UE Holomorphic functions

Level
Baccalaureate +4

ECTS
6 credits

Component
UFR IM2AG (informatique, mathématiques et mathématiques appliquées)

Semester
Automne

- **Teaching language(s):** French
- **Teaching method:** In person
- **Teaching type:** Lectures
- **Open to exchange students:** Yes
- **Code d'export Apogée:** GBMG7U02

Presentation

Description

1. Holomorphic and analytical functions, in particular the equivalence between the two notions, exponential function and logarithm, principle of analytic continuation, principle of isolated zeros, Cauchy formula for the disc
2. Elemental properties of holomorphic functions (Cauchy inequalities, sequences and series of holomorphic functions, property of the mean, and principle of the maximum)
3. Cauchy theory (existence of primitives, Cauchy theorems)
4. Meromorphic functions (classification of isolated singularities, meromorphic functions, residue theorem, Laurent series)
5. Riemann conformal representation theorem

Course parts

TD	Tutorials (TD)	33h
CM	Lectures (CM)	21h

Period : Semester 7

Bibliography

- Patrice Tauvel, *Analyse complexe pour la Licence 3*, Dunod 2006
- Éric Amar, Étienne Matheron, *Analyse complexe*, Cassini 2003

Useful info

Contacts

Program director

Vincent Beffara

Place

Grenoble

Campus

Grenoble - University campus