

Science Communication and Writing Module: Proposal Writing I

UCO/Lick Observational Astronomy Workshop

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Agenda

Two-session workshop to introduce proposal writing and review

- Introductions
- Who I am and why I created this module
- Workshop curriculum
- Interactive breakout and assignment
- Feedback

Ask questions anytime!

Introductions

- Name
- Campus
- Advisor
- Main research interest

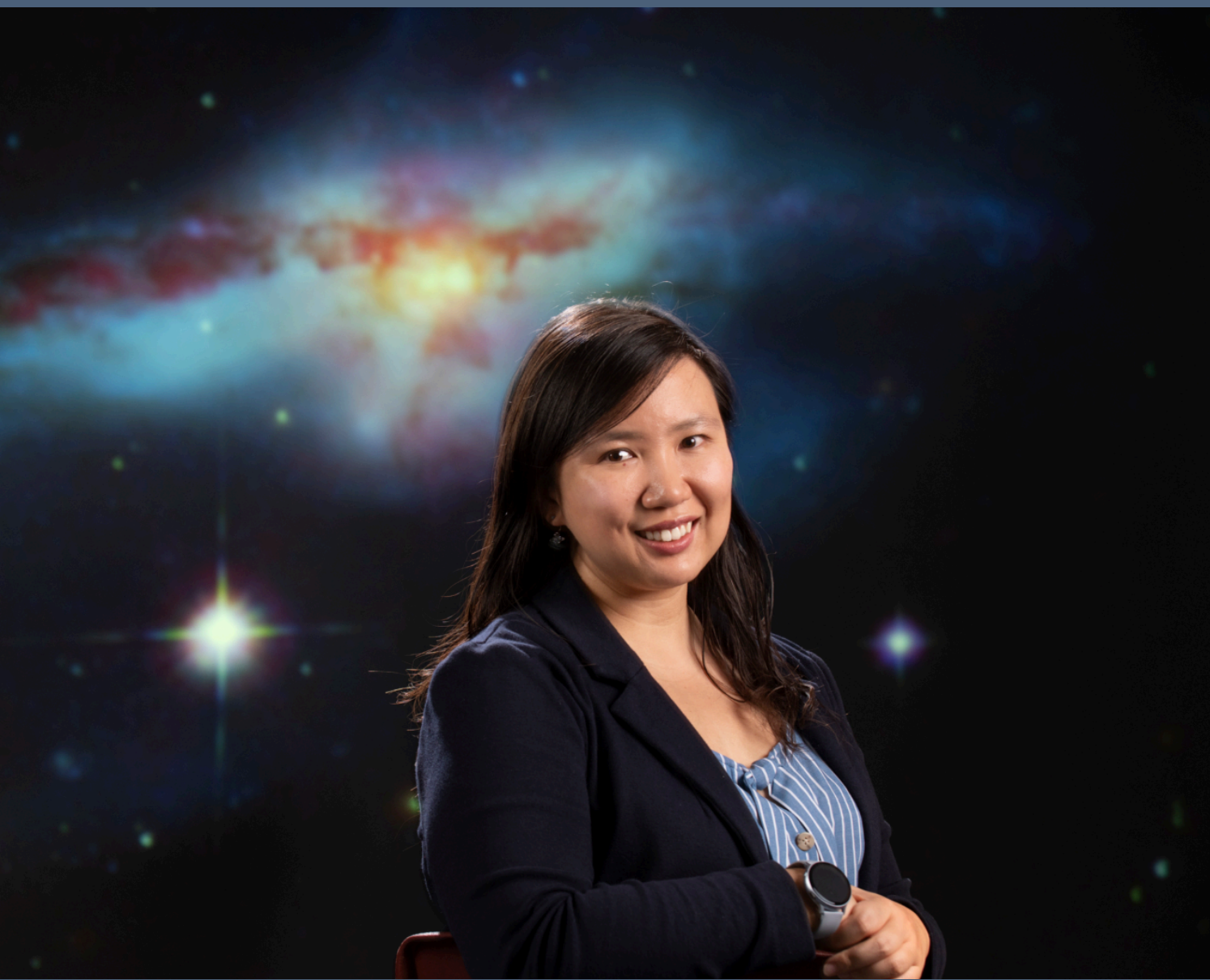
About Me

And why I created this Workshop

vivianu@caltech.edu

<https://vivian-u.github.io>

bsky: justtheletteru



- BS from Caltech, PhD from University of Hawai'i at Manoa
- Postdoc at UC Riverside and UC Irvine (UC PPFP/CFP)
- UC Irvine -> Caltech/IPAC (as of Feb 2025) as the Roman Telescope Proposal Team Lead
- Research interests: galaxy mergers 🌌 AGN (structure, feedback, dual/binary, etc.) 🌌 gas dynamics (multi-scale, multiphase), etc.
- Research group: Marina Bianchin (IAU Gruber Fellow / UCI postdoc) ★ Justin Kader (UCI postdoc) ★ Yiqing Song (ESO fellow) ★ Raymond Remigio (UCI grad) ★ Hajar Aziz (UCI undergrad -> incoming UCR grad) ★ Max Adrian (UCI undergrad)

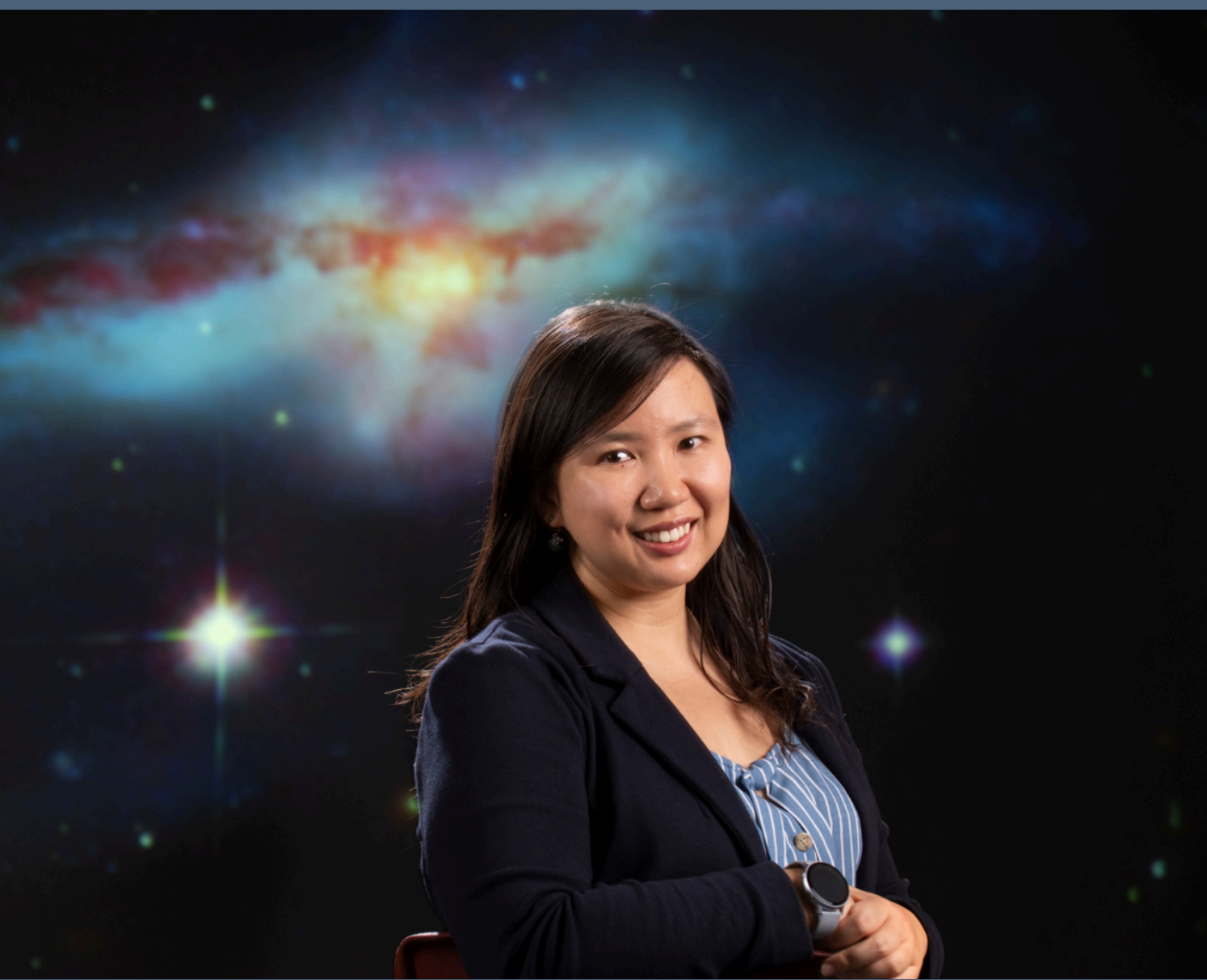
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- Observational expertise: Keck (OSIRIS, KCWI+KCRM, NIRC2, LRIS, MOSFIRE, DEIMOS) 🔭 Lick/Shane (Kast) 🔭 JWST (MIRI, NIRSpec) 🔭 HST (WFC3/ACS) 🔭 SMA 🔭 ALMA 🔭 JCMT 🔭 Gemini (NIFS), ...
- Funding support: NASA Jenkins pre-doc fellowship 💰 SAO pre-doc fellowship 💰 UC Chancellor's postdoc fellowship 💰 NASA ADAP 💰 JWST 💰 HST 💰 NSF 💰 NASA precursor (Also funded as co-I: Chandra)
- Panel review experience: IfA TAC (grad rep) 👓 NASA ADAP (multicycles and chair) 👓 NSF AAG/AAPF 👓 HST 👓 Swift (multicycles and deputy chair) 👓 JWST (multicycles and chair) 👓 UC Keck TAC (3 year term) 👓 external reviewers for Canadian and Chinese proposal reviews

Motivation

Why I created this module



- NSF AAG grant #2408820 broader impact activities
- Connection to and appreciation for Lick Observatory as both a research and an education institution
- Inspired by Prof. Virginia Trimble to contribute to this Observational Workshop series
- Share experience in writing and evaluating proposals, as this skill is sometimes taught as a course but not necessarily on all campuses

Motivation

Why you should participate

- You are a motivated grad student looking to learn and prepare for a research career
- You are looking to learn or improve your science writing skills for proposals or fellowship applications
- You are interested in writing your own telescope proposals
- You are already at the Lick Workshop and you might as well get the most out of it

Workshop Curriculum

How this will work

Session I: Monday, May 19

- Introductions to proposal writing
- Start drafting your proposal in groups— deadline is start of Session II (Wednesday, May 21, 14:30)
- May have homework if not done

Session II: Wednesday, May 21

- TAC panel review!
- Feedback

Different types of proposals

- Telescope proposals (observing, archival, theory, etc.)
- Fellowship applications (grad, postdoctoral, early career)
- Job applications (PhD program, postdoc, faculty / staff)
- Funding applications (federal grants, foundations)

Clear, succinct writing is key!

Proposal Templates

The basic components and expectations

A. Science Justification

- Compelling science case and well thought-out experiment, including sample description
- Demonstration of successful return, may include analysis plan

B. Technical Justification

- Sensible observing setup: instrument, observing mode, exposure time for desired signal-to-noise ratio, observing sequence — info needed for observing planning, and *why*
- Back up plans (for classical observing)

C. Special requirements

- Duplications
- Scheduling
- Joint requests
- Supplementary observations
- Publications using [Lick] data
- Budgets

General Proposal Writing Guidelines

Dos and Don'ts

Respect the page limit and follow the formatting guidelines

Know the deadline (and time zone!) - these are often hard deadlines

Check for rules: DAPR, instrument availability, grading rubric, etc.

Use professional language, check for typos, make legible figures

Know your audience: general or specialized? Strike a balance

Don't use Chatgpt (?)

Interactive Session and Breakout

Step-by-step instructions

1. Form groups of 2-3 (preferably by science interest)
2. Decide on science case
3. Grab google doc template for proposal:
<https://tinyurl.com/LickPropTemplate>
4. Start writing!

Questions?

Interactive Session and Breakout

Step-by-step instructions

1. Form groups of 2-3 (preferably by science interest)
2. Decide on science case
3. Grab google doc template for proposal:
<https://tinyurl.com/LickPropTemplate>
4. Start writing!
5. How to submit: drop google doc into this folder by deadline:
<https://tinyurl.com/PropFolder>

Questions?