#### Grading Rubric for Final Paper (Final Submission)

Note on plagiarism: Definitions and theorems may be copied word-for-word. You may follow the same proof or computation structure as your sources, but your proof and computation should be explained in greater details. No credit will be given for papers that do not pass SafeAssign (Plagiarism Detection).

#### 1. (5 points) Cover letter

A cover letter has been submitted and includes responses to all or the vast	0	1	2	3	4	5
majority of the prompts						

### 2. (10 points) Abstract

The abstract gives the reader a complete idea of the main ideas and/or	0	1	2	3	4	5
results of the paper. (A little background/history is optional.)						
The abstract gives the reader a clear idea of the main ideas and/or results	0	1	2	3	4	5
of the paper. The language of the abstract is efficient. No citations or						
references are included.						

#### 3. (10 points) Introduction

The introduction begins with enough historical background and/or a liter-	0	1	2	3	4	5
ature review to put the paper into context. All the historical background						
should be relevant to the content of the paper.						
The introduction includes a presentation of the main ideas and/or results						
of the paper. If appropriate, the main results are presented as LaTeX						
theorems. Definitions and notations are introduced only as needed to make						
the main ideas and/or results understandable to the reader.						
The introduction concludes with a paragraph describing the organization	0	1	2	3	4	5
of the rest of the paper. The "paper outline" paragraph of the introduction						
uses LaTeX section labels to describe the layout and content of the rest of						
the paper.						

#### 4. (20 points) Content sections

The content sections are the correct length (at least five full	pag	es)				
The content sections contain at least two full pages of mathematical argu-						
ments (rigorous proofs or otherwise) or computations						
The content sections begin with sufficient mathematical background and	0	1	2	3	4	5
exposition (definitions, theorems, lemmas, corollaries, remarks, examples,						
applications, etc.) to prepare the reader for the main content of the paper.						
The background from the earlier content sections is appropriately and	0	1	2	3	4	5
meaningfully referred back to throughout the later main content sections						
(e.g. referring back to an earlier definition).						
The content sections (and subsections if used) are appropriately titled.	0	1	2	3	4	5
The (sub)section titles are concise and give the reader an idea of what						
the (sub)section is about.						
Each definition, lemma, remark, and theorems is introduced within the text	0	1	2	3	4	5
by a complete sentence that precedes the statement.						

### 5. (10 points) Citations and reference section

Two to four references are used nontrivially throughout the	pap	er.				
References are used meaningfully throughout the entire paper.	0	1	2	3	4	5
References are formatted correctly throughout the entire paper.						
A citation is needed whenever you use ideas from these references. The						
sentence structures and ideas themselves must be rephrased in your own						
words (as opposed to quoted).						
The BIB file for references is correctly formatted.	0	1	2	3	4	5
At least two of the sources are published (e.g. a peer-reviewed article						
published in a journal or a textbook).						

# 6. (10 points) LaTeX

Two to four references are used nontrivially throughout the	pap	er.				
The LATEX typesetting is free of errors and uses correct LATEX symbols,	0	1	2	3	4	5
notation, and structures.						
Displayed math mode is used sparingly. Most mathematical notation is						
incorporated into the text using regular math mode.						
Definitions, theorems, figures, (sub)sections, equations, etc. are correctly	0	1	2	3	4	5
formatted (e.g. \begin{definition}).						
Definitions, theorems, figures, (sub)sections, equations, etc. are correctly						
labeled for future reference using \label{YOURLABEL} and correctly referred						
back to (e.g. Definition $\sim \text{ref}\{\text{YOURLABEL}\}$ ).						

## 7. (15 points) Mathematics

The mathematics presented in this paper is sufficiently advanced (college	0	1	2	3	4	5
level mathematics).						
The mathematical definitions, concepts, and statements presented in the	0	1	2	3	4	5
paper is correct.						
The mathematical explanation or computation presented in the paper is						
correct.						
The mathematics is presented clearly and efficiently.	0	1	2	3	4	5

## 8. (15 points) Written communication

The document is well-organized and the ideas presented are all clearly con-	0	1	2	3	4	5
nected to each other. The ideas are presented logically and coherently						
throughout the document.						
The transitions between and within paragraphs are highly effective. The	0	1	2	3	4	5
transitions between sections are highly effective. The entire paper flows						
well.						
There are no or very few issues with spelling, grammar, punctuation, and	0	1	2	3	4	5
syntax.						
There are no or very few issues with tone (formal), audience (a peer with						
minimal knowledge of your topic), and point of view ("we", not "I" or						
"you").						

Grading Question: Total Points: Score: