GREEN'S FUNCTIONS

A short introduction

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OUTLINE

Motivation

This presentation is meant as a light introduction to differential forms, particularly focusing on applications to electromagnetism (EM).

For more detail, some good references are:

- D. Bachmann, *A geometric approach to differential forms.* 2011.

- J. Blair Perot and C.J. Zusi, "Differential forms for scientists and engineers," J. Comput. Phys., vol. 257, pp. 1373–1393, 2013.

- T. Frankel, *The geometry of physics: an introduction.* 2011.

- B. Schutz, *Geometrical methods of mathematical physics.* 1980.

- A. Stern, Y. Tong, M. Desbrun, and J. E. Marsden, "Geometric computational electrodynamics with variational integrators and discrete differential forms." 2007.

MOTIVATION

SUMMARY

Big point to drive home.

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Introductions to Green's functions:

- G. B. Folland, *Fourier analysis and its applications*. (1992)