

Advanced Topics in Geometry E (MTH.B501)

Kotaro Yamada

`kotaro@math.titech.ac.jp`

`http://www.math.titech.ac.jp/~kotaro/class/2022/geom-e/`

Tokyo Institute of Technology

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Important links:

- ▶ `http://www.math.titech.ac.jp/~kotaro/class/2022/geom-e`
(official web)
- ▶ `http://www.official.kotaroy.com/class/2022/geom-e`
(a mirror)
- ▶ `https://t2schola.titech.ac.jp/` (T2SCHOLA)

Lecture:

- ▶ Schedule: Tuesdays 10:45–12:25
- ▶ Venue: Online lecture via zoom
- ▶ Lecturer: Kotaro Yamada (Dept. Math.);
kotaro@math.titech.ac.jp

山田 光太郎

(山田(光)) ← 姓が光

Course Description

曲面論の基礎 (幾何学脱稿第II)

The fundamental theorem of surface theory and its applications will be introduced.

⑤ Fundamental Theorem of surface

Surfaces with $K = -1$

some additional conditions determine

↑
"1st & 2nd fundamental forms determine a surface"

"Proof" Solve PDE for the Frame " $\mathbf{g}_u = \mathbf{F}\Omega, \mathbf{F}_v = \mathbf{F}\Lambda$ "

"linear"

① ordinary differential equations

②

Grading Policy:

- ▶ Graded by weekly homeworks.
- ▶ Each homework consists of (1) a problem on the topics in the lecture (up to 2 points), and (2) to present a question on the contents of the lecture, or to point out error(s) in the lecture note/the lecture (up to 3 points).
- ▶ Each homework should be submitted to T2SCHOLA by 10:00 on the following Thursday of the lecture, as an pdf file in the format of the homework sheet (which can be downloaded from the folder “Homework Sheet” on T2SCHOLA). Japanese is acceptable.
- ▶ Questions, requests and comments (and the answers, lecturer’s comments) will be published on the following class.