

Your JCSMD Article's Title Goes Here

Phil Integral^{1,2,*}, Beta Differential^{2,3}, and Gamma Exponential⁴

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(Dated: April 13, 2013)

In what follows, we provide Instructions for Authors submitting their manuscripts to the Journal of Coupled Systems and Multiscale Dynamics.

Keywords: Multifield Problems, Complex Systems, Coupled Human-Environment Interactions, Networks, Numerical Methods, Earth and Climate Modeling.

PACS: 89.75.-k., 89.75.Da, 05.45.Xt, 87.18.-h

MSC: 34C15, 35Q70

1. JCSMD AIMS AND SCOPE

Journal of Coupled Systems and Multiscale Dynamics (JCSMD) is an international, peer-reviewed interdisciplinary journals that provides a unique publication forum for addressing challenges and new emerging problems in the study of coupled systems, their dynamics, as well as associated phenomena and processes. The journal publishes high quality contributions in all aspects of such systems, including analysis, modeling, control, and applications. Some of the most challenging problems in science and engineering require dealing with several different physical fields, the interaction of different parts of the system, and the interactions of various length and time scales, which may or may not be known a priori. Most such problems require mathematical modeling approaches for their solution. As many areas of science and engineering were conventionally divided in the past, these problems were difficult to address. With the development of new mathematical modeling techniques, such as those based on multifield, multiscale approaches, the situation is rapidly changing and we are now in a position to meet such challenges.

The journal welcomes papers in all aspects of this development directed toward the study of coupled dynamic systems, phenomena, and processes, both deterministic and stochastic. This includes model developments for coupled dynamic problems, their applications, fundamental mathematical problems in advancing the theory of coupled dynamic systems, as well as the development of new numerical procedures, high performance computing, and algo-

ritmic aspects related to solving such problems. The JCSMD accepts submissions of high-quality articles containing original research results (in the categories of Full Research Papers and Short Communications), as well as review articles of exceptional merit.

Research topics covered by the JCSMD include, but not limited to:

- Multifield problems in science and engineering (e.g., thermoelasticity, piezoelectricity, phase-field models, magneto-hydrodynamics, geomechanics);
- Complex systems (from oscillators to networks), including uncertainty analysis and quantification;
- Applications in engineering and materials science ranging from mechanical, civil and environmental engineering to biomechanics and bioengineering (e.g., heterogeneous media, fluid-structure interactions, plasma-solid modeling);
- Multiscale problems (from atomistic to macroscopic scales, from nanoscience and its applications to large scale dynamics);
- Life science applications (from processes at the macromolecular level to neuroscience and to biomedicine);
- Coupled human-environment systems, mathematical models in sustainability science;
- Industrial applications (e.g., smart materials and systems, alternative energy problems, bioinspired and bionic systems, multibody systems with constraints);
- Applications in finance, economics, business, and social sciences;
- Coupled dynamic problems in astrophysics and cosmology, models coupling matter and light;
- Coupled systems dynamics in earth and climate modeling.

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The papers developing theoretical concepts, theories, and methods in any focus area of JCSMD are especially welcome when the application areas are clearly identified. The JCSMD peer-review system, together with the outstanding scientists of the editorial board, ensures that quality is maintained throughout.

The journal aims to provide its readership with coverage of important advances in all aspects of coupled systems and multiscale dynamics.

The JCSMD is available in print and online editions. The language of the journal is English. There is no page charges to the authors.

2. ACCEPTANCE CRITERIA

The primary criteria for judging the acceptability of a manuscript are: its originality, scientific importance and interest to a general audience working in diverse areas of coupled systems, multiscale dynamics, and their applications. The JCSMD accepts submissions in the following three categories: Full Research Articles, Review Articles, and Short Communications. The last category is intended for communicating the results of significant importance and of broad interest to the coupled systems & multiscale dynamics research community.

3. BENEFITS TO THE AUTHORS AND OFFPRINTS

The JCSMD authors will receive the following benefits:

- Electronic submission of articles;
- Fast reviews;
- Rapid times to publication;
- No page charges;
- Free color where justified;
- Distinguished editorial board;
- Availability in print and online editions.

Authors may order offprints of articles with a minimum of 100 from American Scientific Publishers (ASP) prior to publication. An order form accompanying the page proofs will be sent directly to the corresponding author (*). Please return your offprint order form with the page proofs.

4. PREPARATION OF MANUSCRIPTS

The material in this section is grouped into several subsections.

4.1. General remarks

The work must demonstrate in a clear and concise manner main results obtained, their novelty and importance, while conclusions must be justified by the study. As mentioned above, there are three categories of contributions to the JCSMD. Except of the Short Communications, there are no strict length restrictions for the overall manuscript or individual sections. Regardless of the category, all submitted manuscripts should have a short abstract (typically containing fewer than 250 words), 5-6 keywords, and a minimum of two PACS and two MSC codes. Given the interdisciplinary nature of the readership of the JCSMD, the authors should emphasize the importance of their results to researchers in other fields of coupled systems and/or multiscale dynamics, whenever applicable. The papers that may have potential implications across several fields of research in coupled systems and/or multiscale dynamics are especially welcome.

Full Research Articles present new results that are either of current general interest or of great significance to a more specialized audience. There are no restrictions on the length of full research articles. The work should be put in the context of the current state-of-the-art in the field, implying that a comprehensive review of relevant literature is required in the introductory part. The manuscript in this category should be divided into sections, with sections containing Introduction, Main Results, Conclusions, and References necessarily present.

Review Articles provide comprehensive overviews of current topics of interest in all areas of coupled systems and/or multiscale dynamics. Such overviews should contain a critically selected treatment of the material and the inclusion of the discussion of open problems and new challenges is highly desirable. There are no restrictions on the length of review articles. A typical review article may have 20-25 journal pages with 150+ references, but review articles of any length (e.g., ranging from 15 to 100 journal pages) will be considered. As a rough guide, 2.5 manuscript pages are equal to one journal page, 4 figures are equal to one journal page. All review articles should have a Table of Contents. Although Review Articles are usually written upon invitation of the editor or a member of the Editorial Board, unsolicited manuscripts within the scope of the journal are also welcome.

Short Communications are peer-reviewed short reports of significant importance, containing outstanding novel findings that may lead to potential advances in several fields pertinent to coupled systems and/or multiscale dynamics. The cover letter, abstract, and the first paragraph of this contribution should provide a clear picture on why it should be considered in this category. The final paragraph of a rapid communication should summarize the main findings. The maximum length of a Short Communication is four journal

pages (approximately 3500 words and two figures). Short Communications submitted to JCSMD are handled expeditiously and are published in the journal upon acceptance as quickly as possible.

In addition, occasional highlights describing important new results of original research and book reviews may also be published.

4.2. Organization of the Manuscript

Articles should be organized into sections containing as a minimum Introduction, Main Results, Conclusions, and References.

4.2.1. Title

All submitted manuscripts should start with the title part, containing the title of the article, author's name(s), affiliation(s), address(es), and the corresponding author's email address. Complete affiliations of all authors are required, including their department, university/company, city, zip-code, and country. The corresponding author should be indicated with an asterisk (*). The title of the article should be informative, specific to the project, yet concise (as a rule, 75 characters or less, not more than 15 words). It should be comprehensible to a broader scientific audience. Do not use abbreviations in the article's title.

4.2.2. Abstract and Keywords

Next, the manuscript should have a short abstract and 5-6 keywords. The abstract should not typically exceed 250 words; it must be complete and self-contained (understandable without reference to the text). Keywords should be listed separated by commas. No abbreviations are allowed in the abstract (they should be defined the first time they are used in the text).

4.2.3. Introduction

The Introduction should present the importance of present studies in providing significance to answer previously unresolved questions. Novelty should be clear already from the introductory part. As mentioned above, this section should be put in the context of the current state-of-the-art in the field, implying that a comprehensive review of relevant literature is essential in the introductory part.

4.2.4. Main Part of the Article

This can be divided by corresponding headings such as "Mathematical Model", "Theory", "Numerical Methodology", "Experimental Details", applicable to your particular case. Formulate clearly and unambiguously your main results, their novelty and impact. In particular, we encourage including a separate section "Results and Discussion". Use divided subheadings to establish the logical sequence of your main results and findings whenever necessary. The discussion should be brief and comprehensive. Emphasis should be on the discussing the novelty of the studies and establishing a new hypothesis or model on the basis of the studies.

4.2.5. Conclusions

Summarize all important accomplishments achieved and emphasize novelty and potential impact of your results.

4.2.6. Acknowledgments

This section should be brief and placed at the end of the text before the references. It is the responsibility of authors to disclose in the Acknowledgments section any funding sources for the project or other relationships that are relevant.

4.3. Notation, Mathematical Material, and Nomenclature

Notation used in the manuscript should be clear and consistent with standard usage. It is important that all equations in the manuscript should be neatly formatted and punctuated. They are numbered on the right and aligned to bring out their structure. Whenever needed, use appropriate bracketing to ensure clarity. Use the established nomenclature wherever possible, and always report numerical data (length, weight, and volume) in the appropriate SI units. The units of measurement should be used in conjunction with their numerical values. Conversion factors should be given at their first occurrence. If in doubt, the APS style guide should be used as a general reference on matter of units, grammar and formatting. Keep abbreviations to a minimum, but if they are necessary, define them upon first use in the text (alternatively, a list of abbreviations may be included in the end before references).

Here are several examples of mathematical material:

Example 1. If we set $X_i(t) = \ln[V_i(t)]$, then the threshold of $X_i(t)$ is $D_i(t) = \gamma_i t + \ln(\kappa_i)$. Our main interest is in the process $X_i(t)$.

Example 2. The optimal bandwidth in the kernel function

K can be calculated as:

$$h_{opt} = \left(2N\sqrt{\pi} \int_{-\infty}^{\infty} (f_t'')^2 dt \right)^{-0.2}. \quad (1)$$

4.4. Figures and Tables

All figures should be prepared so that the details can be seen after reproduction. As a basic guideline, all submitted figure images must have resolutions of at least 300 dpi. They must be easy to read and of good quality. Hence, a clear background and unbroken lines with as much black-and-white contrast as possible are highly desirable. Figures should be numbered consecutively using Arabic numerals and referred to in the text by number. Each figure legend (right underneath the figure) should have a concise title and should provide enough information so that the figure is understandable without frequent reference to the text.

All figures, tables, illustrations, photographs should be prepared in such a way that they could be printed in a single column size with a width of 3 1/4 inches or 8.25 cm. Only if absolutely necessary should figures/tables/photos occupy double columns.

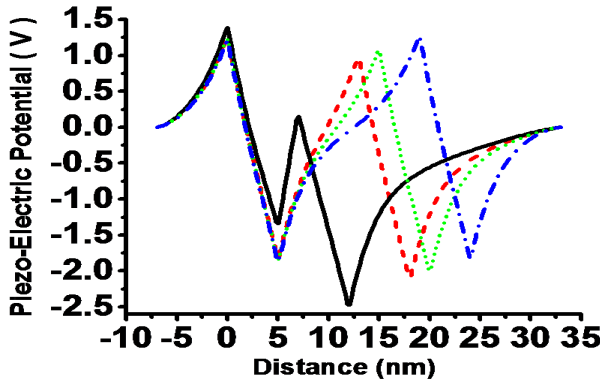


FIG. 1: (Color online) Effect of piezoelectric potential on the two vertically stacked double AlN/GaN quantum dots along z -direction.

Color illustrations are most welcome by the JCSMD as they are effective in conveying complex graphs and photographs. Free color printing at the publisher's discretion, will provide an opportunity to publish color figures/illustrations in print at no cost to the authors.

Tables can be used in all cases where the information cannot be presented in a clean structured manner in other ways. They must have captions, which should make the tables intelligible without reference to the text. Whenever possible, the position of each table should be clearly marked in the text. Tables should be numbered serially and referred to in the text by number. Their structure should be clear, with

simple column headings giving all units whenever applicable.

Here is an example:

TABLE I: Optimized parameters that were used for our Monte Carlo runs.

	σ_i	λ	μ_{Z_i}	σ_{Z_i}
A	0.0900	0.1000	-0.2000	0.5000
B	0.0894	0.1000	-0.2960	0.6039
C	0.1587	0.1000	-0.5515	1.6412
D	0.4500	0.1000	-0.8000	1.5000

4.5. Cover Art and Supplemental Material

Authors are encouraged to provide a striking image to accompany their article. If the image (photo, graph, scheme) is judged by the editors to be suitable for publication, it may be featured on the web and/or in print to highlight the paper online, put on the volume cover, or on a journal flyer. The image could originate from the computational or experimental findings reported in the manuscript but do not have to constitute a part of the original work and need not be reprinted in the article. Images must be original and should be submitted as separate files. We can accept a wide range of image file types (e.g., TIFF, JPEG or EPS file) as long as it is high-resolution. Submission of such images can be made at any time from acceptance of the manuscript.

Supporting Information (e.g., software codes or details of experimental findings) can be placed at the end of the manuscript or link to the article as Supplemental Material. We encourage submitting essential supplementary files that additionally support author's conclusions. Supporting files should be prepared in a publication-ready format. Material that has been published previously is not acceptable for posting. If the software required for users to view/use the supplemental material is not embedded in the file, you are urged to use shareware or generally available/easily accessible programs. To prevent any misunderstandings we request that authors submit a text file (instruction.txt) containing a brief instruction on how to use the files supplied. All supporting information should be referred to in the manuscript, with titles (and, if desired, legends) for all files listed under the heading 'Supporting Information'.

4.6. References and Footnotes

Whenever applicable, the "Journal of Coupled Systems and Multiscale Dynamics" should be abbreviated as **J. Coupled Syst. Multiscale Dyn.** for the reference citation purpose.

Proper formatting of the references is crucial, so special

care should be taken about spelling, abbreviations, capitalization and punctuation. All references should be in the proper format and numbered in the sequence [in square brackets] in the text and list in the same numerical order in the reference section. Do not use abstracts and websites as references. References to papers accepted but not yet published should be designated as "in press". Information from manuscripts submitted but not accepted should be cited in the text as "unpublished observations" with written permission from the source. Avoid citing a "personal communication" unless it provides essential information not available from a public source (note that for scientific articles, authors should obtain written permission and confirmation of accuracy from the source of a personal communication). Do not use "website address" as a reference. If absolutely necessary, web pages, private communications, unpublished results, etc. may be given as footnotes. All references must be archival. The references must be verified by the authors against the original documents. Their completeness is the responsibility of the authors. References should be listed in the following style (the ACS style).

1. Journal Article

X. L. Huang, L. C. Wang, and X. X. Yi, *Phys. Rev. E* 87, 012144 (2013).

2. Book Reference

M. A. R. Ferreira and H. K. H. Lee, *Multiscale Modeling. A Bayesian Perspective*, Springer, New York (2007).

3. Chapter in a Book

H. V. Jansen, N. R. Tas and J. W. Berenschot, in *Encyclopedia of Nanoscience and Nanotechnology*, Edited H. S. Nalwa, American Scientific Publishers, Los Angeles (2004), Vol. 5, pp.163-275.

4. Conference Proceedings

T. Kundu, Editor. Health Monitoring of Structural and Biological Systems. *Proc. SPIE 8348*, (2012) March 11; San Diego, CA, USA.

5. Patent

H. D. Hudspeth, R. R. Corderman, R. B. Rohling, and L. Denault, *Gated nanorod field emitter structures and associated methods of fabrication*. US patent 7411341, August 12 (2008).

6. Dissertation

B. V. Asokan. *Variational multiscale method for stochastic thermal and fluid flow problems* [dissertation]. Cornell University (2006).

The names of all authors must be included in a reference. Do not use the phrases "et al." and "ibid." in the reference section.

All publications cited in the text should be presented in a list of references following the text of the manuscript. Cite references in the text by a number in square brackets on the line (e.g., "as suggested in [1], we use this formula"). The full reference should be given in a list of references at the

end of the paper. Follow the examples of references given in this template file for each of the following categories: journal articles [1–4], entire special issues of journals [5], books [6–8], chapters in edited books [9], proceedings [10], papers in published proceedings [11], reports [12], patents [13], theses/dissertations [14, 15].

A footnote giving the email address of the corresponding author is encouraged. Apart from the above described cases, the use of footnotes should be minimized.

4.7. Formatting and Readability

All pages, including those with the references, tables, and figures, must be numbered consecutively. The use of LaTeX with a standard 12-point Times New Roman font is highly encouraged (please consult the template provided). We recommend American-style English spelling throughout the manuscript. Manuscripts submitted to the JCSMD should be written clearly, in good English, well-structured, and organized in a coherent, easy to follow style. Manuscripts lacking adequate language or organizational quality may be returned to the author for improvement, without sending them to the referees.

4.8. Copyright Transfer Agreement

Once the manuscript is accepted for publication, authors have to sign a Copyright Transfer Agreement that is available on the webpage of the JCSMD. We encourage submitting the signed agreement at the time of the manuscript submission. A completed agreement, signed by the corresponding author on behalf of all the authors, must be provided for each submitted manuscript as a condition of publication.

5. MANUSCRIPT SUBMISSION AND PEER REVIEW PROCESS

The manuscript should be submitted online via the journal home page. Authors are kindly advised to read Journal of Coupled Systems and Multiscale Dynamics policy and also the uniform requirements for manuscripts submission. Authors should submit manuscript online as a single pdf file to the Manuscript Tracking System.

In exceptional circumstances, the manuscript can be submitted electronically to the Journal Editor. The manuscripts must be written in LaTeX or MS Word. We do not accept Plain TeX format. The LaTeX template is available from the journal website (see Instructions for Authors). Please use this template to prepare your manuscript. Other formats such as Windows/MS-DOS or Macintosh having MS Word file will also be accepted. If you are preparing your

manuscript in the Windows-based format such as MS Word, type it double-spaced throughout (including footnotes, references, tables, legends) on 8.5" x 11" or A4 white paper leaving at least 1 inch left hand margin. Otherwise, please try to adhere to the given template.

5.1. Cover Letter

Each manuscript should be accompanied by a cover letter which should explicitly state that the authors have the authority to publish the work and that the manuscript (or one with substantially the same content, by any of the authors) has not been previously published, electronically or in print, in any language anywhere and that it is not under simultaneous consideration by another journal. Submission of a manuscript to this journal implies that any experimental research that is reported in the manuscript has been performed with the approval of an appropriate ethics committee. All authors of the manuscript are responsible for its content; they must have agreed to its publication and have given the corresponding author the authority to act on their behalf in all matters pertaining to publication. The corresponding author is responsible for informing the coauthors of the manuscript status throughout the submission, review, and production process.

The cover letter should also contain suggestions of **at least three proposed reviewers** with their contact details, affiliations, and email addresses. The final suggestion of reviewers is the decision of the Editor or an Editorial Board member handling the manuscript.

5.2. Author Related Work and Electronic Data Files

If references concerning related work by the author are quoted, but such work is in press/submitted and therefore not available to the referees, an electronic reference or copy should be submitted with the manuscript.

Electronic data files of the original manuscript are required only after notification of acceptance. If the manuscript is accepted, the corresponding author will be asked to provide separate electronic files of the text and figures for the final production.

5.3. Permissions

It is authors' responsibility to obtain written copyright permissions to reproduce any copyright materials from other sources, if they are required (e.g. for a review article). Authors are advised to cite proper references in figure/tables captions of all previously published figures/tables/illustrations including their own published work

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5.4. Peer Review Process

Both submissions and the peer review process are handled via the Manuscript Tracking System. Each manuscript after uploading to the Manuscript Tracking System receives an individual identification code that is used in any correspondence with regard to the publication process. During the pre-screen process, a submission may be declined without review if the studies reported are not sufficiently novel or important to merit publication in the journal. The Editor seeks advice from experts in the appropriate field and appoints an Editorial Board member with expertise in that field, who is fully responsible for further handling the manuscript and an ultimate decision about its acceptance/rejection. All articles submitted to the JCSMD that pass the initial pre-screen process, are refereed by a minimum of two reviewers.

5.4.1. Decision Letter

Once all reviews have been received and considered, a decision letter is sent to the author with one of the possible outcomes: (i) accept without revision, (ii) minor revision, (iii) major revision, (iv) reject.

Rejection of the manuscript does not necessarily imply that the paper is incorrect, uninteresting, or unimportant in general. It implies that the authors have not established to the satisfaction of the referees that the paper has sufficient merits according to the standards of the JCSMD.

5.4.2. Resubmission

When revision of a manuscript is requested, authors should return the revised version of their manuscript as soon as possible. A summary of changes made and a response to all recommendations and criticisms should be enclosed, along with the revised manuscript. Prompt and diligent action may ensure fast publication if a paper is finally accepted for publication. If it is the first revision of an article, authors need to return their revised manuscript within 28 days. If it is the second revision authors, need to return their revised manuscript within 14 days. If these deadlines are not met, and no specific arrangements for completion have been made with the Editor, the manuscript will be treated as a new one and will receive a new identification code along with a new registration date. Final decision is made by the Editor.

5.4.3. Final proofreading

Authors will receive a pdf file with the typeset version of their manuscript for final proofreading. This is the last opportunity to view an article before its publication. Page proofs for the correction of printer's errors only will be dispatched to the corresponding author denoted with an asterisk (*) unless otherwise requested. Alterations at this stage are not allowed as they are expensive and may have to be charged to the authors. The proofread copy and reprint order form must be returned within 72 hours.

5.4.4. Other Issues

Errata. If any errors are detected in the published material, they should be reported to the Editor. The corresponding authors should send appropriate corrected material to the Editor via email. The standard Erratum is a statement by the authors of the original paper that briefly describes the correction(s) and, where appropriate, any effects on the conclusions of the paper. This material will be considered for publication as soon as feasible.

Serious errors in a published manuscript and infringements of professional ethical codes will result in an article being retracted. This will occur where the article is clearly defamatory, or infringes others' legal rights, or where the article is, or there is good reason to expect it will be, the subject of a court order, or where the article, if acted upon, might pose a serious health risk. In any of these cases all coauthors will be informed about a retraction. To protect the integrity of the record, the retracted article will not be removed from the journal, but a Retraction Note (a notice that the paper should not be regarded as part of the scientific literature) detailing the reason for retraction will be linked to the original article.

Scientific misconduct and other fraud. Scientific misconduct is defined by the Office of Research Integrity as "fabrication, falsification, plagiarism, or other practices that seriously deviate from those that are commonly accepted within the academic community for proposing, conducting, or reporting research". In cases where there is a suspicion or allegation of scientific misconduct or fraudulent research in manuscripts submitted or published, the Editors reserve the right to impose sanctions on the authors, such as:

- an immediate rejection of the manuscript;
- banning author(s) from submitting manuscripts to the journal for a certain period of time;
- retracting the manuscript;
- alerting editors of other journals and publishers;
- bringing the concerns to the authors' sponsoring or funding institution or other appropriate authority for investigation.

The JCSMD publishes only original manuscripts that are not also published or going to be published elsewhere. Multiple submissions/publications, or redundant publications (re-packaging in different words of data already published by the same authors) will be rejected. If they are detected only after publication, the journal reserves the right to publish a Retraction Note.

Conflicts of Interest Disclosure. In order to encourage transparency without impeding publication, all authors, referees and editors must declare any association that poses a conflict of interest in connection with the manuscript. There should be no contractual relations or proprietary considerations that would affect the publication of information contained in a submitted manuscript. A competing interest for a scholarly journal is anything that interferes with, or could reasonably be perceived as interfering with, the full and objective presentation, review, or publication of research findings, or of articles that comment on or review research findings. Potential conflicts of interest exist when an author, editor or reviewer has financial, personal or professional interests in a publication that might influence their scientific judgment.

Although the editors attempt to avoid conflicts of interests in their choice of referees, they may not always be aware of a problem. If an author believes that conflicts are possible, s/he may wish to submit a list of the individuals to be excluded as referees for the given manuscript. The Editor will usually honor such a request.

5.5. JCSMD Submission Checklist

1. Complete manuscript in pdf format, with full postal addresses and affiliations of all authors, indicating the corresponding author with an asterisk.
2. Cover letter with minimum three potential reviewers and contact details of the corresponding author, including email addresses.
3. If your manuscript is resubmitted, a summary of changes made and a response to all recommendations and criticisms should be enclosed, along with the revised manuscript.
4. Completed and signed Copyright Transfer Agreement (not compulsory at the stage of submission).

6. CONCLUSIONS

In this contribution, we described Instructions for Authors submitting their manuscripts to the Journal of Coupled Systems and Multiscale Dynamics.

Acknowledgments

We would like to thank NSERC for its support and anonymous referees for helpful suggestions. The work was

also supported by the Danish National Research Foundation, Grant No. 123456. This work was made possible by the facilities of the Canadian Shared Hierarchical Academic Research Computing Network (SHARCNET).

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