Project Management for Scientists 2019

**Proposal Evaluation**

Evaluate all proposals, except for your own. Fill in these forms by 1 November 2019 at 09:15.

**Proposal 1:** **Automating the 3-m Shane Telescope for Astronomical Surveying**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Upgrade necessary for sustained relevance of telescope for sky surveys and training purposes.

B) Verbal assessment of the proposal (1 sentence):

Clear and detailed proposal, however I find it hard to justify spending 5 million dollars on upgrading an old telescope (also because only 250,000 dollars are available for this call for proposals.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

7 Innovativeness of the proposed research

8 Likelihood to achieve the proposed research goals

10 Realism of the proposed research plan and budget

8 Qualification of the proposer to carry out the proposed research

**Proposal 2:** **Developing an Event Classification Algorithm for the Cherenkov Telescope Array**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Expanding the energy range of observational gamma-ray astronomy leading to increased understanding of gravitational waves, agns and neutrinos.

B) Verbal assessment of the proposal (1 sentence):

Interesting research described in great detail, however, the writing is not always very clear.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

8 Innovativeness of the proposed research

8 Likelihood to achieve the proposed research goals

7 Realism of the proposed research plan and budget

8 Qualification of the proposer to carry out the proposed research

**Proposal 3:** **Neural Networks for next generation Adaptive Optics systems**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Using machine learning for increasing effectiveness of adaptive optics on a large scale.

B) Verbal assessment of the proposal (1 sentence):

Clear and to the point.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

7 Innovativeness of the proposed research

8 Likelihood to achieve the proposed research goals

8 Realism of the proposed research plan and budget

7 Qualification of the proposer to carry out the proposed research

**Proposal 4:** **Beyond CO Outflows, Finding Complex Molecules of Planet Formation**

A) Summary of the innovative aspects of the proposed research (1 sentence):

High res images of the inner parts of proto-planetary disks are essential for furthering knowledge about early planet formation.

B) Verbal assessment of the proposal (1 sentence):

Extremely verbose but very interesting proposal.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

6 Innovativeness of the proposed research

8 Likelihood to achieve the proposed research goals

7 Realism of the proposed research plan and budget

9 Qualification of the proposer to carry out the proposed research

**Proposal 5:** **Life Signature Detection from the Moon (LSDmoon)**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Characterising the earth as an exoplanet and identifying possible biomarkers using moon-based observations.

B) Verbal assessment of the proposal (1 sentence):

Clear and to the point but lacks detailed overview of budget and planning.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

9 Innovativeness of the proposed research

8 Likelihood to achieve the proposed research goals

6 Realism of the proposed research plan and budget

9 Qualification of the proposer to carry out the proposed research

**Proposal 6: Lava Rainbows of 55 Cnc e: Proposal**

A) Summary of the innovative aspects of the proposed research (1 sentence):

For the first time 55 Cnce’s will be studied using rainbows setting a precedent for studying exoplanets using this technique.

B) Verbal assessment of the proposal (1 sentence):

Well written, clear and concise, could have a more detailed budget overview.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

8 Innovativeness of the proposed research

8 Likelihood to achieve the proposed research goals

7 Realism of the proposed research plan and budget

8 Qualification of the proposer to carry out the proposed research

**Proposal 7: Exploring innovations in High contrast imaging algorithms using deep neural networks**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Implementing machine learning techniques to a high contrast imaging problem.

B) Verbal assessment of the proposal (1 sentence):

Clear and concise, could have a bit more detailed plan and budget.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

8 Innovativeness of the proposed research

7 Likelihood to achieve the proposed research goals

7 Realism of the proposed research plan and budget

8 Qualification of the proposer to carry out the proposed research

**Proposal 8:** **Constraints on the Interior Density and Porosity of an (Interstellar) Comet**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Using partial transmittance of satellite communication signals to study an intercepted comet's nucleus.

B) Verbal assessment of the proposal (1 sentence):

Interesting and clearly written proposal how it is fairly high risk due to the nature of the probe mission.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

9 Innovativeness of the proposed research

7 Likelihood to achieve the proposed research goals

8 Realism of the proposed research plan and budget

8 Qualification of the proposer to carry out the proposed research

**Proposal 9: Nirvana Science Foreclosures (NSF) Grant Proposal**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Potentially observing an intermediate mass black hole.

B) Verbal assessment of the proposal (1 sentence):

The project is well described however I am not convinced of how innovative this research is, the plan as described in this proposal is more of a project description and the budget is not informative.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

6 Innovativeness of the proposed research

8 Likelihood to achieve the proposed research goals

6 Realism of the proposed research plan and budget

7 Qualification of the proposer to carry out the proposed research

**Proposal 10: The missing link: Investigating Sz91**

A) Summary of the innovative aspects of the proposed research (1 sentence):

B) Verbal assessment of the proposal (1 sentence):

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

\_\_\_ Innovativeness of the proposed research

\_\_\_ Likelihood to achieve the proposed research goals

\_\_\_ Realism of the proposed research plan and budget

\_\_\_ Qualification of the proposer to carry out the proposed research

**Proposal 11:** **TRACING THE ORBITS OF MILKY WAY GALAXY AND M31 AT HIGH REDSHIFTS USING MODEL SIMULATIONS**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Using modeling methods to study the past orbital behaviour of the milky way and M31.

B) Verbal assessment of the proposal (1 sentence):

Clearly written, not entirely convinced about innovative nature but I like that unexpected costs were accounted for.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

7 Innovativeness of the proposed research

7 Likelihood to achieve the proposed research goals

9 Realism of the proposed research plan and budget

8 Qualification of the proposer to carry out the proposed research

**Proposal 12: MAMUTPoC-The MAssively MUltiplexed Telescope Proof of Concept**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Proof of concept for large flux collector telescope.

B) Verbal assessment of the proposal (1 sentence):

Concise and clearly written.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

9 Innovativeness of the proposed research

8 Likelihood to achieve the proposed research goals

8 Realism of the proposed research plan and budget

8 Qualification of the proposer to carry out the proposed research

**Proposal 13: Employing deep learning to select potential ground breaking targets from sky surveys**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Labeling SDSS sources according to their scientific values and using this to train a neural network to predict other potentially scientifically valuable sources.

B) Verbal assessment of the proposal (1 sentence):

Very ambitious and possibly controversial project due to subjectiveness of labeling, clear plan and description.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

9 Innovativeness of the proposed research

6 Likelihood to achieve the proposed research goals

8 Realism of the proposed research plan and budget

7 Qualification of the proposer to carry out the proposed research

**Proposal 14: The sun’s motion and it’s vertical position with respect to the Milky Way disk**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Developing new methods for techniques for determining the motion and position of our sun relative to the milky-way.

B) Verbal assessment of the proposal (1 sentence):

Clear, concise, optimistic planning.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

7 Innovativeness of the proposed research

8 Likelihood to achieve the proposed research goals

7 Realism of the proposed research plan and budget

8 Qualification of the proposer to carry out the proposed research

**Proposal 15: Magnetism in galaxy evolution**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Carrying out large scale simulations that incorporate magnetohydrodynamics and coupling this to gravitational dynamics.

B) Verbal assessment of the proposal (1 sentence):

Clearly written with good emphasis on important points.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

7 Innovativeness of the proposed research

9 Likelihood to achieve the proposed research goals

8 Realism of the proposed research plan and budget

10 Qualification of the proposer to carry out the proposed research

**Proposal 16: ExoML: Direct imaging of exoplanets with machine learning**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Using artificial intelligence methods in a direct imaging pipeline for exoplanets.

B) Verbal assessment of the proposal (1 sentence):

Well, clear, concise and comprehensive proposal.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

8 Innovativeness of the proposed research

9 Likelihood to achieve the proposed research goals

9 Realism of the proposed research plan and budget

9 Qualification of the proposer to carry out the proposed research

**Proposal 17: Emulation of Euclid-era Cosmology with Neural Networks**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Developing machine learning code for euclid-like cosmology.

B) Verbal assessment of the proposal (1 sentence):

Clear, concise, well written.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

8 Innovativeness of the proposed research

8 Likelihood to achieve the proposed research goals

9 Realism of the proposed research plan and budget

9 Qualification of the proposer to carry out the proposed research

**Proposal 18: EFFECTS OF THE AURORAL COLORS ON THE UPPER ATMOSPHERE**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Using information gained from auroral processes on earth in order to better understand these processes on gas giants.

B) Verbal assessment of the proposal (1 sentence):

Slightly confusing language, at times exceedingly verbose., however plan is interesting.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

7 Innovativeness of the proposed research

8 Likelihood to achieve the proposed research goals

8 Realism of the proposed research plan and budget

8 Qualification of the proposer to carry out the proposed research

**Proposal 19: *Modelling of a space-based radio telescope  
for determining reionisation epoch of the universe from 21-cm radiation***

A) Summary of the innovative aspects of the proposed research (1 sentence):

Developing a satellite that may be used to study the reionization epoch.

B) Verbal assessment of the proposal (1 sentence):

Innovative aspect is not entirely clear, project description is however.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

7 Innovativeness of the proposed research

8 Likelihood to achieve the proposed research goals

6 Realism of the proposed research plan and budget

7 Qualification of the proposer to carry out the proposed research

**Proposal 20: The realtionship between active galactic nuclei and their large scale environment**

A) Summary of the innovative aspects of the proposed research (1 sentence):

Combining AGN observations from different wavelengths in order to observe their environment with increased precision.

B) Verbal assessment of the proposal (1 sentence):

I like the different take on the organization of the proposal that still contains all relevant information yet remains quite concise.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

7 Innovativeness of the proposed research

9 Likelihood to achieve the proposed research goals

8 Realism of the proposed research plan and budget

8 Qualification of the proposer to carry out the proposed research

**Proposal 21: Space History: asteroids reveal the origins of our Solar System**

A) Summary of the innovative aspects of the proposed research (1 sentence):

High precision catalogue of sub-km asteroids will be created.

B) Verbal assessment of the proposal (1 sentence):

Clear and obviously relevant research, proposal slightly verbose.

C) Numerical grades between 1 (bad) to 10 (excellent) on the following aspects:

8 Innovativeness of the proposed research

8 Likelihood to achieve the proposed research goals

8 Realism of the proposed research plan and budget

8 Qualification of the proposer to carry out the proposed research