Instructor: Luca Spolaor, Office: AP&M 5111 (will not be there :) )

Office Hours: W 3-5PM

Textbook: *Riemannian geometry*, by Manfredo Do Carmo

Website of the course: [My page](#) and [Canvas](#)

Email: lspolaor@ucsd.edu

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**Content of the class**

**Aim and content:** We will study the notions of Differentiable Manifolds, Riemannian Metrics, Affine and Riemannian Connections, Geodesics, Curvature, Jacobi Fields, Isometric Immersions and Hopf-Rinow and Hadamard Theorems. This corresponds to Chapters 1-7 of Do Carmo. If time permit I will discuss some additional topics in preparation to the Topic Class I will teach in Winter on Minimal Surfaces.

**Lecture:** The Lectures will be live on Zoom. The link will be provided through Canvas and the recording will also be there.

**Reading:** As this is a Graduate Class, reading and autonomous work will be a fundamental part of it.

**Lecture notes:** I will post the handwritten notes after each class on Canvas, however they will not be a substitute for the book. Moreover they may contain errors or typos, use them at your own risk.

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**Homeworks, Exams and Grades**

**Problem Sets:** There will be 5 homeworks, posted every 2 weeks on Canvas. They will not be graded and solutions will not be provided, since they are part of the final.

**Final and Grades:** The final exam will be an oral exam on Zoom. You will have to choose 5 problems from the homeworks, one problem from each of the five homeworks, and I will ask you to present one or more of them.

**Academic Dishonesty:** Academic dishonesty is considered a serious offense at UCSD. Students caught cheating will face an administrative sanction which may include suspension or expulsion from the university. See [this website](#) for more information.