

# ADS → SciX

## Challenges and Opportunities

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[@adsabs](#) [@SciXCommunity](#)

17 Nov 2023 | ADS Users Group

CENTER FOR  
**ASTROPHYSICS**  
HARVARD & SMITHSONIAN



# Overview



## Challenges

Irrelevant Results

Poor Useability

Loss of Astronomy Focus

## Opportunities

Cross-disciplinary

## Discovery

Additional Resources

AI Advancement

## Future of Users Group

# Challenge: Irrelevant Results

## Increasing coverage of other disciplines

- More authors with similar names (Drs. Lee & Smith)
- More concepts with similar names (want exoplanet transits not railways as mass transit)

← Start New Search

author:"van de Kamp"

Your search returned 343 results

☰ Date ▾

▼ AUTHORS

- van de Kamp, P 298
- van de Kamp, Peter 153
- van de Kamp, P 128
- van de Kamp, Peter C 8
- van de Kamp, P C 5
- van de Kamp, Piet 3
- van de Kamp, Peter Cornelis 1
- less
- >  van de Kamp, M 23

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- 2023SpCul..26..204V 2023/05 Churches and Urban Regeneration in Postindustrial Amsterdam van de Kamp, Linda
- 2022PreR..37806607V 2022/08 cited: 1 Origin and Provenance of Archean Keewaywin Formation clastic rocks at Sandy Lake, NW Ontario, Canada: Constraints on Archean weathering and depositional processes van de Kamp, P. C.; James, R. S.
- 2021SpCul..24..437V 2021/08 cited: 1 Housing, Personhood and Affect in Gentrifying Garden Villages of Amsterdam van de Kamp, Linda

My “van de Kamp” was 48.

# Challenge: Irrelevant Results

← Start New Search

author:"^Lee, H"

Your search returned 7,687 results

Filters: Date ▾

▼ AUTHORS

- Lee, H 7.5k
- Lee, J 467
- Kim, J 457
- Kim, S 408
- Lee, S 396

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1 2024JCoPh.49612578L 2024/01  
cNN-DP: Composite neural network with differential propagation for impulsive nonlinear dynamics  
Lee, Hyeonbeen; Han, Seongji; Choi, Hee-Sun *and 1 more*

2 2023NanoC...10...27L 2023/12

← Start New Search

author:"^Lee, H" aff:"^Chungbuk"

Your search returned 27 results

Filters: Date ▾

▼ AUTHORS

- Lee, H 26
- Choi, Y 6
- Kim, C 6
- Kim, M 6
- Moon, H 6

more

▼ COLLECTIONS

- physics 20
- astronomy 9

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1 2021AJ...161..112L 2021/03 cited: 4  
Spin Change of Asteroid 2012 TC4 Probably by Radiation Torques  
Lee, Hee-Jae; Durech, Josef; Vokrouhlický, David *and 9 more*

2 2020A&A...635A.137L 2020/03 cited: 3  
Shape model and spin state of non-principal axis rotator (5247) Krylov  
Lee, H.-J.; Durech, J.; Kim, M.-J. *and 12 more*

3 2019NatSR...913610L 2019/09 cited: 3  
2-Amino adipic acid (2-AAA) as a potential biomarker for insulin resistance in childhood obesity

- Choice of collection
- Sorting by score
- Name disambiguation tools
  - ORCID
  - Autocomplete or suggestions
  - Affiliations
- Keyword systems
  - Unified Astronomy Thesaurus
  - Planetary feature names
  - Minor planet lists

## Discovery Opportunity

# Challenge: Irrelevant Results

← Start New Search

author:"^Lee, H"

Your search returned 7,687 results

Date ▾

▼ AUTHORS

- >  Lee, H 7.5k
- >  Lee, J 467
- >  Kim, J 457
- >  Kim, S 408
- >  Lee, S 396

Show highlights  Show abstracts  Hide Sidebars [Go To Bottom](#)

1	<input type="checkbox"/>	2024JCoPh.49612578L	2024/01	<input type="button" value="PDF"/> <input type="button" value="List"/> <input type="button" value="Cite"/>
cNN-DP: Composite neural network with differential propagation for impulsive nonlinear dynamics				
Lee, Hyeonbeen; Han, Seongji; Choi, Hee-Sun <i>and 1 more</i>				
2	<input type="checkbox"/>	2023NanoC...10...27L	2023/12	<input type="button" value="PDF"/> <input type="button" value="List"/> <input type="button" value="Cite"/>

← Start New Search

author:"^Lee, H" keyword:"asteroid"

Your search returned 4 results

Date ▾

▼ AUTHORS

- >  Choi, Y 4
- >  Kim, M 4
- >  Lee, H 4
- >  Moon, H 4
- >  Kim, C 3

▼ COLLECTIONS

Show highlights  Show abstracts  Hide Sidebars [Go To Bottom](#)

1	<input type="checkbox"/>	2022A&A...661L...3L	2022/05 cited: 5	<input type="button" value="PDF"/> <input type="button" value="List"/> <input type="button" value="Cite"/>
Refinement of the convex shape model and tumbling spin state of (99942) Apophis using the 2020-2021 apparition data				
Lee, H. -J.; Kim, M. -J.; Marciniak, A. <i>and 30 more</i>				
2	<input type="checkbox"/>	2021AJ...161..112L	2021/03 cited: 4	<input type="button" value="PDF"/> <input type="button" value="List"/> <input type="button" value="Cite"/>
Spin Change of Asteroid 2012 TC4 Probably by Radiation Torques				
Lee, Hee-Jae; Durech, Josef; Vokrouhlický, David <i>and 9 more</i>				

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## Discovery Opportunity

# Disambiguation via ORCiD Proposed Timeline



FY23–24 Implement ORCiD/author name lookup for registered users: users opt into being more findable through an autocomplete function

FY24–25 Author profiles linking accounts and ORCiD: making profiles searchable; populate author profiles with public ORCiD info, actively update ORCiD claims via events

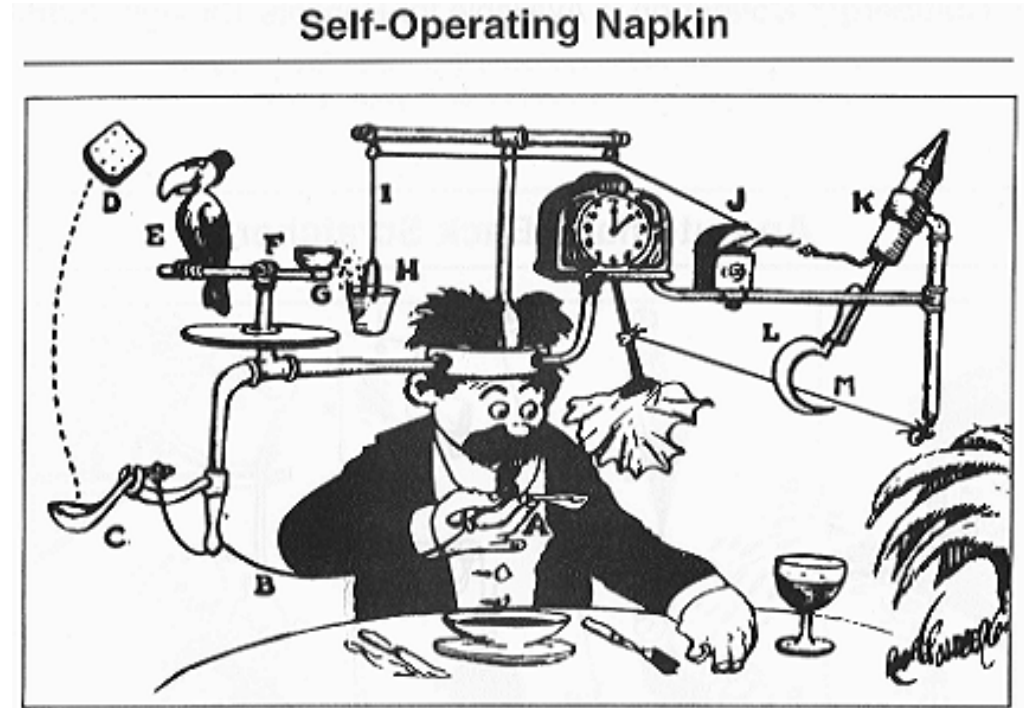
FY25–26 Implement public author profiles: users may make their profile searchable

FY25–26 Enhance upkeep of author profiles via “Is this your paper?” functionality: proactively suggest additions to an author's ORCiD claims

# Challenge: Poor Useability

Increasing content,  
search options, settings,  
choices

- Slow responses
- Confusing interface
- Multistep operations
- Poor documentation



Goldberg 1931

# Challenge: Poor Useability



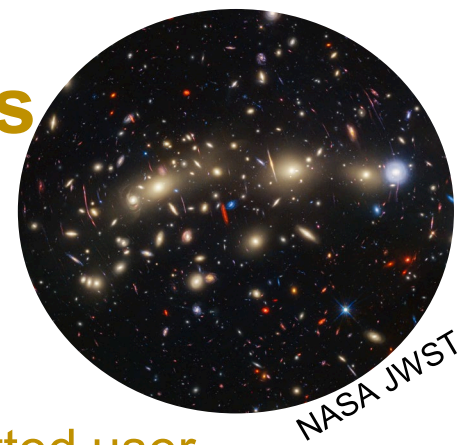
## Careful, user-centered design

- Consider response time when selecting development options
- Continuous improvement
- KISS
- Expand beta-testing pool
- Increase avenues for user-feedback
- Improve documentation

## User Engagement Opportunity



# Challenge: Loss of Astronomy Focus



- Geoscience

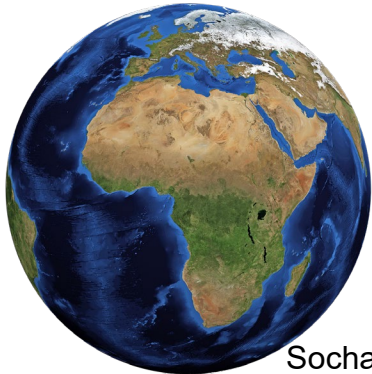
- largest collection
- potentially largest user group
- Less overlap with astronomy
- More soft science

- Astronomy

- first discipline
- largest committed user community
- most robust resource mapping

- Developments

- Discipline neutral
- Rolled out astronomy first



Socha via Pixabay

**Resource Opportunity**

# Opportunity: Cross-discipline discovery

- Can't find what isn't there; can't find if not looking
- Move away from highly focused, "linear" approach
  - Find "right" paper, then follow references and citations
- Need richer, more open exploration of literature
  - Requires new mindset, ADS toolset
  - "Non-expert" resources to understand other fields
  - Browsing mechanisms
  - AI is part of the answer but not all



DALL-E 2023

**What might you find?**

# Opportunity: Additional resources

- Expansion comes with additional resources
  - Use wisely for personnel, infrastructure, AI
- Discipline-agnostic improvements benefit astronomy
  - Name disambiguation
  - Reference resolver
  - Scan explorer
  - Improved documentation in multiple formats
- Discipline-specific improvements begin with astronomy
  - Assignment of Unified Astronomy Thesaurus keywords
  - Automated curation of observatory bibliographies

**What investment next?**

# SciX Users Group Requirements

- Need expertise from wider range of disciplines
- Need feedback from disciplines whose content maturity differs
- Too few representatives dilutes a community's voice, too many voices produces noise



About  
Team  
History of ADS  
ADS Users Group  
Past Presentations  
Careers@ADS

## ADS Users Group

The ADS Users Group (ADSUG) advises the ADS on the operations of the project, and recommends changes and improvements to both its services and procedures in order to maximize the scientific productivity of the community it serves. The ADSUG will advocate for the user community and provide suggestions regarding content curation, technical infrastructure, management, and priority setting.

The next Users Group meeting will take place November 16–17, 2023 virtually and at the Center for Astrophysics | Harvard & Smithsonian. In advance of the meeting, the Users Group is seeking community feedback through a [brief user survey](#); please share your experience by 14 November to help enhance the ADS user experience and guide innovations.

Current members of the ADSUG are:

- J.J. Kavelaars — chair; CADC, UVic, NRC Herzberg
- Matthew J. Graham — vice chair; CalTech
- Jason Barnes — U. Idaho
- Juliann Dalcanton — Flatiron Institute, U. Washington
- Vandana Desai — Caltech/IPAC
- Silvia Meakins — ESO
- Aimee Norton — Stanford
- Annalisa Pillepich — MPA
- Licia Verde — UB-IEEC

ADSUG provides valuable community assessments



# SciX of Users Group Format?



Altmann via Pixabay

1. Incrementally add members to expanded ADSUG
2. Create discipline-specific UG until certain level of maturity, then merge
3. Temporarily maintain current ADSUG plus new SciX expansion UG
4. Other?

# Further Discussion?

C O N N E C T I O N S  
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