

Abstract Submitted
for the SES20 Meeting of
The American Physical Society

Electric Fields from Geometry SPENCER TAMAGNI, COSTAS EFTHIMIOU, University of Central Florida — Using techniques from geometry and complex analysis in their simplest form, we present a derivation of electric fields on surfaces with non-trivial topology. A byproduct of this analysis is an intuitive visualization of elliptic functions when their argument is complex-valued. The underlying connections between these techniques and the theory of Riemann surfaces are also explained. Our goal is to provide students and instructors a quick reference article for an extraordinary topic that is not included in the standard books.

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Date submitted: 19 Oct 2020

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