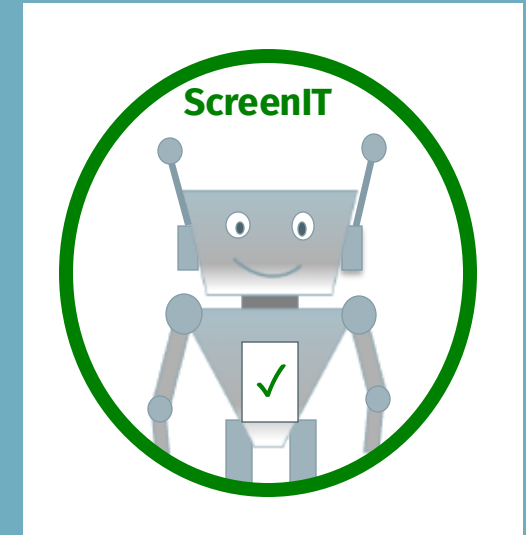


ScreenIT



Tracey L. Weissgerber, PhD

QUEST Center for Responsible Research



Tracey Weissgerber



ReproducibiliTeach, Meta-research Methods



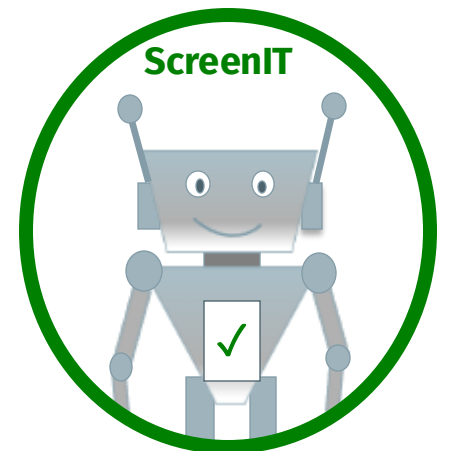
@T_Weissgerber (inactive)

ScreenIT: Developing scalable solutions collaboratively

ScreenIT brings together 25-30 international tool makers and other interested researchers who develop or use automated screening tools

Tools:

- Detect common problems or beneficial practices, in scientific publications
- Share customized feedback with authors & readers



Tool	Screens for	People
SciScore	RRIDs & resources, NIH rigor criteria, ethics/consent statements, sex as a biological variable, cell line authentication	Anita Bandrowski Peter Eckmann
LimitationsRecognizer	Author-acknowledged limitations	Halil Kilicoglu
ODDPub	Open data, open code	Nico Riedel, Vladi Nachev
rtransparent	Statements for COI, funding, protocol registration	Stelios Serghiou
ctRegistries	Clinical trial registration numbers	Maia Salholz-Hillel Delwen Franzen
Scite	Retracted citations, citations with correction or erratum	Sean Rife
Barzooka	Bar graphs of continuous data (often misleading)	Nico Riedel, Vladi Nachev, Tracey Weissgerber
JetFighter	Rainbow color maps (create visual artifacts)	Shyam Saladi
Seek & Blastn	Incorrect nucleotide sequences	Cyril Labbe & others*

Other members: Jennifer Byrne*, Guillaume Cananac*, Amanda Capres-Davis*, Bertrand Favier*, Rene Bernard, Sarah McCann, Gerben ter Riet, Alexandra Bannach-Brown, Robert Schulz

Advantages & limitations

Advantages: Tools can...

- Screen many papers quickly
- Draw authors, editors, reviewers & readers attention to items that affect transparency, rigor & reproducibility
- Identify widely accepted, but problematic, practices

Limitations: Tools...

- Make mistakes
- Can't always determine whether a specific item is relevant
- Can't detect complex or nuanced factors
- The factors for which we have tools may not be the most important


Performance & limitations: <https://scicrunch.org/ASWG/about/ToolLimit>

COMMENTARY

Open Access

Is the future of peer review automated?



Robert Schulz¹, Adrian Barnett², René Bernard³, Nicholas J. L. Brown⁴, Jennifer A. Byrne⁵, Peter Eckmann⁶, Malgorzata A. Gazda⁷, Halil Kilicoglu⁸, Eric M. Prager⁹, Mala Salholz-Hillel¹, Gerben ter Riet¹⁰, Timothy Vines¹¹, Colby J. Vorland¹², Han Zhuang¹³, Anita Bandrowski⁴ and Tracey L. Weissgerber^{1*} 

Over 2 years, we screened and posted public reports on >23,000 bioRxiv and medRxiv COVID-19 preprints

Correspondence | Published: 11 January 2021

Automated screening of COVID-19 preprints: can we help authors to improve transparency and reproducibility?

Tracey Weissgerber , Nico Riedel, Halil Kilicoglu, Cyril Labbé, Peter Eckmann, Gerben ter Riet, Jennifer Byrne, Guillaume Cabanac, Amanda Capes-Davis, Bertrand Favier, Shyam Saladi, Peter Grabitz, Alexandra Bannach-Brown, Robert Schulz, Sarah McCann, Rene Bernard & Anita Bandrowski

Nature Medicine **27**, 6–7 (2021) | [Cite this article](#)

Contains data through July 2020



Current activities

Randomized controlled trial

- Does feedback from automated tools help authors improve reporting?



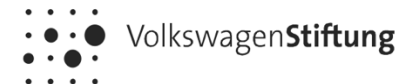
ARRIVE compliance checker

- Collaborative project with 4 teams



Meta-science Summer School Hackathon: Contribot

- Detects author contributions & CRediT statements, ORCIDs, acknowledgements



“Screen My Paper” website for BIH/Charité

ScreenIT

Brought to you by the QUEST Center at the BIH Charité

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Welcome to ScreenIT!

Preparing to submit a paper? Our automated tools screen your manuscript to assess compliance with standards that are associated with more transparent and reproducible work. Did you cite a retracted paper? Does your paper include a contaminated cell line? You'll get a report with warnings and helpful hints to improve the manuscript before it is submitted to a preprint server or journal.

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Who can use this tool?

Charité or BIH researchers conducting biomedical research. The tools may also be useful in other fields, but most are designed for biomedicine.

Next steps: Deploy, get researcher feedback, improve

Future activities

Collaborators
needed

New tools

- Expand study types/reporting guidelines (e.g., qualitative research studies, systematic review, SAGER guidelines)
- New fields

New applications

- Meta-research
- Monitoring
- Interventions

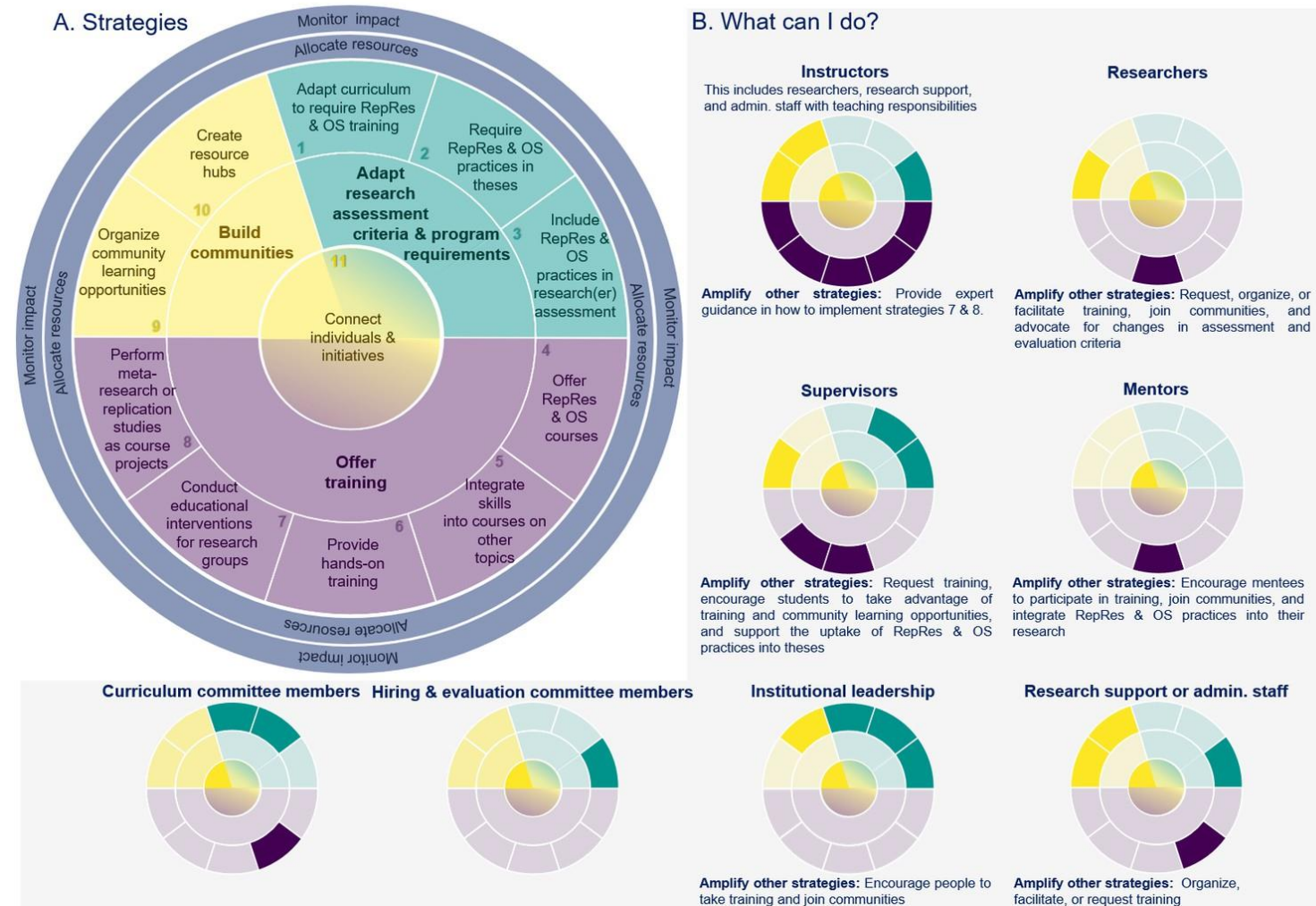
Also from the GRN: How can you make reproducible research & open science training the norm at your institution?



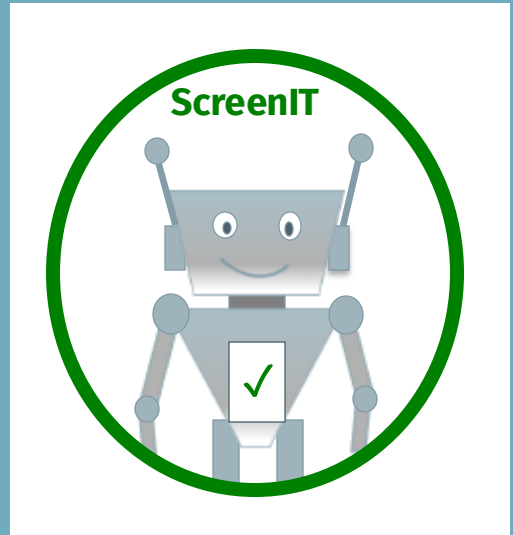
Eleven strategies for making reproducible research and open science training the norm at research institutions

Friederike E Kohrs¹, Susann Auer², Alexandra Bannach-Brown¹, Susann Fiedler³, Tamarinde Laura Haven⁴, Verena Heise⁵, Constance Holman¹, Flavio Azevedo^{6,7}, René Bernard⁸, Armin Bleier⁹, Nicole Bössel¹⁰, Brian Patrick Cahill¹¹, Leyla Jael Castro¹², Adrian Ehrenhofer¹³, Kristina Eichel¹⁴, Maximillian Frank¹⁵, Claudia Frick¹⁶, Malte Friese¹⁷, Anne Gärtner¹⁸, Kerstin Gierend¹⁹, David Joachim Grüning^{20,21}, Lena Hahn²², Maren Hülsemann¹, Malika Ihle²³, Sabrina Illius²⁴, Laura König²⁵, Matthias König²⁶, Louisa Kulke²⁷, Anton Kutlin²⁸, Fritjof Lammers²⁹, David MA Mehler³⁰, Christoph Miehl³¹, Anett Müller-Alcazar²⁴, Claudia Neuendorf³², Helen Niemeyer³³, Florian Pargent¹⁵, Aaron Peikert³⁴, Christina U Pfeuffer³⁵, Robert Reinecke³⁶, Jan Philipp Röer³⁷, Jessica L Rohmann³⁸, Alfredo Sánchez-Tójar³⁹, Stefan Scherbaum¹⁸, Elena Sixtus⁴⁰, Lisa Spitzer⁴¹, Vera Maren Straßburger^{42,43}, Marcel Weber¹⁷, Clarissa J Whitmire^{44,45}, Josephine Zerna¹⁸, Dilara Zorbek⁴⁶, Philipp Zumstein⁴⁷, Tracey L Weissgerber^{1*}

11 strategies for making reproducible research & open science training the norm at research institutions



Questions...?
Comments...?
Emotional outbursts...?



Tracey Weissgerber



ReproducibiliTeach, Meta-research Methods

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