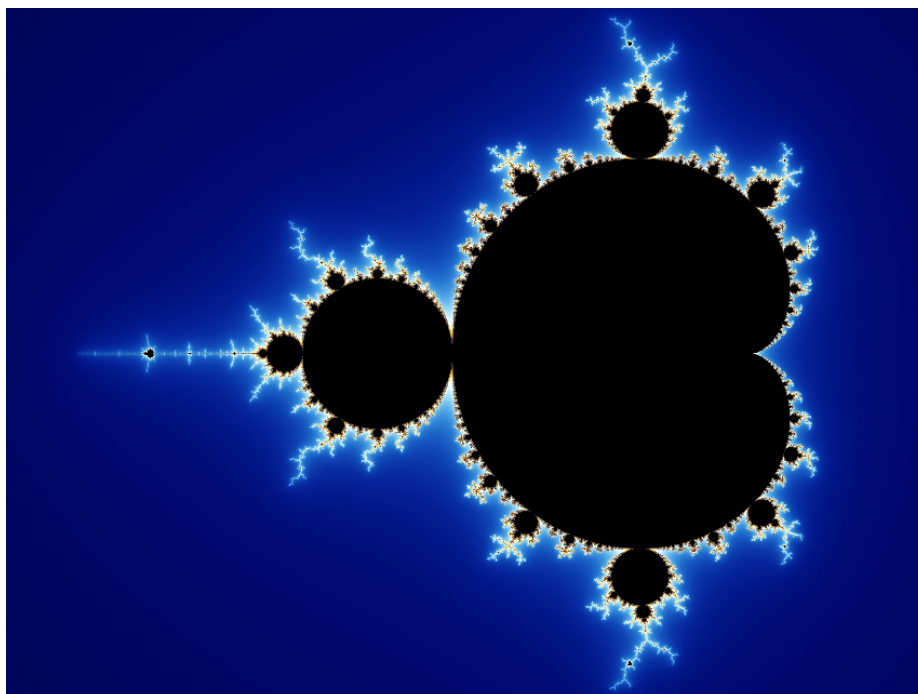


Arizona State University  
MAT 572, Fall 2020, MW 3-4:15  
Instructor: Julien Paupert

## Complex Analysis I



**Course description:** This is a basic course in complex analysis at the graduate level. The material is a beautiful blend of analysis and topology. The familiar functions and tools of real-variable calculus turn out to be only pale shadows of their complex reality.

**Prerequisites:** MAT 371 (Advanced Calculus), or any equivalent Introduction to Analysis class.

**Topics:** Topics include analyticity, Schwarz's lemma and the maximum principle, winding numbers and Cauchy's integral theorem, singularities and residues.

**Textbook:** Lars Ahlfors; Complex Analysis (3d ed.), McGraw-Hill. Earlier editions of the text are acceptable. Bookfinder, Amazon, or Google might help locate a less expensive copy. The lectures are meant to be self-contained, so that in theory no text need be purchased (or any of various books can be used as reference). We will roughly cover chapters 2–4.

**Course work:** Homework will be assigned every other week, and there will be a midterm and a final exam.