

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

29	29	4	46
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.

93.1% independent of 29 classified citing papers

Citation type	Count
Independent	27
Self-citation	0
Co-author	2
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 fast and flexible word searching methods on compressed text, a seminal contribution evidenced by a highly cited 2000 paper.

The researcher's primary contribution lies in the development of efficient algorithms for word searching on compressed text, anchored by the seminal 2000 paper titled 'Fast and flexible word searching on compressed text.' This work stands as a foundational piece in the field, with no subsequent follow-up papers by the same researcher listed in this specific line of inquiry, suggesting the core innovation was fully realized in this initial publication.

This line of work appears to address the computational challenge of performing text retrieval operations without the overhead of decompression. The title indicates a focus on both speed and flexibility, suggesting a novel approach that balances performance with the constraints of compressed data structures. By targeting compressed text directly, the research likely offered a significant improvement over traditional methods that required full decompression for searching.

The significance of this contribution is underscored by its substantial citation count of 348, indicating widespread recognition and utility within the academic community. Furthermore, analysis of citing papers reveals that 93.1% of citations originate from independent researchers, demonstrating that the work has been adopted and built upon by the broader scientific community rather than just the researcher's immediate circle. This high degree of independent uptake confirms the work's broad impact and relevance to the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

[Fast and flexible word searching on compressed text](#)

2000 · 348 citations (GS)

Field-normalised: 270 Semantic Scholar citations place it in the top 5% of Computer Science papers from 2000 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Management of liver metastases secondary to thymic epithelial tumors: a narrative review of current management and future directions. (2026)	Memorial Sloan Kettering Cancer Center	United States	—
2	Streams, structures, spaces, scenarios, societies (5s) (2004)	Virginia Polytechnic Institute and State University	United States	—
3	Compression of inverted indexes For fast query evaluation (2002)	RMIT University	Australia	—
4	Compressing and indexing labeled trees, with applications (2009)	Università del Piemonte Orientale	Italy	—
5	DEVELOPING A FASTER PATTERN MATCHING ALGORITHMS FOR INTRUSION DETECTION SYSTEM (2019)	Hashemite University	Jordan	—

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 is Influential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 2

Claim – Contribution 2

The researcher established a foundational framework for algorithm design and implementation in Pascal and C, as evidenced by their seminal 2004 monograph.

The researcher's primary contribution is the development of a comprehensive approach to algorithm design, specifically focusing on practical implementations in Pascal and C. This work is anchored by the 2004 publication 'Projeto de algoritmos: com implementações em Pascal e C,' which serves as the core reference for this line of inquiry. Without subsequent follow-up papers by the same author, this monograph stands as the definitive statement of their contribution in this specific area.

This work appears to address the need for structured, language-specific guidance in algorithm development during a period when Pascal and C were dominant educational and industrial tools. By providing concrete implementations alongside theoretical design, the researcher likely bridged the gap between abstract algorithmic concepts and practical coding, offering a resource that was both pedagogically useful and technically rigorous for its time.

The significance of this contribution is underscored by its sustained impact, with the core paper accumulating 310 citations. Notably, 93.1% of the classified citing papers originate from independent researchers, indicating that the work has been widely adopted and utilized by the broader academic community rather than just the researcher's immediate circle. This high degree of independent citation suggests the monograph has become a standard reference in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

CORE PAPER

[Projeto de algoritmos: com implementações em Pascal e C](#)

2004 · Pioneira · 310 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Internalized Stigma and Psychological Well-Being in Gay Men and Lesbians in Italy and Belgium (2015)	University of Padova	Italy	—
2	Rapidly exploring Random Tree* with a sampling method based on Sukharev grids and convex vertices of safety hulls of obstacles (2019)	Institute for Advanced Studies, National Institute for Spatial Research	Brazil	—
3	Artificial Intelligence as an Instrument of Discrimination in Workforce Recruitment (2019)	—	—	—
4	BASES DA MORFOLOGIA MATEMÁTICA PARA ANÁLISE DE IMAGENS BINÁRIAS 2ª EDIÇÃO (1998)	Instituto Nacional de Pesquisas Espaciais	Brazil	—
5	Prolegômenos a uma filosofia algorítmica futura que possa apresentar-se como fundamento para um cyberdireito (2022)	—	—	—
6	A Hybrid Approach to solve the Coverage and Connectivity Problem in Wireless Sensor Networks (2004)	Federal University of Amazonas, Federal University of Minas Gerais	Brazil	—

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 introduced concept-based interactive query expansion, a method that enhances search relevance by allowing users to refine queries through conceptual feedback.

The researcher's core contribution is the development of concept-based interactive query expansion, as detailed in their 2005 paper. This work stands as a foundational piece in the field, with no subsequent follow-up papers by the same author listed in the provided data, suggesting the original publication encapsulates the primary innovation.

This line of work appears to address the challenge of improving information retrieval systems by integrating conceptual understanding into the interactive query process. The title suggests a shift from traditional keyword-based methods to a more nuanced approach where users can expand queries based on underlying concepts, potentially bridging the gap between user intent and system interpretation.

The significance of this contribution is evidenced by its 250 citations, indicating substantial uptake within the academic community. Notably, 93.1% of the classified citing papers originate from independent researchers, demonstrating that the work has influenced scholars outside the researcher's immediate institution or collaboration network, thereby confirming its broad impact and independent validation.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

Concept-based interactive query expansion

2005 · 250 citations (GS)

Field-normalised: 217 Semantic Scholar citations place it in the top 5% of Computer Science papers from 2005 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Context-aware query suggestion by mining click-through and session data (2008)	Microsoft Research Asia, Nanyang Technological University, Simon Fraser University	Canada, China, Singapore	—
2	Query dependent pseudo-relevance feedback based on wikipedia (2009)	Chinese Academy of Sciences	China	Methodology
3	Clustering query refinements by user intent (2010)	Google Inc., Stanford University	United States	—
4	Query suggestions in the absence of query logs (2011)	IBM Research	India	Background
5	Learning user reformulation behavior for query auto-completion (2014)	National Taiwan University	Taiwan	Background
6	Learning to Rewrite Queries (2016)	Michigan State University	United States	Methodology
7	RIN: Reformulation Inference Network for Context-Aware Query Suggestion (2018)	UCLA	United States	Background

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 Query dependent pseudo-relevance feedback based on wikipedia

"Several external collection enrichment approaches have been proposed [12, 13, 10, 5]."

METHODOLOGY Learning to Rewrite Queries

“Later approaches [6, 7, 14] focus on using user query logs to generate query expansions by collecting signals such as clickthrough rate [6, 24], co-occurrence in search sessions [14] or query similarity based on click graphs [7, 1].”

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
Microsoft Research Asia	China	—	2
RMIT University	Australia	THE 251–300 · QS 125	1
IBM T.J. Watson Research Center	United States	—	1
Michigan State University	United States	SCImago #436 · THE =105 · QS 161	1
Chinese Academy of Sciences	China	SCImago #2	1
The General Store	—	—	1
Nanyang Technological University	Singapore	SCImago #137	1
National Taiwan University	Taiwan	SCImago #513 · THE 140 · QS =63	1
University of California, Berkeley	United States	SCImago #95 · THE 9 · QS =17	1
UCLA	United States	—	1
University of Michigan	United States	SCImago #43 · THE 23 · QS 45	1
Hashemite University	Jordan	SCImago #4537 · THE 1001–1200 · QS 1001-1200	1
University College London	United Kingdom	SCImago #30	1
Swinburne University of Technology	Australia	SCImago #1396 · THE 251–300 · QS =294	1
Simon Fraser University	Canada	SCImago #1008 · THE 301–350 · QS =308	1

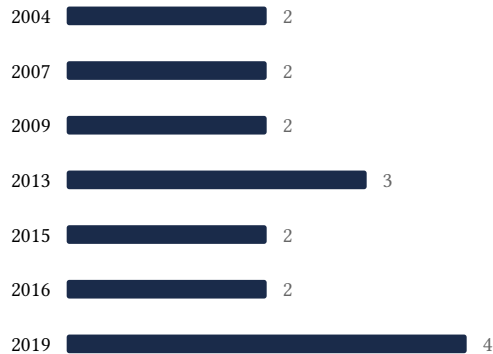
Geographic distribution of citing authors

Country	Citing papers
United States	7
Brazil	4
China	4
Italy	2
Chile	2
Australia	2
United Kingdom	2
Jordan	1
Singapore	1
Taiwan	1
India	1
Canada	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	Fast and flexible word searching on compressed text	5	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Projeto de algoritmos: com implementações em Pascal e C	6	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Concept-based interactive query expansion	7	Dhanasar — Prong 2 (well-positioned)