

Partial Differential Equations, the Frobenius Theorem and the Riemann Curvature Tensor

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1. INTRODUCTION

This module is concerned with connecting the theory of partial differential equations of the first order with the Riemann Curvature Tensor and with the Frobenius theorem. ¹

2. SOME PARTIAL DIFFERENTIAL EQUATIONS

The material in this section is taken from Caratheodory's splendid book [1] on partial differential equations of the first order and the calculus of variations.

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References

- [1] Caratheodory, Constantine; *Calculus of Variations and Partial Differential Equations of the First Order*, translated by Dr. Robert B. Dean Holden Day, San Francisco 1965
- [2] Morrey, Charles B.; *Multiple Integrals in the Calculus of Variations*, Springer Verlag, Berlin, 1966