

I have revised my PhD thesis. I came up with a list of changes in the revised version, which are summarized below. It is important to note that I have not created new content.

General:

Use `\citep[[]]{}` instead of `\cite`
Add e.g. to the sources, if necessary
Increased the image sizes, sometimes corrected for labels
Correct for grammar
Unify layout and no formulas above the boundary anymore
Use `\mathbf` instead of `\pmb`
Use `\ell` instead of `l`

Intro:

Nothing special

Chapter 1:

Instead of using the first submit, we use the published version of the paper
Citation style is adapted to be similar to the rest of the dissertation

Chapter 2:

The feedback on this paper draft is included in the thesis print. Additionally to minor changes regarding the grammar and clarity:

-) Rephrased abstract
-) Highlighting own work (first paper) in introduction and p. 75
-) Move general mathematical definitions to the end of introduction
-) Introduction of $\text{Re}^{\{x y\}}$ as real-part to improve readability
-) Volumes are denoted by V instead of Ω , since Ω is already used for the solar rotation
-) Highlight that we use a conservation of mass constraint (p. 72)
-) The relation $\text{Cov} \approx \text{Im}(G)$ is not needed and removed (p. 74)
-) Add references in the algorithm (p. 84)
-) Introduce the volume potential operator (p. 84)
-) Add discussion of the convergence of the iterative procedure (p. 85)
-) Remove the projection operator in the leakage matrix, since they are not used (p. 87), instead discuss properties of leakage matrix
-) Move Lagrange functions to the Appendix
-) Rearranged the order of the appendices, such that they are in the order, they appear in the main text.

Chapter 3:

The feedback on this paper is included in the thesis print. Additionally to minor changes regarding the grammar and clarity:

-) The support constraints are a separate Assumption and not just stated in the text
-) In Eq. 4.6a) was a typo
-) In Assumption 4.5, the constant has to be real
-) We deleted the discussion of the solar atmospheric model on page 121, since it will not change the result
-) Corrected for small typo in the first Eq. of page 122
-) Rewrite the proof of the second part in Lemma 4.8

-) Add discussion of the acoustic Poynting vector
-) Add Lemma 4.11 and 4.12. These lemmatas describe the unique continuation for Dirichlet and partial Cauchy data and allow us to discuss these two examples at the same time
-) Remove the argument of unique continuation at the end of Lemma 4.13 since the vanishing at the computational boundary is already sufficient
-) Remove Lemma 4.12 from the old version. This lemma is already part of Lemma 4.12 and Lemma 4.13 in the new version and therefore redundant.
-) The jump relations are in a own lemma instead of stating them in the text
-) Lemma 4.17/4.18: In a first step, we prove the jump relations in a general setup, then we prove the invertibility of single-layer potential. This is a simplification of the previous proof since we do not need to argue with the invertibility of the unperturbed single layer potential

Discussion:

No changes

Bibliography:

-) Removed ISSN-numbers and arxiv-eprint-numbers
-) Removed all hyperlinks
-) Unify the spelling of the journals
-) Added further references which occurred in the revision process of paper 1

Rest:

-) Update the publication list
-) Remove CRC retreats from Talks list