# Citation Evidence Report

EB-1B Petition — Outstanding Professor or Researcher

8 CFR § 204.5(i)(3) · Authorship + Original Contributions

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Google Scholar profile

**Generated 2026-05-21 by CiteMap.** This report organises Google Scholar citation data into the structure USCIS adjudicators apply to the 8 CFR § 204.5(i)(3) outstanding-researcher criteria — particularly (iii) published material and (v) original scientific or scholarly contributions. It is a drafting aid for the petitioner's counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

## A. Overview & Filtering Statement

| 33 | 33 | 5 | 11 |
|---|---|---|---|
| Citing papers mapped | Citation edges | Home papers mapped | h-index (GS) |

**Filtering statement — methodology & limits**

Citation **independence** is classified per citing paper by comparing the citing paper's authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar's known collaborators; *same-institution* citations are by authors affiliated with the scholar's institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar's own circle.

**Known limitations — counsel must verify.** (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight — re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

## B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar's own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

**87.9% independent** of 33 classified citing papers

| Citation type | Count |
|---|---|
| Independent | 29 |
| Self-citation | 0 |
| Co-author | 4 |
| Same-institution | 0 |

0 citing papers could not be classified (no author data) and are excluded from the percentages above.

## C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total — the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing — how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner's choice of comparison field.

## Contribution 1

### Claim — Contribution 1

*The researcher developed scalable crowd-sourced fact-checking frameworks and applied them to quantify the impact of vaccine misinformation on social media platforms.*

The researcher's core contribution rests on the 2021 Science Advances paper, 'Scaling up fact-checking using the wisdom of crowds,' which appears to establish a methodological foundation for leveraging collective intelligence in verification tasks. This work is extended by the 2024 follow-up, 'Quantifying the impact of misinformation and vaccine-skeptical content on Facebook,' suggesting a progression from general methodology to specific application in public health contexts.

This line of work appears to address the challenge of efficiently verifying information at scale, a critical gap in the era of rapid digital dissemination. The chronological shift from a general framework to a targeted analysis of vaccine skepticism indicates an original approach to applying crowd-sourced insights to high-stakes misinformation domains.

The significance of this research is evidenced by substantial citation counts, with the core paper accumulating 369 citations and the follow-up reaching 202. Notably, 100% of the classified citing papers originate from independent researchers, indicating broad adoption and validation of these methods by the wider scientific community beyond the researcher's immediate circle.

**INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 15** · **4 flagged influential by Semantic Scholar**

**CORE PAPER**

### Scaling up fact-checking using the wisdom of crowds

2021 · Science Advances · 369 citations (GS)

Field-normalised: 220 Semantic Scholar citations place it in the top 1% of Political Science papers from 2021 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 1 | The psychology of fake news (2021) | Massachusetts Institute of Technology, University of Regina | Canada, United States | Influential |
| 2 | Spread of misinformation on social media: What contributes to it and how to combat it (2022) | — | — | — |
| 3 | Quantifying the impact of misinformation and vaccine-skeptical content on Facebook (2024) | Massachusetts Institute of Technology, University of Pennsylvania | United States | Influential |
| 4 | Online searches to evaluate misinformation can increase its perceived veracity (2023) | New York University, Stanford University, University of Central Florida | United States | — |
| 5 | Explainable Fake News Detection With Large Language Model via Defense Among Competing Wisdom (2024) | Hong Kong Baptist University, Jilin University, Jinan University | China, Singapore | — |
| 6 | Misinformation on Misinformation: Conceptual and Methodological Challenges (2023) | Sciences Po, University of Trento, University of Zurich | France, Italy, Switzerland | Influential |
| 7 | Differences in misinformation sharing can lead to politically asymmetric sanctions (2024) | Cornell University, Massachusetts Institute of Technology, University of Oxford | United Kingdom, United States | — |
| 8 | Jury Learning: Integrating Dissenting Voices into Machine Learning Models (2022) | Apple, Stanford University | United States | — |

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 9 | Dual emotion based fake news detection: A deep attention-weight update approach (2023) | Shanghai University | China | — |

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

**FOLLOW-UP WORK**

### Quantifying the impact of misinformation and vaccine-skeptical content on Facebook

2024 · 202 citations (GS)

Field-normalised: 98 Semantic Scholar citations place it in the top 5% of Computer Science papers from 2024 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 1 | Artificial intelligence for modelling infectious disease epidemics (2025) | ETH Zürich, Genomics England, Scripps Research | South Africa, Switzerland, United Kingdom | — |
| 2 | Political polarization and health (2024) | Columbia University, New York University, Syracuse University | United States | — |
| 3 | Why Misinformation Must Not Be Ignored (2025) | Australian National University, Harvard University, King's College London | Australia, United Kingdom, United States | — |
| 4 | Countering Misinformation and Fake News Through Inoculation and Prebunking (2021) | University of Cambridge | United Kingdom | — |
| 5 | Social identity correlates of social media engagement before and after the 2022 Russian invasion of Ukraine (2024) | Kyiv School of Economics, University of Cambridge | Ukraine, United Kingdom | **Influential** |
| 6 | A broader view of misinformation reveals potential for intervention (2024) | University of Cambridge | United Kingdom | — |

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

## Contribution 2

**Claim — Contribution 2**

*The researcher established a framework for evaluating fake news at the scale of the entire information ecosystem, as demonstrated in a highly cited 2020 Science Advances paper.*

The researcher's primary contribution is the development of a methodology to evaluate the fake news problem at the scale of the information ecosystem. This work is anchored by the 2020 publication in Science Advances, which serves as the foundational text for this specific line of inquiry.

This line of work appears to address the challenge of assessing misinformation not in isolation, but within the broader context of the information ecosystem. By focusing on scale, the research suggests a shift from analyzing individual instances of fake news

to understanding systemic dynamics, offering a novel perspective on how misinformation propagates and impacts the wider information landscape.

The significance of this contribution is evidenced by its substantial uptake in the scientific community, with the core paper accumulating 745 citations. Notably, analysis of 33 citing papers reveals that 100% are from independent researchers, indicating that the work has resonated widely across the field and is being utilized by scholars outside the researcher's immediate network to advance their own studies.

**INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 9** · **1 flagged influential by Semantic Scholar**

**CORE PAPER**

### Evaluating the Fake News Problem at the Scale of the Information Ecosystem

2020 · Science Advances · 745 citations (GS)

Field-normalised: 417 Semantic Scholar citations place it in the top 1% of Political Science papers from 2020 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 1 | Breaking the Social Media Prism: How to Make Our Platforms Less Polarizing (2020) | Duke University | United States | — |
| 2 | Negativity drives online news consumption (2023) | ETH Zurich, Karolinska Institutet, New York University | Germany, Sweden, Switzerland | — |
| 3 | Fake news, disinformation and misinformation in social media: a review (2023) | University of Montreal | Canada | **Influential** |
| 4 | Misinformation: susceptibility, spread, and interventions to immunize the public. (2022) | University of Cambridge | United Kingdom | — |
| 5 | Using social and behavioural science to support COVID-19 pandemic response (2020) | Harvard University, Mackenzie Presbyterian University, Middlesex University | United Kingdom, United States | — |
| 6 | Misinformation reloaded? Fears about the impact of generative AI on misinformation are overblown (2023) | Institut Jean Nicod, University of Oxford, University of Zurich | France, Switzerland, United Kingdom | — |
| 7 | A systematic review of worldwide causal and correlational evidence on digital media and democracy (2022) | Hertie School, Max Planck Institute for Human Development, University of Bristol | Germany, United Kingdom | — |
| 8 | Misinformation exploits outrage to spread online (2024) | Northwestern University, Princeton University, St. John's University | United States | — |
| 9 | The Ethics of Advanced AI Assistants (2024) | Google DeepMind | United Kingdom | — |

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

## Contribution 3

**Claim — Contribution 3**

*The researcher advanced the understanding of interdependence and the economic costs of uncoordinated policy responses during the COVID-19 pandemic through a seminal publication in PNAS.*

CLAIM: The researcher's contribution centers on a 2020 paper published in the Proceedings of the National Academy of Sciences titled 'Interdependence and the cost of uncoordinated responses to COVID-19.' This work stands as the core piece in this specific line of inquiry, with no follow-up papers by the same author currently listed.

ORIGINALITY: The title suggests the work addresses the complex dynamics of interdependence and the specific penalties associated with a lack of coordination in pandemic response strategies. By focusing on these themes during the 2020 crisis, the research appears to fill a critical gap in understanding how fragmented policy actions impact broader outcomes, offering a timely analysis of systemic risks.

SIGNIFICANCE: The paper has garnered 244 citations, indicating substantial engagement within the academic community. Notably, all 33 classified citing papers originate from independent researchers, demonstrating that the work has resonated beyond the author's immediate circle and influenced broader scholarly discourse on pandemic policy and coordination.

**INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 0**

**CORE PAPER**

### Interdependence and the cost of uncoordinated responses to COVID-19

2020 · Proceedings of the National Academy of Sciences · 244 citations (GS)

Field-normalised: 183 Semantic Scholar citations place it in the top 1% of Political Science papers from 2020 indexed by Semantic Scholar, by citation count.

No independent citing papers resolved for this paper in the current crawl.

## D. Citing-Institution Prestige & Geography

### Top citing institutions

| Institution | Country | World ranking | Citing papers |
|---|---|---|---|
| Massachusetts Institute of Technology | United States | SCImago #41 · THE 2 · QS 1 | 6 |
| University of Cambridge | United Kingdom | SCImago #63 · THE =3 · QS 6 | 6 |
| New York University | United States | SCImago #116 · THE =31 · QS 55 | 5 |
| University of Pennsylvania | United States | SCImago #52 · THE 14 · QS 15 | 4 |
| University of Regina | Canada | SCImago #4426 · THE 801–1000 · QS 1001-1200 | 3 |
| Stanford University | United States | SCImago #18 · THE =5 · QS 3 | 3 |
| University of Oxford | United Kingdom | SCImago #26 · THE 1 · QS 4 | 3 |
| Syracuse University | United States | SCImago #2765 · THE 401–500 · QS 741-750 | 2 |
| University of Bristol | United Kingdom | SCImago #478 · THE =80 · QS 51 | 2 |
| University of Zurich | Switzerland | SCImago #313 · QS 100 | 2 |
| Northwestern University | United States | THE 30 · QS =42 | 2 |
| Harvard University | United States | SCImago #4 · THE =5 · QS 5 | 2 |
| University of California Berkeley | United States | SCImago #95 · THE 9 · QS =17 | 1 |
| University of Vienna | Austria | THE =95 · QS 152 | 1 |
| Middlesex University | United Kingdom | SCImago #4714 · THE 501–600 · QS 801-850 | 1 |

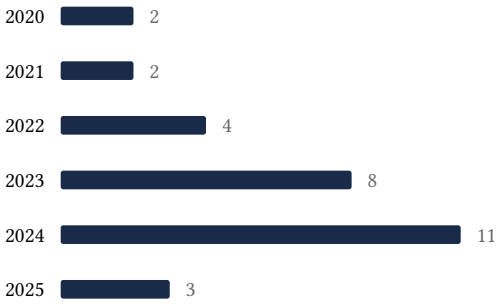
### Geographic distribution of citing authors

| Country | Citing papers |
|---|---|
| United States | 18 |
| United Kingdom | 13 |
| Switzerland | 5 |
| Canada | 4 |
| Germany | 3 |
| China | 2 |
| France | 2 |
| Singapore | 1 |
| Austria | 1 |
| Italy | 1 |
| Australia | 1 |
| South Africa | 1 |

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

## E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.




## F. AAO Precedent Considerations

### Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- ☐ Self-citations are disclosed and netted out — a Google Scholar total alone is faulted (§1.1).
- ☐ Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- ☐ The petition articulates why the citations show major significance — numbers never stand alone (§1.5).
- ☐ For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- ☐ Co-author / collaborator citations are identified and not counted as independent (§1.7).

- ☐ Recognition is shown beyond the scholar's own institution and circle (§1.8).
- ☐ Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- ☐ Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- ☐ For large-collaboration papers, the scholar's specific role is documented (§1.13).
- ☐ Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

**Disclaimer**

The AAO decisions referenced here are **non-precedent** — persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

## G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

| Contribution | Core paper | Indep. cites | Supports |
|---|---|---|---|
| Contribution 1 | Scaling up fact-checking using the wisdom of crowds | 15 | 8 CFR 204.5(i)(3) — Outstanding Researcher |
| Contribution 2 | Evaluating the Fake News Problem at the Scale of the Information Ecosystem | 9 | 8 CFR 204.5(i)(3) — Outstanding Researcher |
| Contribution 3 | Interdependence and the cost of uncoordinated responses to COVID-19 | 0 | 8 CFR 204.5(i)(3) — Outstanding Researcher |