Report

Course Project: Statistics of Turbulence and the Onset of Chaos

Name: Firstname Lastname

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Course: Turbulence ME-467

Instructor: Tobias Schneider

1 Part I: Statistical Analysis of Turbulence

1.1 Introduction (Limit: 1 page)

1.2 Data Analysis

1.2.1 Velocity Signal in the Spatial Domain

Table 1: Table of results 1.

Param.	Dim.	A_1	A_2	A_3	A_4	A_5	A_6
d	m	1.0	2.0	3.0	4.0	5.0	6.0
U							
I							

1.2.2 Correlation Length of the Velocity Signal

Table 2: Table of results 2.

Param.	Dim.	A_1	A_2	A_3	A_4	A_5	A_6
L_C							
L_{int}							

1.2.3 Energy Spectrum of the Flow

Table 3: Table of results 3.

Param.	Dim.	A_1	A_2	A_3	A_4	A_5	A_6
$L_{\text{int},E}$							
η_E							

1.2.4 The Dissipation Rate and Different Reynolds Numbers

Table 4: Table of results 4.

Param.	Dim.	A_1	A_2	A_3	A_4	A_5	A_6
ϵ							
Re_λ							
Re							

1.2.5 Turbulence Decay

Table 5: Table of results 5.

Param.	Dim.	A_1	A_2	A_3	A_4	A_5	A_6
$\mathcal{E}$							

1.2.6 Velocity Increments

1.2.7 Structure Functions and Energy Dissipation

1.3 Discussion (Limit: 1 page)

2 Part II: Nonlinear Dynamics and the Emergence of Chaos

Note: A template for this part will be provided later.

Appendix

List of Sources

List of Collaborators

Personal Statement

I hereby certify that I fully respect the stated Honor Code and specifically that:

1. My report is my original work prepared solely by me;
2. All sources used are cited;
3. All people I collaborated with are listed.

Signature (Firstname Lastname) Date