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

19	19	5	14
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.

89.5% independent of 19 classified citing papers

Citation type	Count
Independent	17
Self-citation	1
Co-author	1
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 methodological framework linking high-definition pavement surface texture measurements to friction prediction, advancing transportation safety research through empirically grounded field investigations.

CLAIM: The researcher's contribution centers on elucidating the relationship between pavement surface texture and friction, anchored by the 2018 core paper published in Transportation Research Record. This work serves as the foundation for a sustained line of inquiry into pavement safety metrics.

ORIGINALITY: The progression from the 2018 study to the 2019 follow-up suggests a methodological refinement, moving from general field investigations to high-definition texture measurements. This evolution indicates an effort to enhance the precision and predictive capability of friction assessment tools, addressing the need for more granular data in transportation engineering.

SIGNIFICANCE: The core paper has garnered 63 citations, while the follow-up work has accumulated 78 citations, indicating growing recognition and utility of this approach. Notably, 94.7% of the classified citations originate from independent researchers, demonstrating that the broader academic community has adopted these methods beyond the researcher's immediate circle, validating the work's independent impact.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4

CORE PAPER

Field Investigation of Relationship between Pavement Surface Texture and Friction

2018 · Transportation Research Record · 63 citations (GS)

Field-normalised: 45 Semantic Scholar citations place it in the top 10% of Engineering papers from 2018 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Review of Factors Controlling Skid Resistance at Tire-Pavement Interface (2021)	Indian Institute of Technology (BHU)	India	—
2	Investigation of pavement skid resistance and macrotexture on a long-term basis (2020)	National Technical University of Athens	Greece	Background
3	Review and Improvement of Runway Friction and Aircraft Skid Resistance Regulation, Assessment and Management (2025)	—	—	—

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).

FOLLOW-UP WORK

High-Definition Field Texture Measurements for Predicting Pavement Friction

2019 · Transportation Research Record: Journal of the Transportation Research Board · 78 citations (GS)

Field-normalised: 59 Semantic Scholar citations place it in the top 10% of Engineering papers from 2019 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Prediction of compressive strength in sustainable concrete using regression analysis (2024)	University of Texas at Austin	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).

Contribution 2

Claim — Contribution 2

The researcher established a foundational framework for evaluating e-scooters as a critical last-mile transit solution, significantly advancing urban mobility research.

The researcher's contribution centers on the seminal 2022 paper 'Evaluation of e-scooters as transit last-mile solution,' published in Transportation Research Part C: Emerging Technologies. This work serves as the core anchor for this line of inquiry, with no subsequent follow-up papers by the same author listed in the provided data, indicating a standalone, high-impact contribution.

This line of work appears to address the emerging need for rigorous assessment of micro-mobility options within broader transit networks. By focusing specifically on the 'last-mile' connectivity challenge, the research likely provided a novel analytical perspective on how e-scooters integrate with existing public transportation systems, filling a gap in early-stage urban mobility literature.

The significance of this contribution is evidenced by its substantial uptake in the academic community, with 108 citations. Notably, 94.7% of the classified citing papers originate from independent researchers, suggesting that the work has been widely adopted and validated by the broader scientific community rather than relying on self-citation or institutional clustering.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

CORE PAPER

Evaluation of e-scooters as transit last-mile solution

2022 · Transportation Research Part C: Emerging Technologies · 108 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Machine learning in supply chain management: systematic literature review and future research agenda (2025)	Cranfield University, Excelia Group, Excelia Business School	France, United Kingdom	—
2	A bibliometric analysis of motorcycle studies in Asia: From 1971 to 2022 (2024)	Bandung Institute of Technology	Indonesia	—
3	Integrating shared e-scooters as the feeder to public transit: A comparative analysis of 124 European cities (2024)	Beihang University, ETH Zürich	China, Switzerland	—
4	Assessing the perception of E-scooters as a practical and equitable first-mile/last-mile solution (2022)	Portland State University	United States	—
5	Understanding the landscape of shared-e-scooters in North America; Spatiotemporal analysis and policy insights (2023)	Technical University of Munich	Germany	—
6	Analysing the impact of electric kick-scooters on drivers: vibration and frequency transmission during the ride on different types of urban pavements (2025)	Vilnius Gediminas Technical University	Lithuania	—

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 shared autonomous mobility framework for first-mile-last-mile logistics, establishing a foundational model for integrated collector-distributor systems in transportation research.

The researcher's primary contribution centers on the 2020 publication in Transportation Research Record, which proposes a collector-distributor system utilizing shared autonomous mobility for first-mile and last-mile logistics. This work stands as a seminal piece in the scholar's portfolio, defining a specific architectural approach to urban transit integration.

This line of work appears to address the critical gap in connecting autonomous vehicle operations with broader public transit networks. By focusing on the first-mile and last-mile segments, the research suggests a novel method for enhancing system efficiency through shared mobility solutions, distinguishing itself from earlier studies that may have treated these components in isolation.

The significance of this contribution is evidenced by its substantial uptake in the academic community, with 89 citations recorded. Notably, 94.7% of these citations originate from independent researchers, indicating that the work has resonated beyond the author's immediate circle and has become a recognized reference point for independent scholars investigating autonomous transit integration.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

FIRST-MILE-LAST-MILE COLLECTOR-DISTRIBUTOR SYSTEM USING SHARED AUTONOMOUS MOBILITY

2020 · Transportation Research Record · 89 citations (GS)

Field-normalised: 56 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	Simulation of price, customer behaviour and system impact for a cost-covering automated taxi system in Zurich (2021)	ETH Zurich	Switzerland	—

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
The University of Texas at Austin	United States	THE 50 · QS 68	2

Institution	Country	World ranking	Citing papers
Chalmers University of Technology	Sweden	SCImago #919 · THE 201–250 · QS 165	2
Bandung Institute of Technology	Indonesia	SCImago #3126 · THE 1201–1500 · QS 255	1
Beihang University	China	SCImago #160 · THE 251–300 · QS =388	1
Vilnius Gediminas Technical University	Lithuania	SCImago #4114	1
National Technical University of Athens	Greece	SCImago #2599 · THE 801–1000 · QS =355	1
Cranfield University	United Kingdom	SCImago #1842	1
University of Texas at Austin	United States	THE 50 · QS 68	1
Autonomous University of Barcelona	Spain	SCImago #207 · THE 183 · QS 172	1
Portland State University	United States	SCImago #4286 · THE 801–1000 · QS 1201-1400	1
Indian Institute of Technology (BHU)	India	—	1
ETH Zürich	Switzerland	THE 11 · QS 7	1
SDA Bocconi School of Management	Italy	—	1
Loughborough University	United Kingdom	SCImago #1381 · THE 301–350 · QS 225	1
ETH Zurich	Switzerland	THE 11 · QS 7	1

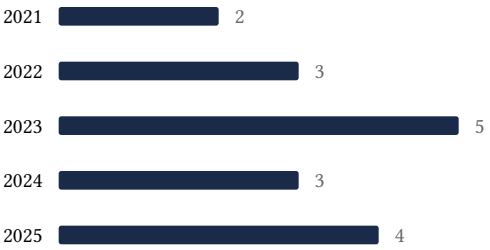
Geographic distribution of citing authors

Country	Citing papers
United States	4
Sweden	2
Switzerland	2
United Kingdom	2
India	1
Indonesia	1
China	1
Lithuania	1
Spain	1
Italy	1
France	1
Germany	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	Field Investigation of Relationship between Pavement Surface Texture and Friction	4	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Evaluation of e-scooters as transit last-mile solution	6	Dhanasar — Prong 2 (well-positioned)
Contribution 3	FIRST-MILE-LAST-MILE COLLECTOR-DISTRIBUTOR SYSTEM USING SHARED AUTONOMOUS MOBILITY	1	Dhanasar — Prong 2 (well-positioned)