

November 6, 2014

Plan of Todays seminar.

- 1 Motivation: Pictures of Soap Bubbles.

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- 3 Some remarks about the plan of the course, pedagogics and examination.

Plan of Today's seminar.

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- 2 Motivation to GMT: Some examples on the black board.
- 3 Some remarks about the plan of the course, pedagogics and examination.
- 4 Group discussion

Plan of Todays seminar.

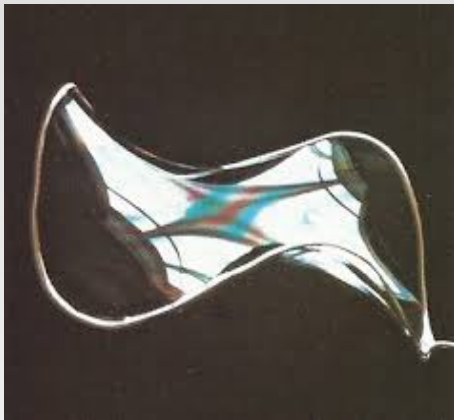
- 1 Motivation: Pictures of Soap Bubbles.
- 2 Motivation to GMT: Some examples on the black board.
- 3 Some remarks about the plan of the course, pedagogics and examination.
- 4 Group discussion - if you have read todays chapter.

A simple soap bubble.

One of the main classical questions in the calculus of variations is to find the surface with minimal area that spans some frame.

A simple soap bubble.

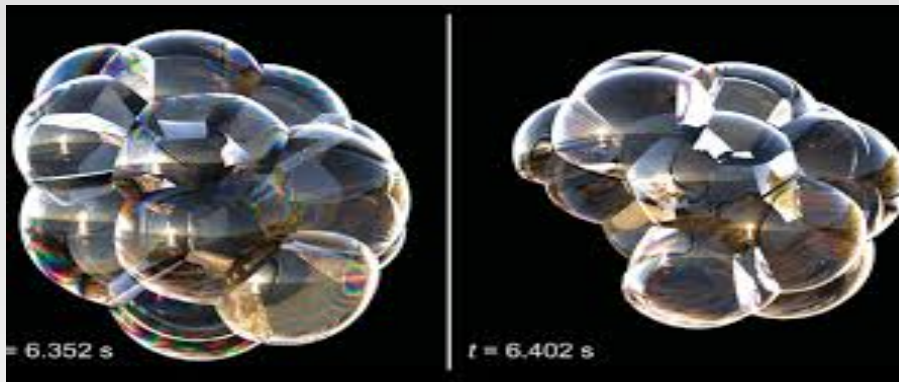
One of the main classical questions in the calculus of variations is to find the surface with minimal area that spans some frame.



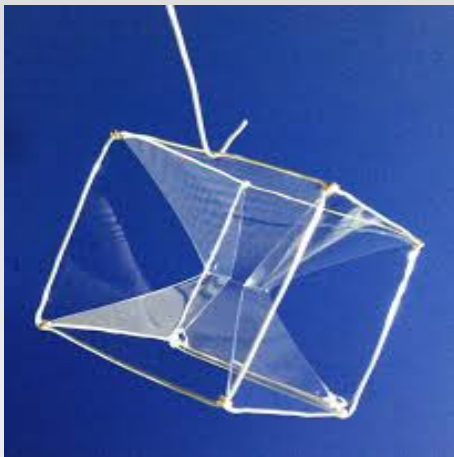
That is to calculate the shape of a soap film.

A more complicated soap bubble.

Or find a more complicated surface.



Or another example of a complicated surface...



...which leads to non-uniqueness.

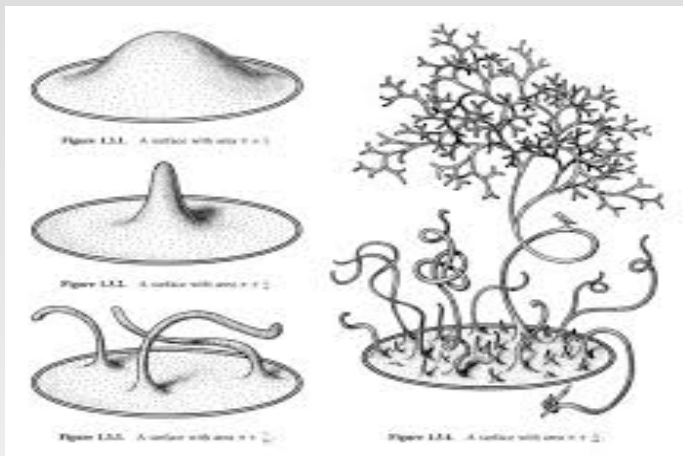


That is, the same frame can span several soap films.

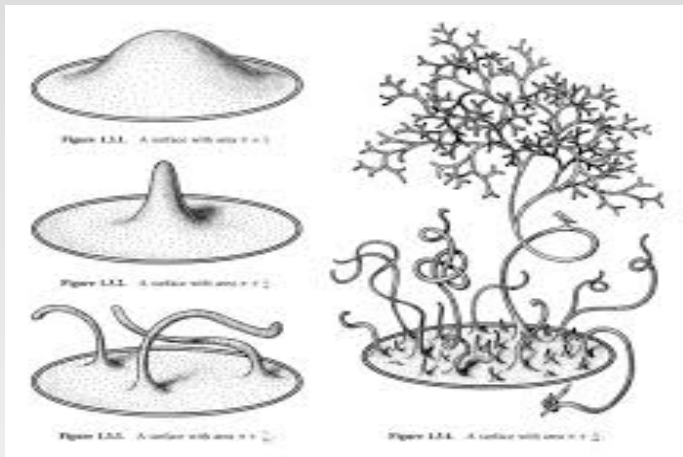
Or something complicated like this knotted frame.



Different complicated surfaces...



Different complicated surfaces...



...whose importance will be explained shortly.