Dear Dr. Cook,

Di, Referees have a few thoughts. (Graphics always has a subjective component and lots of opinions.)

I am fond of this reference, but perhaps Debby's contains it:

Salch, J.D. and D.W. Scott, (1997),
``Data Exploration with the Density Grand Tour,''
\fI Statistical Graphics and Computing Newsletter\fR,
ASA, Alexandria, VA, 8: 7-11, April, 1997.

Look forward to your revision. David, co-editor

I am writing in regards to Manuscript ID EOCS-534 entitled "The State-of-the-Art on Tours for Dynamic Visualization of High-dimensional Data," which you submitted to WIREs Computational Statistics. The reviewer(s) have suggested some revisions to improve the manuscript. Their comments are included at the bottom of this letter; I invite you to respond to them and revise your manuscript.

Please submit your revision within 6 weeks.

A revised version of your manuscript that takes into account the comments of the reviewer(s) will be reconsidered for publication. Please note that revising your manuscript does not guarantee eventual acceptance, and that your revision will be subject to re-review before a decision is rendered.

If you are updating your Main Document in Word, make sure that "Track Changes" is enabled so that the editors can easily find your amendments. If you are using LaTeX, make sure that revisions are made in red font.

You can upload your revised manuscript using this direct link: * * * PLEASE NOTE: This is a two-step process. After clicking on the link, you will be directed to a webpage to confirm. * * *

https://mc.manuscriptcentral.com/compstats?
URL_MASK=f0dc1a60c876422786c6e78637088776f.

When you submit your revision, you must provide a point-by-point summary of how each of the issues raised by the reviewer(s) were addressed. Please note that the space provided is for plain text only, as the system will not accept any formatting. For each criticism raised, please provide:
1. The criticism from the reviewer.
2. The response and explanation of how the manuscript has been modified in response to the criticism.

IMPORTANT: We have your original files; therefore, please delete the file(s) that you wish to replace and then upload the revised file(s). You will be able to upload both marked and clean versions of your Main Document. Please note that figures must be in PRODUCTION-READY format.

Please do not hesitate to get in touch with us if you have any queries or concerns.

Once again, thank you for submitting your article to WIREs Computational Statistics. I look forward to receiving your revision.

Sincerely,

Mounika Muralidhar
On behalf of
Dr. David Scott
Co-Editor-in-Chief and Review Editor, WIREs Computational Statistics
scottdw@rice.edu

Reviewer: 1

Comments to the Author(s)
Overall, there is nothing wrong in the article, but lots of language issues, problems with references, and a few aspects of tours (including software and references) that have not been explored in detail. Please see the attached markup for details.

Before submitting the revision, I would encourage one of the senior native English speaking authors to carefully do a final language review of the article. I have marked many language problems, but there may be more.

Reviewer: 2

Comments to the Author(s)
Summary

This work summarizes the state-of-the-art tour methods for visualizing high-dimensional data.
The tour works by linearly projecting the set of data points down to low dimensions through a sequence of smoothly changing orthonormal projections.

projections.

The work summarizes the development, components for the display, interaction modes, software and latest applications of the tour method. Overall, the work is well-written and well-covered.
I would recommend a minor revision to authors sometime to revise the content and text (see recommended revisions).

Strengths
The literature is well covered and described, and up to date.
There are abundant number of examples with figures which covers a large variety of use cases of the tour method (e.g. kinds of display, structure of measurements in physics, geometric shapes, a tour looking at itself, ...)

Recommended Revisions

- I highly appreciate the specification of notations in Section 2.1, but few sections use the notation.
Instead, different tour methods are only described in text.
I anticipate that the readers would benefit from a highlight of key differences between different tour variants and interactions using the unified notations.
For example, (as far as I understand) guided tour finds a sequence of interesting projections A_i by applying projection pursuit optimization on a predefined criteria $c(\cdot)$ of ``interestingness'' of a projection, $argmax_A c(XA)$; local tour rocks back and forth from a particular plane A to randomly chosen targets A_i in a small neighborhood $\{A_j \;|\; d(A_j, A) < \epsilon \}$; manual tour manipulates the contribution of any variable by editing the corresponding row $A[i]$ in the projection frame A, $A[i] \leftarrow A[i] + \Delta[i]$ and re-orthonormalizing the columns.

- Section 2.2: "A guided tour ... The little tour ... and a local tour ..." --- cite?

- Section 2.3: "contains all the rotation to be between planes, not a particular basis in any plane". It maybe worth mentioning the difference between "interpolating frames" (interpolating projection frame A and B directly, which involves particular bases) vs. "interpolating planes" (between span(A) and span(B)), and briefly discuss how the motion can be decomposed to motion of planes and within plane spin.

- Section 2.3: "The space of all tour *paths* is a high-dimensional torus..." --- All paths, all k-planes or all orthogonal k-frames?
From the context it's not clear to me whether the space of all tour paths is a high-D torus.
Consider giving some contexts/explanations to this statement?

- Section 3: Li et al. 2020 seems to propose a different way to control the projection, via brushing and dragging data points as opposed to moving individual variables in manual tour (what they call ``the data point mode'' direct manipulation).
Perhaps it is worth mentioning it as a way of manual control in Section 3

Perhaps it is worth mentioning it as a way of manual control in Section 5.

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