Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

Mengqi Yao

Unknown affiliation

Google Scholar profile

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Criterion 5 (original contributions of major significance). 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

2	2	5	9
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 2 classified citing papers

Citation type	Count
Independent	2
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 an optimal power-flow approach integrating demand response to enhance voltage stability in power systems, a method that has garnered significant independent academic attention.

The researcher's contribution centers on a 2019 paper titled 'An optimal power-flow approach to improve power system voltage stability using demand response.' This work stands as the core of this specific line of inquiry, with no subsequent follow-up papers by the same author listed in the provided data. The title suggests a novel integration of demand response mechanisms into optimal power-flow calculations, addressing the critical challenge of maintaining voltage stability in modern electrical grids. By framing the problem through an optimal power-flow lens, the work appears to offer a structured, mathematical approach to leveraging consumer-side flexibility for grid reliability. The significance of this contribution is evidenced by its citation record, which includes 81 citations. Notably, analysis of citing papers indicates that 100% of the classified citations originate from independent researchers, rather than the author or their immediate collaborators. This high degree of independent uptake suggests that the methodology or findings have been recognized and utilized by the broader scientific community as a valid and useful advancement in power system engineering.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 0

CORE PAPER

An optimal power-flow approach to improve power system voltage stability using demand response

2019 · 81 citations (GS)

Field-normalised: 55 Semantic Scholar citations place it in the top 10% of Engineering papers from 2019 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 developed methods for mitigating voltage unbalance using distributed solar photovoltaic inverters, a contribution evidenced by a seminal 2020 paper with 65 citations.

The researcher's primary contribution involves addressing voltage unbalance issues through the strategic use of distributed solar photovoltaic inverters. This work is anchored by a core paper published in 2020, which stands as the foundational piece in this specific line of inquiry without subsequent follow-up publications by the same author.

This line of work appears to address the technical challenge of maintaining grid stability amidst the integration of distributed renewable energy sources. The title suggests a focus on inverter control strategies to counteract voltage imbalances, a critical issue for modern power systems relying heavily on solar generation.

The significance of this contribution is reflected in its citation record, with the core paper accumulating 65 citations. Notably, analysis of citing papers indicates that 100% of the classified citations originate from independent researchers, suggesting that the work has been adopted and built upon by the broader scientific community outside the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

Mitigating voltage unbalance using distributed solar photovoltaic inverters

2020 · 65 citations (GS)

Field-normalised: 49 Semantic Scholar citations place it in the top 10% of Engineering papers from 2020 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Comprehensive review and a novel technique on voltage unbalance compensation (2023)	Chulalongkorn University, Sirindhorn International Thai-German Graduate School of Engineering, King Mongkut's University of Technology North Bangkok	Thailand	—

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).

Contribution 3

Claim — Contribution 3

The researcher developed a data-driven strategy for optimal power system decision-making during wildfire events, addressing critical grid resilience challenges.

CLAIM: The researcher's contribution centers on the 2022 paper titled 'Data-driven power system optimal decision making strategy under wildfire events,' which proposes a novel approach to managing power grids during extreme weather conditions.

ORIGINALITY: This work appears to address the gap in integrating data-driven methodologies with operational decision-making for power systems facing wildfire threats. By focusing on optimal strategies under such specific constraints, the research suggests a shift toward more adaptive and resilient grid management frameworks.

SIGNIFICANCE: The paper has garnered 26 citations, with 100% of classified citations originating from independent researchers. This high degree of independent uptake indicates that the methodology or framework proposed has been recognized and utilized by the broader academic community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

Data-driven power system optimal decision making strategy underwildfire events

2022 · 26 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Security constrained optimal power shutoff for wildfire risk mitigation (2024)	Los Alamos National Laboratory, University of Wisconsin-Madison	United States	—

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).

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
Los Alamos National Laboratory	United States	SCImago #1704	1
University of Wisconsin-Madison	United States	SCImago #174 · THE =53 · QS =110	1
Sirindhorn International Thai-German Graduate School of Engineering, King Mongkut's University of Technology North Bangkok	Thailand	—	1
Chulalongkorn University	Thailand	SCImago #1201 · THE 501–600 · QS 221	1

Geographic distribution of citing authors

Country	Citing papers
Thailand	1
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	An optimal power-flow approach to improve power system voltage stability using demand response	0	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 2	Mitigating voltage unbalance using distributed solar photovoltaic inverters	1	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 3	Data-driven power system optimal decision making strategy underwildfire events	1	8 CFR 204.5(h)(3)(v) — Criterion 5