic field'. In this lecture, Maxwell's route to the discovery of his equations will be analysed.

His thinking was strongly based upon the use of analogy between mechanical and electromagnetic phenomena. Many remarkable features of his great paper of 1865 will be described, including

his construction of a mechanical model to demonstrate electromagnetic induction. It will be shown how easily his mathematical physics translates into the modern SI system. Tragically, Maxwell did not

live to see the complete validation of his equations as a result of Hertz's remarkable experiments of 1887, eight years after his death.