Plan Overview

A Data Management Plan created using DMPonline

Title: Quantum tau functions and related topics

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Funder: Netherlands Organisation for Scientific Research (NWO)

Template: Data Management Plan NWO (September 2020)

Project abstract:

Quantum tau functions were introduced in 2016 by Buryak, Dubrovin, Guéré, and Rossi using the double ramification hierarchies and their quantizations. The first and only result about quantum tau functions concerns a particular example, the quantum Witten-Kontsevich series; Xavier Blot established that the dispersionless coefficients of this series are obtained from Hurwitz numbers. This result open the door to the study of connections between quantum integrable systems and quantum tau functions with enumerative geometry. Recently, Xavier Blot and his collaborators considerably strengthen this result by conjecturing that coefficients of any quantum tau function are obtained from intersection numbers with a Chiodo class. The goal of this project is to study quantum tau functions by proving this conjecture and investigate other connections with enumerative geometry.

ID: 135564

Start date: 01-09-2023

End date: 31-08-2025

Last modified: 17-10-2023

Grant number / URL: OCENW.M.21.233

Quantum tau functions and related topics

General Information

Name applicant and project number

Sergey Shadrin, OCENW.M.21.233

Name of data management support staff consulted during the preparation of this plan and date of consultation.

Tim van Erven, 12-10-2023

1. What data will be collected or produced, and what existing data will be re-used?

1.1 Will you re-use existing data for this research?

If yes: explain which existing data you will re-use and under which terms of use.

- No

1.2 If new data will be produced: describe the data you expect your research will generate and the format and volumes to be collected or produced.

No data will be produced due to the theoretical characteristics of the project.

1.3. How much data storage will your project require in total?

- 0 – 10 GB

2. What metadata and documentation will accompany the data?

2.1 Indicate what documentation will accompany the data.

No documentation, since there will be no data due to the theoretical characteristics of the project.

2.2 Indicate which metadata will be provided to help others identify and discover the data.

Not applicable.

3. How will data and metadata be stored and backed up during the research?

3.1 Describe where the data and metadata will be stored and backed up during the project.

- Institution networked research storage

3.2 How will data security and protection of sensitive data be taken care of during the research?

- Not applicable (no sensitive data)

4. How will you handle issues regarding the processing of personal information and intellectual property rights and ownership?

4.1 Will you process and/or store personal data during your project?

If yes, how will compliance with legislation and (institutional) regulation on personal data be ensured?

- No

4.2 How will ownership of the data and intellectual property rights to the data be managed?

Not applicable.

5. How and when will data be shared and preserved for the long term?

5.1 How will data be selected for long-term preservation?

- All data resulting from the project will be preserved for at least 10 years

5.2 Are there any (legal, IP, privacy related, security related) reasons to restrict access to the data once made publicly available, to limit which data will be made publicly available, or to not make part of the data publicly available?

If yes, please explain.

- No

5.3 What data will be made available for re-use?

- All data resulting from the project will be made available

5.4 When will the data be available for re-use, and for how long will the data be available?

- Data available as soon as article is published

5.5 In which repository will the data be archived and made available for re-use, and under which license?

Not applicable.

5.6 Describe your strategy for publishing the analysis software that will be generated in this project.

Not applicable.

6. Data management costs

6.1 What resources (for example financial and time) will be dedicated to data management and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?

Not applicable.