

**MATH 6280 Advanced Algebraic Topology**  
**Course Projects**

**Fall 2022**

**Course Instructor:** Dr. Markus Pflaum

**Contact Info:** Office: Math 255, Telephone: 2-7717, e-mail: [markus.pflaum@colorado.edu](mailto:markus.pflaum@colorado.edu)

1. The sheaf of holomorphic functions in several complex variables (including domains of holomorphy) (Dan 11/18)
2. Complex spaces and complex manifolds (Robi, 11/18)
3. The sheaf of hyperfunctions (Connor 11/18)
4. GAGA (Jon 11/28)
5. Sheaves in algebraic K-theory (Alex 11/28)
6. Constructible and perverse sheaves (Howy 11/30)
7. D-modules (Ezz 11/30)
8. Sheaves in data analytics (Andrew 12/02)
9. The Hochschild homology of sheaves of algebras (Eric 12/02)
10. Stacks as sheaves in groupoids (Emily 12/05)
11. Gerbes as sheaves (Henry 12/05)
12. Landweber exact functor theorem in the language of stacks and quasicoherent sheaves (Juan 12/05)
13. Sheaves on Riemann surfaces (Rebecah 12/07)
14. Sheaf approach to infinite dimensional manifolds (Calum 12/07)
15. Stein spaces and Cartan's theorems A and B
16. The Grauert direct image theorem
17. Sheaves in logic
18. Graded manifolds