

ME 572 Term Project

Project Guidelines

- Open-end projects
- Identify the problem, background information
- Methods to solve the problem
- Results and Discussion
- Conclusions
- Use any resources you can have
- Your broader education and curiosity will lead you to different project solutions
- Every solution is acceptable as long as it is justified.

Project Timeline

- Project Start: 04/02
 - Project Assignment #1 due on 04/12
- Midpoint Check: 05/02
 - Project Assignment #2 due on 05/03
- Final Presentation: the week of 05/13
 - Project Assignment #3 (Final Report) due on 05/22

Project Assignment #1 due on 04/12

In this assignment, each student will need to develop a project proposal with detailed description of the project idea, objectives, methods, and project plan.

- **Project proposal report no more than 3 pages.**
- Project overview
- Background
- Problem Statement
- Project goal and objectives
- Methods
- Project Plan and expective outcomes
- References

Project Assignment #2 due on 05/03

In this assignment, each student will need to report the project progress:

- Project Progress Presentation on Thursday, 5/2/2024 at Shepard S-308
- 5 min presentation on project progress
- **Project progress report due on 05/03/2024, no more than 3 pages.**
- Achievements
- Tasks completed and To-do Tasks
- Challenges and issues
- References

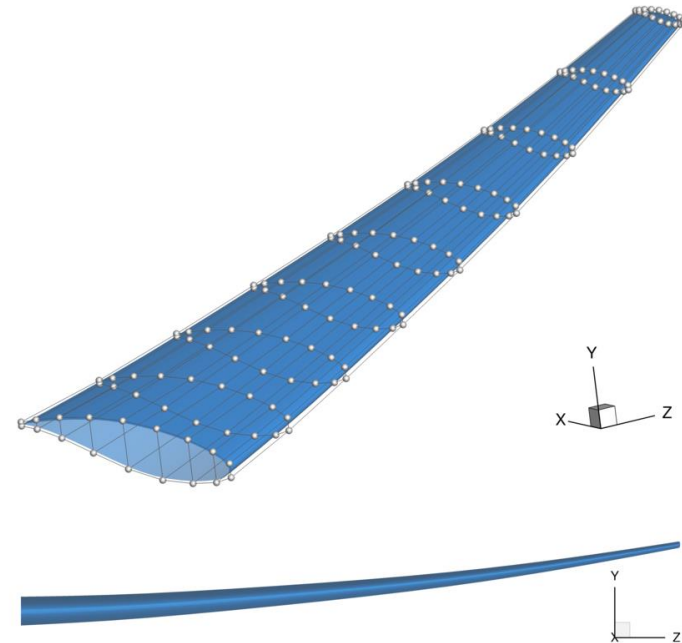
Project Assignment #3 due on 05/22

In this assignment, each student will need to submit a final project report, and present the project.

- Final presentation in the week of 05/13.
- Schedule the presentation with Prof. Liu
- 15 min presentation on project.
- Project achievements
- Challenges and issues
- **Final project report due on 5/22/2024, no page limit**
- Title Page
- Abstract
- List of symbols (nomenclature)
- Introduction
- Methodology
- Results
- Discussion
- Conclusions
- The contribution of each group member
- References
- Appendices

Project Topics

- Wing aerodynamics of commercial passenger airplanes (e.g., BOEING 747, BOEING 787, AIRBUS 380, AIRBUS 340): impact on fuel consumption, economics, and environment.



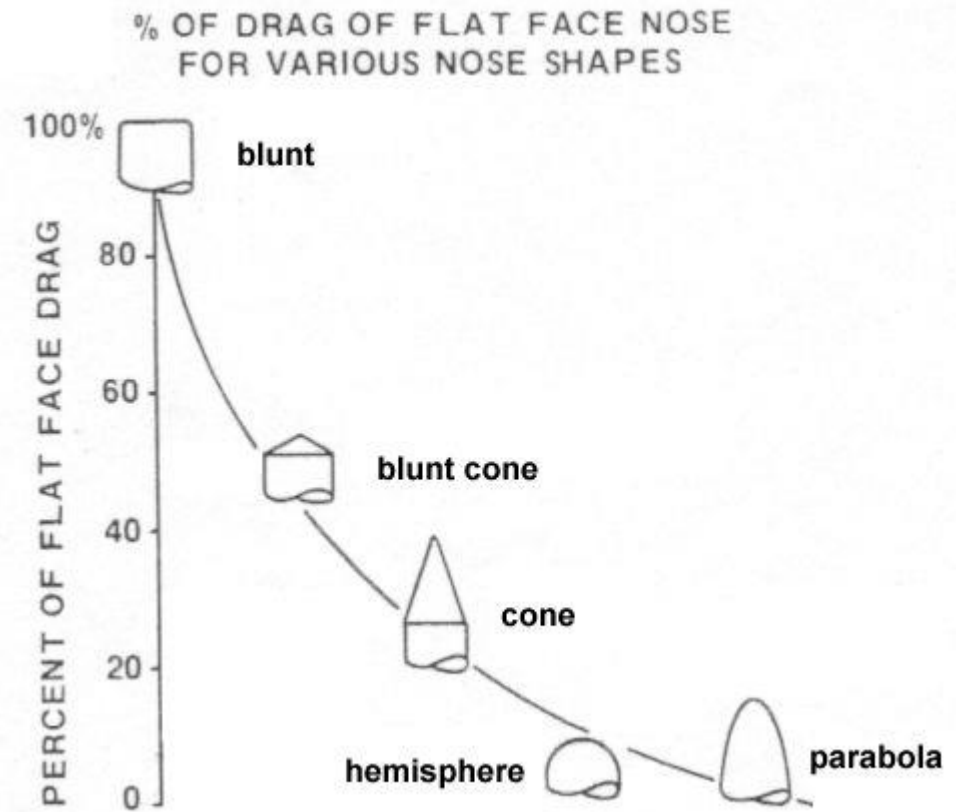
Project Topics

- Aerodynamic performance of drone enclosure geometries



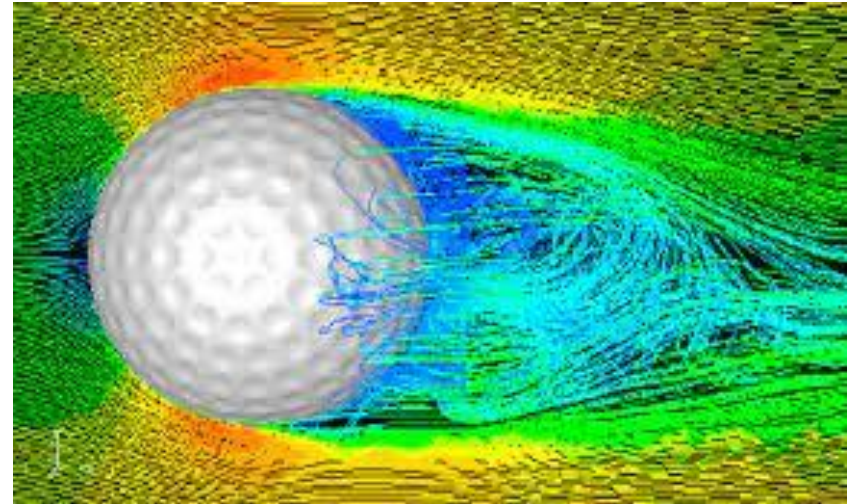
Project Topics

- Aerodynamic analysis of rocket nose cone designs (e.g., parabolic, blunt, cone)



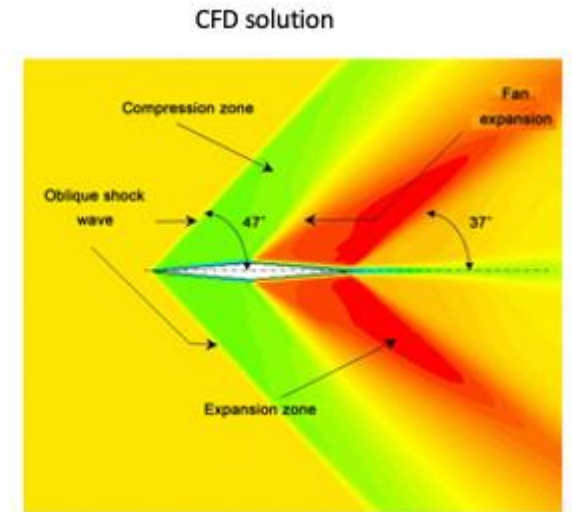
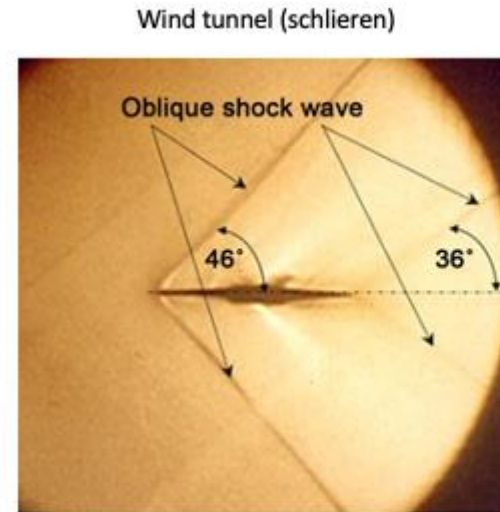
Project Topics

- Aerodynamics of golf balls (Roles of the dimples)



Project Topics

- Aerodynamics of supersonic airfoils (compare to subsonic airfoils)



Project Topics

- Aerodynamics of offshore wind turbines

