SCI论文署名原则和如何量化作者贡献

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。在过去100年中，科技论文的署名作者平均数量增加了5倍，从1913年的每篇论文一个作者增加到2013年的每篇论文超过五个作者[1]，最近随着hyperauthorship的兴起，有一篇论文列出了5,154位作者[2]。

Combined Measurement of the Higgs Boson Mass in pp Collisions at $\sqrt{s} = 7$ and 8 TeV with the ATLAS and CMS Experiments

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这种发展导致了与作者署名相关的纠纷和不当行为的增加，包括ghost, guest, orphan,和 forged 作者[3]。**署名不端**已经成为学术造假中的一种新趋势。

根据“ 撤稿观察 ”(Retraction Watch)报道得知：一名西班牙学者和不存在的合作者共同发表了 6 篇论文这一令人震惊的莱姆斯事件，还有知名科学家一年内三次遭遇冒用名字。

为了减少此类纠纷，一些国际知名期刊制定了**作者署名指南**(参考例[4]))。 然而，并非所有的期刊都提供这样的指南，不同学科、不同地域、甚至不同研究小组对作者的定义也不尽相同。

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在这篇文章中，国际科学编辑ISE将讨论最新的与作者署名有关的最佳指导，包括如何区分作者和非作者贡献者，如何对每个作者的贡献进行分类和量化(如果需要的话)
，以及如何对作者姓名进行排序。

步骤1: 列出所有的作者和非作者贡献者

作者

大多数期刊且被最广泛采纳的**作者定义来自国际医学期刊编辑委员会**(the International Committee of Medical Journal Editors，ICMJE)。 ICMJE建议作者身份基于以下标准* [5]：

1. 对研究的构思或设计、或者对研究数据的收集，分析或解释方面作出实质性的贡献;

2. 负责起草撰写工作或对重要研究知识内容进行批判性修改;

3. 对最终要出版的版本进行确认;

4.
同意对本文的所有方面负责，确保所有有关研究的准确性或完整性的问题，能妥善调查并解决。

*此定义的使用可能因期刊而异。例如，PLOS
Medicine要求所有作者都满足所有四个ICMJE标准;然而，在其他PLOS

期刊中，**作者只需要满足第一，第三和第四个标准**
[6]。因此，我们建议您在投稿前咨询目标期刊的要求。

非作者贡献者 Non-author contributors

非作者贡献者是指未能满足上述任何一项标准但提供财力、观点、工具、技术，道德或编辑方面支持的贡献者[5,7]。非作者贡献者应该在论文致谢部分被感谢，并指明他们的贡献。

编辑支持

对于是否应该承认专业编辑润色公司的协助这一问题，目前尚未达成共识。应该鼓励致谢[5]；然而，大多数作者似乎放弃了这项建议[7]。
最近的一项调查表明，出于不同的原因，作者和编辑都希望避免承认专业编辑的协助[7]。

作者们似乎认为，在审稿人和资助者眼中，获得专业的编辑公司协助会对他们带来不好的影响。另一方面，编辑们担心文章在他们润色过后，如果作者在致谢中感谢编辑，可能被审稿人或读者认为编辑对作者结论的背书[7]。

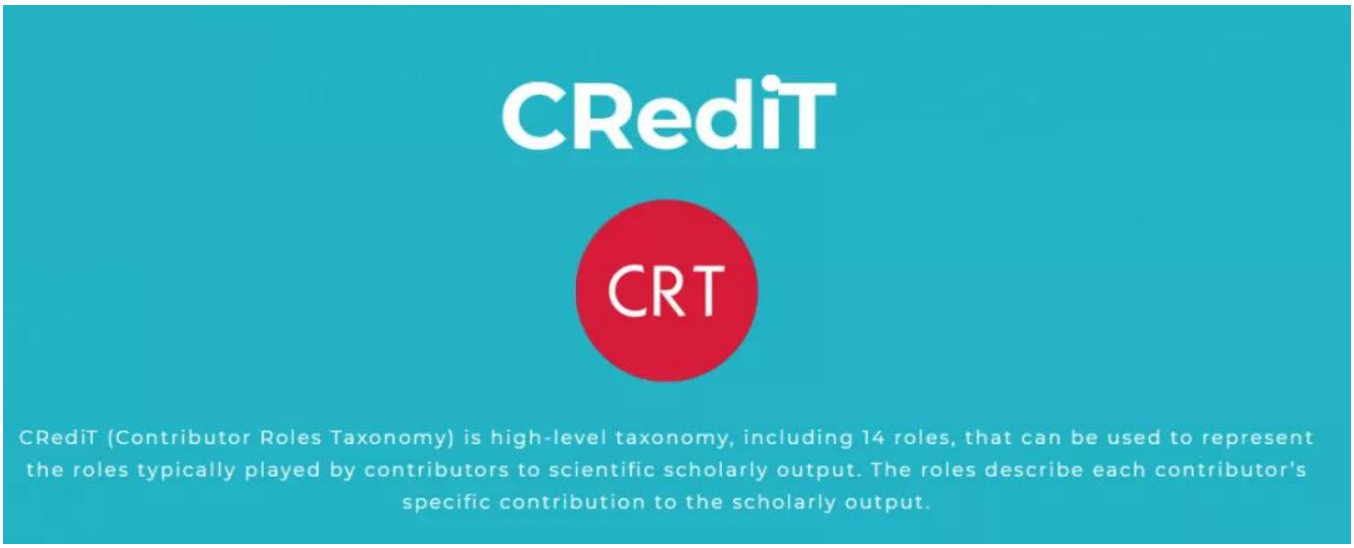
然而，随着学术交流中提高透明度的势头越来越强劲，一些期刊，例如《美国医学会杂志》JAMA，已经强制要求致谢任何提供写作或语言编辑帮助的人。[12]

以下是致谢中列出的非作者贡献的一些实例:

步骤2： 对每位作者的贡献进行分类和量化

最近，学术界对学术出版物中的角色和贡献度进行了标准化的分类(Contributor Roles Taxonomy [CRediT]);

https://www.casrai.org/credit.html [13]) ， 即作者贡献角色分类法，该体系由14类构成。


CRediT
CRT
CRediT (Contributor Roles Taxonomy) is high-level taxonomy, including 14 roles, that can be used to represent the roles typically played by contributors to scientific scholarly output. The roles describe each contributor's specific contribution to the scholarly output.

下面是一些真实的例子，说明应如何应用这种角色分类法(1)
，以及(2)作者列表如何修改能包含更多细节:

如何量化作者的贡献?

随着署名纠纷和不端行为发生率的不断上升，以及科学界对提高作者透明度的兴趣的日益渐增[16]，许多衡量标准或指标已被开发出来，用以量化——而不是简单地限定——每个共同作者的贡献[17,18]，然而，没有任何一个标准得到期刊届的广泛认可。

Rethinking Ecology 期刊最近发表的作者贡献指数Author Contribution Index
(ACI)可能代表了作者透明度改革的一个转折点[19]。 ACI
是一个简单的(而且通用的)指标，基于每个共同作者的单个百分比贡献[16]而定。

以下是 Rethinking Ecology 期刊最近一篇文章[20]中的一个真实例子:

AUTHOR CONTRIBUTION

Author contribution: CGM, developed the concept and designed the manuscript: 65%; JB, RH and IM provided key information and helped revise the manuscript, 10% each; and DH and DM provided key intellectual support 2.5% each.

Authors	Contribution	ACI
CGM	0.65	9.286
JB	0.1	0.556
RH	0.1	0.556
IM	0.1	0.556
DH	0.025	0.128
DM	0.025	0.128

简而言之， ACI 值为9.286， 意味着该作者的贡献是其他作者平均贡献的9.286倍。 有关ACI 公式，请参见[16]。

短期内，可能不太会要求你量化作者的贡献。 然而，如果 ACI 被证明是成功的，它会被其他期刊采纳。明智之举是：即使期刊没有明确要求，也可以尝试开始与共同作者讨论对论文的贡献(按百分比计算) 。

步骤3: 确定作者署名的排列顺序

对于学术论文中作者署名排序没有标准化的指导政策。 署名一般按作者贡献大小排名，不同学科的政策各不相同[21]。因此，作者顺序通常没有统一的定义。

你应该查阅目标期刊和 / 或你所在机构的指导手册，以获得关于作者排序的具体建议。关于作者顺序的争议通常可以通过提供作者的贡献——定性和定量陈述来解决(见步骤1和2)。

结论

有关作者署名的指导原则仍处于不断变化的状态。 近年来， 关注共同作者问题的文章数量急剧增加[19]。(例如最近中科院硕士将导师告上法庭：论文被署名第二作者这一案例)

随着提高作者透明度的增强，你应该考虑投入时间进行最佳的实践。

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