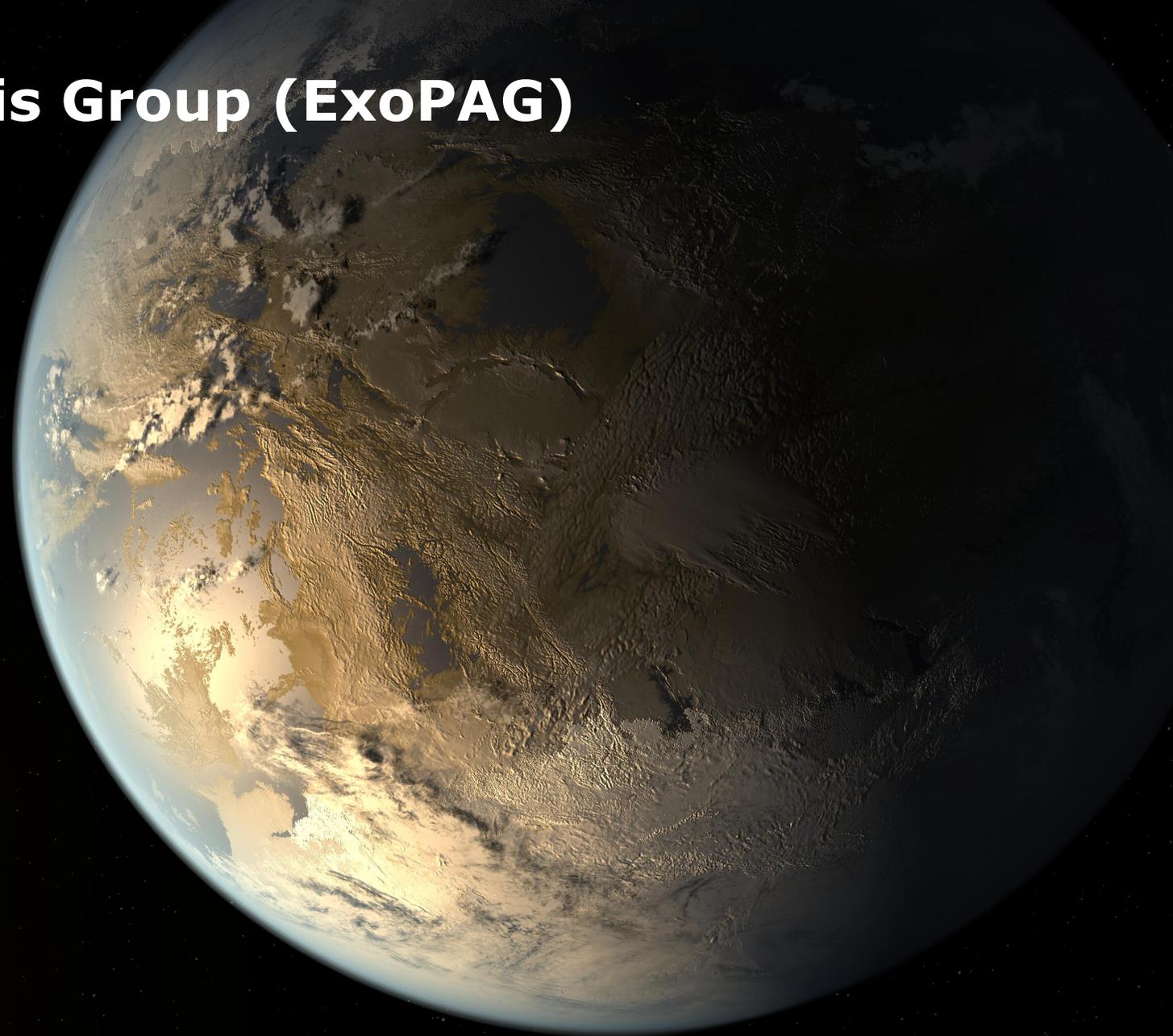


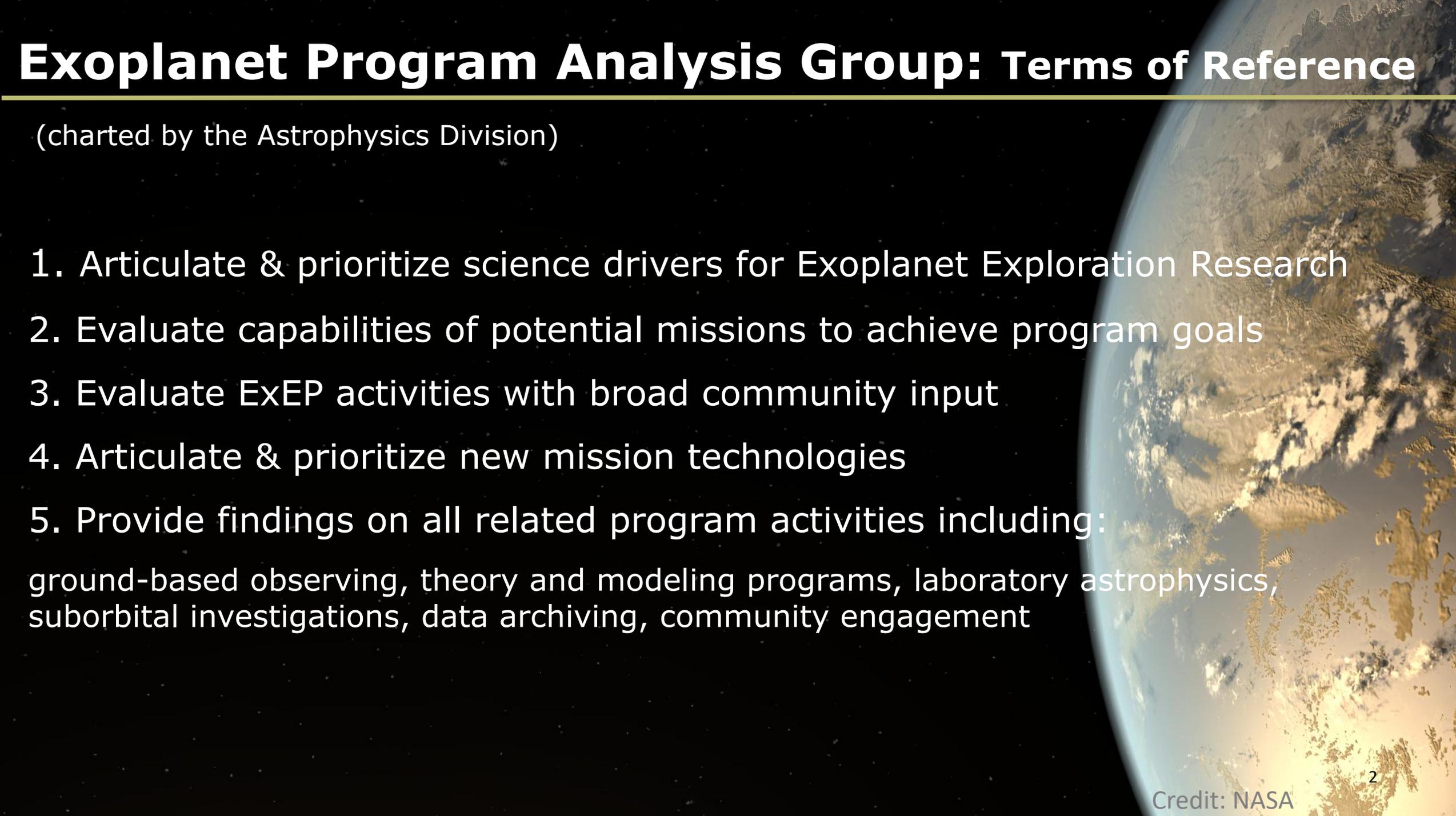
# Exoplanet Program Analysis Group (ExoPAG) Report to APAC

Ilaria Pascucci (U. Arizona)  
Chair, ExoPAG Executive Committee

October 17, 2022



# Exoplanet Program Analysis Group: Terms of Reference



(charted by the Astrophysics Division)

1. Articulate & prioritize science drivers for Exoplanet Exploration Research
2. Evaluate capabilities of potential missions to achieve program goals
3. Evaluate ExEP activities with broad community input
4. Articulate & prioritize new mission technologies
5. Provide findings on all related program activities including:  
ground-based observing, theory and modeling programs, laboratory astrophysics,  
suborbital investigations, data archiving, community engagement

<b>Ilaria Pascucci</b> <i>Chair</i>	The University of Arizona
<b>Natasha Batalha</b>	NASA-Ames
<b>Jacob Bean</b>	The University of Chicago
<b>Michael Bottom</b>	The University of Hawaii
<b>Ofer Cohen</b>	University of Massachusetts Lowell
<b>Knicole Colon</b>	NASA GSFC
<b>John Debes</b>	STScI
<b>Diana Dragomir</b>	University of New Mexico
<b>Erin May</b>	Johns Hopkins Applied Physics Laboratory
<b>Bertrand Mennesson</b>	Jet Propulsion Laboratory/Caltech
<b>Laura Schaefer</b>	Stanford University
<b>John Wisniewski</b>	The University of Oklahoma
<b>Michael Meyer</b> <i>Past Chair, Emeritus</i>	University of Michigan
<b>Hannah Jang-Condell,</b> <i>Executive Secretary, Astrophysics Division</i>	NASA Headquarters
<b>Douglas Hudgins,</b> <i>Program Scientist, Exoplanet Exploration Program</i>	NASA Headquarters
<b>Doris Daou,</b> <i>NASA Planetary Science Division Liaison</i>	NASA Headquarters
<b>Richard Eckman,</b> <i>NASA Earth Science Division Liaison</i>	NASA Headquarters
<b>Galen Fowler,</b> <i>NASA Heliophysics Division Liaison</i>	NASA Headquarters

# 2022 ExoPAG Executive Committee members

Identified all of the ongoing (and some of the upcoming) activities as well as EC members who could lead them

*Thank you to those who volunteered!*

# ExoPAG ongoing & recent activities I (since the last APAC meeting)

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- Organize monthly ExoPAG EC meetings (8/17, 9/21), cross-PAG meetings, rep. to APAC (I. Pascucci)
- Reviewed ExEP Science Gap List (deadline 9/30, all EC members)
- Ongoing activities with the Planetary Science Division: Exoplanets in Our Backyard workshop (Nov. 2-4, 2022) & Planetary Science Advisory Committee meeting (rep.: L. Schaefer)
- Organization of the ExoPAG27 meeting (all EC members)

# ExoPAG ongoing & recent activities II (since the last APAC meeting)

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- Great Observatory Maturation Program (GoMaP) workshop II, 11-13 Oct. (rep.: [B. Mennesson & M. Bottom](#))
- Cross-PAG SAG on barriers to participation (rep.: [N. Batalha](#)). Cross-AG IDEA working Group (rep.: [E. May](#)), first meeting focused on the state of the profession.
- ExoExplorers Program (rep.: [K. Colon & N. Batalha](#))

# ExoPAG ongoing & recent activities III (since the last APAC meeting)

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- NASA Open Science Initiative (Liaison: **N. Batalha**).  
ExoPAG EC meeting 9/21: the EC discussed the Space Telescope User Committee Report (no endorsement of the Zero Exclusive Access Period and recommendation to solicit broader community feedback). The EC supports the STUC's decision/recommendation and discussed community concerns regarding no proprietary data for JWST
- Science Interest Groups (SIGs) and Study Analysis Groups (SAGs):
  - SIG2 "Exoplanets Demographics", finalizing report (Christiansen & **Meyer**)
  - SIG3 "Exoplanets Solar System Synergies", on-going (Meadows & Mandt)
  - SAG23 "The Impact of Exo-Zodiacal Dust on Exoplanet Direct Imaging Surveys" (**Debes**, Rebollido, Hasegawa)

## Cross-PAG SIG to support IROUV GOMaP-related activities

Meeting of the PAGs EC Chairs on Sep 9, 2022: agreement on the number/distribution of leads among PAGs. New discussion planned after this APAC meeting to better define the TOR

- The SIG would conduct analyses on scientific and related technical issues that would inform GOMaP
- The SIG would take full advantage of work done previously by STDTs, and other entities such as the NASA Exoplanet System Science (NExSS) research coordination network
- All PAGs will be included in this activity: coordination by a five-person team comprised of members of ExoPAG, COPAG, and PhysPAG
- The SIG would conduct analyses coordinated and prioritized by the leadership team
- Specific analyses would result in technical reports addressed to NASA's Astrophysics Division in time-limited activities
- We expect that such a cross-PAG SIG would be useful to APD for several years

# ExoPAG 27 meeting

announcement on [exopagannounce@jpl.nasa.gov](mailto:exopagannounce@jpl.nasa.gov)

- Saturday Jan. 7 & half day Sunday Jan. 8 in Seattle...  
working on the agenda
- Two major changes (discussed and approved by the EC): 1. More accessible presentations (reduce acronyms, more background); 2. Group presentations by topic (D. Dragomir & O. Cohen)
- Mini-symposium focused on recent JWST results with contributions from early-career scientists (E. May)

# ExoExplorers Program Update

<https://exoplanets.nasa.gov/exep/exopag/exoexplorers/exoexplorerswelcome/>

Steering Committee: T. Kataria (chair), N. Batalha, J. Christiansen, K. Colón

- Second cohort of ExoExplorer Science Series (Jan-Jun 2022), 12 early-career scientists
- Scope of the program expanded to include international ExoGuides and ExoExplorers
- ExoExplorer Program Steering and Organizing Committees developed the call for the next round of ExoGuides and for the third cohort of ExoExplorers in Jul-Aug 2022. Applications due Sep 2022
- 48 ExoExplorer applications were submitted along with 4 new ExoGuide nominations
- Reviews are underway to select the next class of ExoExplorers and ExoGuides.
- The first cohort of ExoExplorers have a Special Session at AAS 241 (Jan 2023) *"The ExoExplorers: Early-Career Perspectives on the Intersection of Exoplanet Science and DEIA in Astronomy"*

# ExoPAG SAG 23

Co-leads: [J. Debes](#), Y. Hasegawa, I. Rebollido

The Impact of Exo-Zodiacal Dust on Exoplanet Direct Imaging Surveys

SAG23 includes 38 members working on eight major subject areas:

- A Catalog of Dusty Systems around Nearby Stars (lead: Steve Ertel)
- A review of host dust systems (leads: Steve Ertel and William C. Danchi)
- The theory of Exozodi Sources and Dust Evolution (lead: Mark Wyatt)
- Post-Processing and Detection of Extended Sources (leads: Ewan Douglas, Max Millar-Blanchaer)
- Pan-Chromatic Radiative Transfer of Exozodis (lead: Ramya M. Anche)
- Prioritization of Precursor Observational Studies of Debris Disks/Exozodis for future direct imaging missions (leads: Max Millar-Blanchaer, William C. Danchi)
- Prioritization of Precursor Theoretical Studies of Debris Disks/Exozodis for future direct imaging missions (lead: Jess Rigley)
- Update and prioritization of ExEP Gaps relevant to Exozodis (lead: Emily Rickman)
- A Review of the Solar System's Zodiacal Cloud (leads: Neal Turner, Geoff Bryden)

Several groups had their first organization meeting

Other interested members of the community are welcome to join and contribute!