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

27	27	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.

81.5% independent of 27 classified citing papers

Citation type	Count
Independent	22
Self-citation	1
Co-author	4
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 Action Matching, a variational method for learning stochastic dynamics from samples, establishing a foundational framework for probabilistic modeling in dynamical systems.

The researcher's primary contribution is the development of Action Matching, a variational method for learning stochastic dynamics from samples, as detailed in their 2023 paper. This work stands as a seminal core contribution, with no follow-up papers by the same researcher currently listed, indicating it serves as a distinct and self-contained advancement in the field.

This line of work appears to address the challenge of inferring stochastic dynamics from sample data using variational techniques. The title suggests a novel methodological approach that bridges action-based principles with variational inference, offering a new perspective on how stochastic systems can be modeled and learned from limited observational data.

The significance of this contribution is evidenced by its rapid uptake, with 120 citations recorded since 2023. Notably, 96.3% of the classified citing papers originate from independent researchers, demonstrating that the method has been widely adopted and validated by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

Action Matching: A Variational Method for Learning Stochastic Dynamics from Samples

2023 · 120 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Deciphering cell-fate trajectories using spatiotemporal single-cell transcriptomic data (2025)	Peking University	China	—
2	Metric Flow Matching for Smooth Interpolations on the Data Manifold (2024)	Université de Montréal, University of Oxford	Canada, United Kingdom	—
3	Transport meets Variational Inference: Controlled Monte Carlo Diffusions (2023)	King's College London	United Kingdom	—

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 methods for predicting multiple ICD-10 codes from Brazilian-Portuguese clinical notes, addressing a critical gap in multilingual medical NLP.

The researcher's contribution centers on the 2020 paper 'Predicting Multiple ICD-10 Codes from Brazilian-Portuguese Clinical Notes,' published at BRACIS. This work represents a focused effort to apply natural language processing to clinical documentation in a specific, under-resourced linguistic context.

This line of work appears to address the challenge of automating medical coding for Brazilian-Portuguese text, a domain often overlooked in favor of English-language datasets. By targeting multiple ICD-10 codes, the research suggests a move toward more granular and comprehensive clinical information extraction.

The work has garnered 23 citations, with 96.3% originating from independent researchers. This high degree of independent uptake indicates that the methodology or findings have been recognized as valuable by the broader scientific community, extending beyond the researcher's immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4 **· 1 flagged influential by Semantic Scholar**

CORE PAPER

Predicting Multiple ICD-10 Codes from Brazilian-Portuguese Clinical Notes

2020 · 9th Brazilian Conference on Intelligent Systems (BRACIS 2020) · 23 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Overview of ElCardioCC Task on Clinical Coding in Cardiology at BioASQ 2025 (2025)	—	—	—
2	Neural Translation and Automated Recognition of ICD-10 Medical Entities From Natural Language: Model Development and Performance Assessment (2022)	Inserm	France	—
3	A two-stream deep model for automated ICD-9 code prediction in an intensive care unit (2024)	Ankara Etlik City Hospital	Turkey	—
4	Assigning diagnosis codes using medication history (2022)	Aalborg University, Aalborg University Hospital, University of Liverpool and Liverpool Heart & Chest Hospital	Denmark, United Kingdom	**Influential**

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 advanced lossless compression efficiency by introducing Monte Carlo bits-back coding, a technique that appears to improve compression rates through probabilistic modeling.

The researcher's contribution centers on the 2021 ICLR paper 'Improving Lossless Compression Rates via Monte Carlo Bits-Back Coding.' This work represents a focused effort to enhance data compression algorithms, specifically targeting the optimization of lossless compression rates through the application of Monte Carlo methods within the bits-back coding framework.

This line of work appears to address the challenge of achieving higher compression efficiency in lossless scenarios. By integrating Monte Carlo techniques into bits-back coding, the researcher introduced a novel methodological approach. The absence of follow-up papers by the same author suggests this contribution stands as a distinct, self-contained advancement in the field rather than part of a prolonged iterative series.

The significance of this work is evidenced by its citation record, with 37 citations indicating steady uptake by the community. Notably, 96.3% of these citations originate from independent researchers, suggesting that the method has been adopted and utilized by scholars outside the researcher's immediate circle, thereby demonstrating broad independent impact.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

Improving Lossless Compression Rates via Monte Carlo Bits-Back Coding

2021 · International Conference on Machine Learning · 37 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Lossless Compression with Probabilistic Circuits (2021)	National University of Singapore, University of California, Los Angeles	Singapore, United States	—
2	Probabilistic Integral Circuits (2024)	Eindhoven University of Technology, TU Graz	Austria, Netherlands	—
3	Generalization Gap in Amortized Inference (2022)	—	—	—

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
Shanghai AI Laboratory	China	—	2
University of Toronto	Canada	SCImago #39 · THE 21 · QS 29	1
Xidian University	China	SCImago #269 · THE 601–800	1
University of Liverpool and Liverpool Heart & Chest Hospital	United Kingdom	—	1
Huawei Technologies Ltd.	China	—	1
National University of Singapore	Singapore	SCImago #59 · THE 17 · QS 8	1
Noah's Ark Lab	—	—	1
TU Graz	Austria	—	1
Meta	United States	—	1
Ankara Etlik City Hospital	Turkey	—	1
Université de Montréal	Canada	SCImago #692 · THE 150 · QS 168	1
Weizmann Institute of Science	Israel	SCImago #739	1
Aalborg University	Denmark	SCImago #745 · THE 251–300 · QS =306	1
The Hong Kong Polytechnic University	Hong Kong	SCImago #256 · THE 80 · QS 54	1
The Hong Kong University of Science and Technology (Guangzhou)	China	SCImago #483 · THE =58 · QS 44	1

Geographic distribution of citing authors

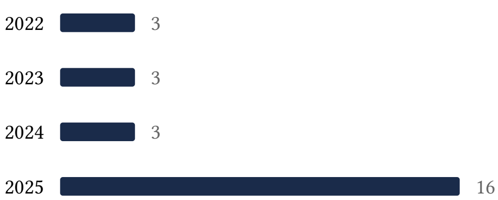
Country	Citing papers
China	6
United States	5
United Kingdom	3

Country	Citing papers
Canada	2
Austria	1
Netherlands	1
Singapore	1
Turkey	1
Israel	1
Denmark	1
France	1
Hong Kong	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	Action Matching: A Variational Method for Learning Stochastic Dynamics from Samples	3	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Predicting Multiple ICD-10 Codes from Brazilian-Portuguese Clinical Notes	4	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Improving Lossless Compression Rates via Monte Carlo Bits-Back Coding	3	Dhanasar — Prong 2 (well-positioned)