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

15	15	2	37
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.

93.3% independent of 15 classified citing papers

Citation type	Count
Independent	14
Self-citation	0
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 foundational stochastic framework for modeling community structure in networks, providing a rigorous statistical basis for analyzing complex network topology.

CLAIM: The researcher's seminal 2011 paper, 'Stochastic blockmodels and community structure in networks,' serves as the cornerstone of this contribution, introducing a robust methodological approach to understanding network organization.

ORIGINALITY: This work appears to address the need for formal statistical models to detect and analyze community structures within complex networks. By focusing on stochastic blockmodels, the researcher provided a theoretical foundation that likely advanced the field beyond heuristic or purely descriptive methods, offering a principled way to infer latent groupings.

SIGNIFICANCE: The paper has been cited 2,846 times, indicating substantial impact and widespread adoption within the scientific community. Notably, 93.3% of the classified citations originate from independent researchers, suggesting that the work has served as a critical reference point for scholars outside the researcher's immediate circle, validating its broad utility and influence in network science.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6 · **2 flagged influential by Semantic Scholar**

CORE PAPER

Stochastic blockmodels and community structure in networks

2011 · 2,846 citations (GS)

Field-normalised: 2,103 Semantic Scholar citations place it in the top 1% of Computer Science papers from 2011 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Networks beyond pairwise interactions: Structure and dynamics (2020)	CENTAI	Italy	Background
2	Community detection in networks: A user guide (2016)	Aalto University, Indiana University	Finland, United States	**Methodology**
3	A Comprehensive Survey on Community Detection With Deep Learning (2022)	Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Macquarie University, Tianjin University	Australia, China, United States	—
4	Diffusion Improves Graph Learning (2019)	Technical University of Munich	Germany	**Methodology**
5	Community Detection and Stochastic Block Models: Recent Developments (2018)	Princeton University	United States	Background
6	Network statistics of the whole-brain connectome of Drosophila (2024)	Janelia Research Campus, Howard Hughes Medical Institute, MRC Laboratory of Molecular Biology, Princeton University	United Kingdom, 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).

Citing-text excerpts — how the field used this work

METHODOLOGY Community detection in networks: A user guide

"The unnormalised maximum loglikelihood that a given partition g in q groups of the network G is reproduced by the standard SBM reads [62]"
METHODOLOGY Diffusion Improves Graph Learning

"The degreecorrected stochastic block model (DCSBM) [30], spectral clustering (using Lsym) [55], DeepWalk"

Contribution 2

Claim — Contribution 2

The researcher developed BoTorch, a highly cited framework for efficient Monte-Carlo Bayesian optimization, establishing a foundational tool for scalable probabilistic modeling.

The researcher's primary contribution is the development of BoTorch, a framework for efficient Monte-Carlo Bayesian optimization published in 2020. This work serves as the cornerstone of the described research line, with no additional follow-up papers provided in the current context. The title suggests a focus on computational efficiency within Bayesian optimization, addressing the need for scalable methods in complex probabilistic modeling tasks. By leveraging Monte-Carlo techniques, the framework appears to offer a robust solution for optimization problems that are otherwise computationally prohibitive. The significance of this contribution is evidenced by its substantial citation count of 1,743, indicating widespread adoption and recognition within the scientific community. Furthermore, analysis of citing papers reveals that 93.3% originate from independent researchers, demonstrating that the work has influenced scholars beyond the researcher's immediate institution or collaboration network. This high degree of independent uptake underscores the framework's utility and impact as a standard tool in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8

CORE PAPER

BoTorch: a framework for efficient Monte-Carlo Bayesian optimization

2020 · 1,743 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Self-Driving Laboratories for Chemistry and Materials Science (2024)	Acceleration Consortium, ETH Zurich, University of Toronto	Canada, Switzerland	—
2	Hyperparameter optimization: Foundations, algorithms, best practices, and open challenges (2023)	Leibniz University Hannover, LMU Munich, Ludwig-Maximilians-Universität München	Germany	—
3	Multistate and functional protein design using RoseTTAFold sequence space diffusion (2024)	California Institute of Technology, Georgia Institute of Technology, Heidelberg University	Germany, United States	—
4	A review of uncertainty quantification in deep learning: Techniques, applications and challenges (2021)	Chinese Academy of Sciences, Deakin University, Dibrugarh University	Australia, Canada, China	—
5	Tree-Structured Parzen Estimator: Understanding Its Algorithm Components and Their Roles for Better Empirical Performance (2023)	University of Freiburg	Germany	—
6	Active learning-assisted directed evolution (2025)	California Institute of Technology	United States	—
7	Deep Learning for Time Series Forecasting: A Survey (2020)	Higher School of Sciences and Technologies of Computing and Digital, Pablo de Olavide University, SADEG Company (Sonelgaz Group)	Algeria, Spain	—

No.	Citing paper	Citing institution(s)	Country	S2
8	Delocalized, asynchronous, closed-loop discovery of organic laser emitters	Catalonia Institute for Energy Research, Institute of Organic Chemistry, Polish Academy of Sciences, Jagiellonian University	Canada, Japan, Poland	—

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
Princeton University	United States	SCImago #386 · THE =3 · QS =25	2
California Institute of Technology	United States	SCImago #449 · THE 7 · QS 10	2
University of Toronto	Canada	SCImago #39 · THE 21 · QS 29	2
Deakin University	Australia	SCImago #607 · THE 201–250 · QS =207	1
Technical University of Munich	Germany	SCImago #187 · THE 27 · QS =22	1
Macquarie University	Australia	SCImago #1047 · THE =166 · QS =138	1
Université du Québec à Montréal	Canada	—	1
TU Dortmund University	Germany	SCImago #2721 · THE 501–600 · QS =673	1
Leibniz University Hannover	Germany	SCImago #2108 · THE 351–400 · QS =433	1
Google	United States	—	1
University of Waterloo	Canada	SCImago #491 · THE =162 · QS =119	1
Fondazione Bruno Kessler	Italy	SCImago #1952	1
Aalto University	Finland	SCImago #854 · THE =195 · QS =114	1
Chinese Academy of Sciences	China	SCImago #2	1
Google Research	United States	—	1

Geographic distribution of citing authors

Country	Citing papers
United States	8
Germany	4
Canada	3
Finland	2
Italy	2

Country	Citing papers
Australia	2
China	2
Spain	2
Japan	1
Poland	1
Singapore	1
India	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	Stochastic blockmodels and community structure in networks	6	Dhanasar — Prong 2 (well-positioned)
Contribution 2	BoTorch: a framework for efficient Monte-Carlo Bayesian optimization	8	Dhanasar — Prong 2 (well-positioned)