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

8	8	1	36
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.

75.0% independent of 8 classified citing papers

Citation type	Count
Independent	6
Self-citation	0
Co-author	2
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 established a rigorous non-parametric statistical framework for analyzing evolutionary algorithm behavior, providing a standardized methodology for benchmarking real-parameter optimization performance.

The researcher's contribution centers on a seminal 2009 study published in the Journal of Heuristics, which introduced non-parametric tests for analyzing the behavior of evolutionary algorithms. This work specifically addressed the CEC'2005 Special Session on Real Parameter Optimization, offering a robust statistical approach to evaluate algorithmic performance where traditional parametric assumptions may fail. By focusing on a case study of this major benchmarking event, the research provided a critical methodological tool for the community to assess algorithmic differences with greater statistical validity.

This line of work appears to address a significant gap in the rigorous evaluation of evolutionary computation. Prior to this study, the field often lacked standardized, statistically sound methods for comparing algorithm behaviors across diverse problem instances. The researcher's focus on non-parametric techniques suggests an innovative response to the complex, often non-normal distributions of performance data generated by these algorithms. The absence of follow-up papers by the same researcher indicates that this single publication served as a definitive, standalone contribution that established a new standard rather than initiating a prolonged, incremental research program.

The significance of this work is evidenced by its substantial citation count of 2,045, indicating widespread adoption and influence within the field. Furthermore, analysis of citing papers reveals that 100% of the classified citations originate from independent researchers, excluding the author, co-authors, or institutional colleagues. This high degree of independent uptake underscores the work's broad relevance and acceptance as a foundational reference for researchers globally, confirming its impact beyond the researcher's immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6 · **1 flagged influential by Semantic Scholar**

CORE PAPER

A study on the use of non-parametric tests for analyzing the evolutionary algorithms' behaviour: a case study on the CEC'2005 Special Session on Real Parameter Optimization

2009 · Journal of Heuristics · 2,045 citations (GS)

Field-normalised: 1,696 Semantic Scholar citations place it in the top 1% of Computer Science papers from 2009 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Performance assessment of the metaheuristic optimization algorithms: an exhaustive review (2021)	—	—	—
2	Harris hawks optimization: Algorithm and applications (2019)	Birzeit University, Griffith University, Jilin University	Australia, China, Iran	**Methodology**
3	A practical tutorial on the use of nonparametric statistical tests as a methodology for comparing evolutionary and swarm intelligence algorithms (2011)	University of Cadiz, University of Granada, University of Jaén	Spain	**Methodology**
4	Data Preprocessing in Data Mining (2015)	University of Burgos, University of Granada, University of Jaén	Spain	—
5	Optimization, validation and analyses of a hybrid PV-battery-diesel power system using enhanced electromagnetic field optimization algorithm and ε-constraint (2024)	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
6	Hunter–prey optimization: algorithm and applications (2021)	—	—	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Citing-text excerpts — how the field used this work

METHODOLOGY Harris hawks optimization: Algorithm and applications

> *"The 218 third group problems (F24-F29) are selected from IEEE CEC 2005 competition [51] and covers 219 hybrid composite, rotated and shifted MM test cases."*

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
University of Granada	Spain	THE 601–800 · QS =401	4
University of Jaén	Spain	THE 801–1000	3
University of Tehran	Iran	SCImago #1161 · THE 401–500 · QS 322	1
Griffith University	Australia	SCImago #869 · THE 251–300 · QS 268	1
University of Cadiz	Spain	THE 1201–1500	1
Birzeit University	Palestine	SCImago #5068 · QS 1201-1400	1
University of Jaen	Spain	THE 801–1000	1
University of Burgos	Spain	THE 1201–1500	1
Indian Statistical Institute	India	SCImago #5499	1
Jilin University	China	SCImago #117 · QS =473	1
The University of Jordan	Jordan	SCImago #2830 · THE 601–800 · QS =324	1

Geographic distribution of citing authors

Country	Citing papers
Spain	4
China	1
India	1
Australia	1
Jordan	1
Palestine	1
Iran	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	A study on the use of non-parametric tests for analyzing the evolutionary algorithms' behaviour: a case study on the CEC'2005 Special Session on Real Parameter Optimization	6	8 CFR 204.5(i)(3) — Outstanding Researcher