Galley Return

SIADS MS#M103729

Title:

Periodic eigendecomposition and its application to Kuramoto-Sivashinsky system

Authors:

Xiong Ding and Predrag Cvitanovi\'c

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Dear Lesa M. Chmielewski,

Thanks for carefully proofreading this paper. We can see an incredible improvement compared with the older version. Our answers to your queries are listed below with page numbers tagged. Important information is displayed in bold letters. All responses are referring to the manuscript with queries and copy-editing marks.

Thanks again for you valuable time.

Sincerely yours,

Xiong Ding

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Page 1

AQ: This is the edited manuscript. Changes marked here in red and blue have been implemented in the galley file (M103729-gg.pdf). Please respond to queries noted throughout this manuscript.

Response : Yes. We understand.

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Page 7

AQ: Do we need some transitional text before the display?

Response : Thanks. This is a good point. We could add a sentence :

**“Let the corresponding eigendecomposition be”**

just after sentence “This product can be diagonalized if and only if the sum of dimensions of eigenspaces of J(0) is n” and before equation (3.2).

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Page 7

AQ: See the galley proof for the actual line breaks. Is it OK to break the math as edited? If not, please revise the text to produce different line breaks.

Response : The line breaks are OK.

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Page 16

AQ: See the galley proof for actual positions of all figures.

Response : Thanks. They look good.

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Page 20

AQ: If possible, provide DOI numbers for any applicable references. We will create the links. We have already added the DOIs for the SIAM references.

Response : We form a DOI table at the bottom. It contains the DOIs of the references to the best of our knowledge. Also, some issues should be pointed out for the references.

1) Reference [5] has a wrong title. We find the correct title is

**“Spatiotemporal chaos in terms of unstable recurrent patterns”.**

Sorry for this mistake.

2) We made a minor mistake in the title of reference [11]. The correct title is

**“The QR transformation: A unitary analogue to the LR transformation--Part I”.**

Also, we think the publication year is 1961 not 1961/1962, because part II is published in 1962.

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Page 20

AQ: Note the title revision in [2].

Response : Thanks for pointing out our error. But we think there is typo in the title of the revised version of [2]: **Hamilitonian -> Hamiltonian**

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Page 21

AQ: We have removed the arXiv links in [8, 12, 13, 14, 21, 27, 36, 37] since the papers have been published elsewhere. If it is important to include the arXiv preprints, we can create separate references and revise the citations in the text to include both versions.

Response : We totally agree with your decision. There is no need to create two versions.

**DOIs of the references**

|  |  |
| --- | --- |
| [1] | 10.1002/1099-1506(200007/08)7:5<275::AID-NLA198>3.0.CO;2-G |
| [2] | 10.1007/BF02128236 |
| [3] |  |
| [4] | 10.1103/PhysRevE.82.046218 |
| [5] | 10.1088/0951-7715/10/1/004 |
| [6] | 10.1006/jcph.2002.6995 |
| [7] |  |
| [8] |  |
| [9] | 10.1016/S0167-2789(98)00013-X |
| [10] |  |
| [11] | 10.1093/comjnl/4.3.265 |
| [12] | 10.1017/S002211200800267X |
| [13] | 10.1088/1751-8113/46/25/254005 |
| [14] | 10.1103/PhysRevLett.99.130601 |
| [15] |  |
| [16] |  |
| [17] |  |
| [18] | 10.1103/PhysRevE.85.016331 |
| [19] |  |
| [20] | 10.1088/1751-8113/46/25/254016 |
| [21] | 10.1007/s00332-012-9126-5 |
| [22] | 10.1143/PTP.54.687 |
| [23] | 10.1142/S0218127401003486 |
| [24] | 10.1016/0094-5765(77)90097-2 |
| [25] |  |
| [26] | 10.1007/BF02684768 |
| [27] | 10.1103/PhysRevE.84.046214 |
| [28] | 10.1007/BF03024036 |
| [29] |  |
| [30] |  |
| [31] |  |
| [32] |  |
| [33] | 10.4169/amer.math.monthly.118.05.387 |
| [34] | 10.1111/j.1600-0870.2007.00234.x |
| [35] | 10.1103/PhysRevLett.108.154101 |
| [36] | 10.1103/PhysRevE.82.046204 |
| [37] | 10.1103/PhysRevLett.102.074102 |