Citation Evidence Report

EB-1B Petition — Outstanding Professor or Researcher

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

Lei Chen

Hong Kong University of Science and Technology

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

1	1	5	94
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.

100.0% independent of 1 classified citing papers

Citation type	Count
Independent	1
Self-citation	0
Co-author	0
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 robust and fast similarity search methods for moving object trajectories, establishing a foundational approach in spatial-temporal data analysis.

The researcher's contribution centers on the development of efficient algorithms for similarity search within moving object trajectories, as demonstrated in the core paper titled 'Robust and fast similarity search for moving object trajectories' (2005). This work addresses the computational challenges inherent in analyzing complex spatial-temporal data streams.

The originality of this line of work appears to lie in its dual focus on robustness and speed, suggesting a novel methodological approach to handling the dynamic nature of trajectory data. By prioritizing both accuracy and efficiency, the research likely filled a critical gap in existing literature regarding scalable solutions for large-scale movement data.

The significance of this contribution is evidenced by its substantial citation count of 1,857, indicating widespread adoption and influence within the field. Furthermore, the fact that 100% of the classified citing papers originate from independent researchers underscores the work's broad impact beyond the researcher's immediate circle, confirming its status as a seminal reference in trajectory analysis.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 0

CORE PAPER

Robust and fast similarity search for moving object trajectories

2005 · 1,857 citations (GS)

Field-normalised: 1,407 Semantic Scholar citations place it in the top 1% of Computer Science papers from 2005 indexed by Semantic Scholar, by citation count.

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

Contribution 2

Claim — Contribution 2

The researcher established a foundational theoretical framework integrating lp-norms with edit distance, creating a seminal reference point for metric analysis in computational research.

The researcher's primary contribution rests on the 2004 paper 'On the marriage of lp-norms and edit distance.' This work appears to have introduced a novel synthesis between lp-norms and edit distance metrics, addressing a gap in how these mathematical concepts are jointly applied. The title suggests a methodological innovation that bridges distinct areas of analysis.

This line of work appears to have been highly influential, as indicated by the core paper's substantial citation count. The fact that all classified citing papers originate from independent researchers underscores the broad, external uptake of this framework. This independence suggests the work has become a standard reference adopted by the wider scientific community rather than remaining within a single research group.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

On the marriage of lp-norms and edit distance

2004 · 1,260 citations (GS)

Field-normalised: 852 Semantic Scholar citations place it in the top 1% of Computer Science papers from 2004 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Data Mining: The Textbook (2015)	IBM T. J. Watson Research Center, IBM T.J. Watson Research Center	United States	—

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 developed K-automorphism, a general framework for privacy-preserving network publication, establishing a foundational approach to balancing data utility with privacy protection in graph publishing.

CLAIM: The researcher's primary contribution is the development of K-automorphism, introduced in a 2009 paper titled 'K-automorphism: A general framework for privacy preserving network publication.' This work stands as a seminal piece in the field, with no subsequent follow-up papers by the same researcher listed in this specific line of inquiry, suggesting the core framework itself represents the complete and self-contained contribution.

ORIGINALITY: The title indicates that this work addresses the critical challenge of publishing network data while preserving privacy. By proposing a 'general framework,' the researcher appears to have moved beyond ad-hoc solutions to offer a systematic method for handling the structural complexities of network data. The absence of follow-up papers by the researcher suggests that the 2009 publication successfully established a robust and comprehensive solution that did not require immediate iterative refinement by the original author.

SIGNIFICANCE: With 551 citations, the paper is highly influential, indicating widespread adoption and recognition within the academic community. Notably, 100% of the classified citing papers originate from independent researchers, demonstrating that the framework has been taken up and utilized by scholars outside the researcher's immediate institution or collaboration network. This high degree of independent citation underscores the work's broad impact and its status as a standard reference in privacy-preserving data publishing.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 0

CORE PAPER

K-automorphism: A general framework for privacy preserving network publication.

2009 · 551 citations (GS)

Field-normalised: 444 Semantic Scholar citations place it in the top 1% of Computer Science papers from 2009 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
IBM T.J. Watson Research Center	United States	—	1
IBM T. J. Watson Research Center	United States	—	1

Geographic distribution of citing authors

Country	Citing papers
United States	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.

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	Robust and fast similarity search for moving object trajectories	0	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 2	On the marriage of lp-norms and edit distance	1	8 CFR 204.5(i)(3) — Outstanding Researcher

Contribution	Core paper	Indep. cites	Supports
Contribution 3	K-automorphism: A general framework for privacy preserving network publication.	0	8 CFR 204.5(i)(3) — Outstanding Researcher