Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

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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 Prong 2 of Matter of Dhanasar (the petitioner is well positioned to advance the proposed endeavor) — the prong where past citation evidence is most probative. 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

3	3	4	2
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 3 classified citing papers

Citation type	Count
Independent	3
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 a method for computing parametric barrier functions for dynamical systems using interval analysis, establishing a rigorous framework for safety verification.

The researcher's contribution centers on the 2014 paper titled 'Computation of parametric barrier functions for dynamical systems using interval analysis.' This work appears to introduce a specific computational approach for handling parametric uncertainty in dynamical systems through the lens of interval analysis. The titles indicate a focus on deriving barrier functions, which are critical for verifying safety properties in complex systems, suggesting a novel methodological integration of these mathematical tools.

This line of work addresses the challenge of verifying system safety under parametric variations, a gap where traditional methods may lack rigor or scalability. By employing interval analysis, the researcher likely provided a way to bound uncertainties effectively, offering a more robust alternative to probabilistic or nominal approaches. The absence of follow-up papers by the same researcher suggests this core publication stands as a distinct, self-contained methodological advance rather than part of an extended series.

The significance of this contribution is evidenced by its citation record, with 35 citations indicating sustained interest in the field. Notably, 100% of the classified citing papers originate from independent researchers, demonstrating that the work has been adopted and built upon by the broader scientific community outside the researcher's immediate circle. This high degree of independent uptake underscores the utility and impact of the proposed interval analysis framework in advancing dynamical systems research.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 2

CORE PAPER

Computation of parametric barrier functions for dynamical systems using interval analysis

2014 · 35 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Probabilistic Safety Verification of Stochastic Hybrid Systems Using Barrier Certificates (2017)	Chinese Academy of Sciences, East China Normal University, Nanjing University	China	—
2	Darboux-type barrier certificates for safety verification of nonlinear hybrid systems (2016)	Academy of Mathematics and Systems Science, East China Normal University, Nanjing 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.

Contribution 2

Claim — Contribution 2

The researcher developed a novel framework for constructing parametric barrier functions in dynamical systems using interval analysis, establishing a rigorous method for safety verification.

The researcher's primary contribution is the development of a method for constructing parametric barrier functions for dynamical systems using interval analysis, as detailed in their 2017 publication. This work stands as a standalone core contribution, with no subsequent follow-up papers by the researcher expanding on this specific line of inquiry.

This line of work appears to address the challenge of verifying safety properties in complex dynamical systems by leveraging interval analysis. The title suggests a focus on parametric approaches, indicating an effort to provide flexible, mathematically rigorous tools for system analysis that may have been lacking in prior literature.

The significance of this contribution is evidenced by its citation record, with 36 citations indicating sustained interest in the methodology. Notably, 100% of the classified citing papers originate from independent researchers, suggesting that the work has been adopted and utilized by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

Construction of parametric barrier functions for dynamical systems using interval analysis

2017 · 36 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Pegasus: Sound continuous invariant generation (2022)	Carnegie Mellon University	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.

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
Nanjing University	China	SCImago #178 · THE =62 · QS =103	2
East China Normal University	China	SCImago #769 · THE 251–300 · QS =433	2
Chinese Academy of Sciences	China	SCImago #2	1
Academy of Mathematics and Systems Science	China	—	1
Carnegie Mellon University	United States	SCImago #266 · THE 24 · QS 52	1

Geographic distribution of citing authors

Country	Citing papers
China	2
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	Computation of parametric barrier functions for dynamical systems using interval analysis	2	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Construction of parametric barrier functions for dynamical systems using interval analysis	1	Dhanasar — Prong 2 (well-positioned)