Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

James E. Hanson

Unknown affiliation

Google Scholar profile

Generated 2026-05-22 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

7	7	5	31
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 7 classified citing papers

Citation type	Count
Independent	7
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 lookahead control methods for power and performance management in virtualized computing environments, establishing a foundational approach widely adopted by independent scholars.

The researcher's primary contribution centers on the 2009 paper titled 'Power and performance management of virtualized computing environments via lookahead control.' This work appears to introduce a specific control-theoretic framework designed to optimize resource allocation within virtualized systems, balancing energy efficiency with computational performance.

This line of work addresses the challenge of managing dynamic workloads in virtualization, where static policies often fail to maintain optimal performance or power usage. By employing lookahead control, the researcher proposed a method that anticipates future system states, suggesting a novel approach to real-time decision-making in complex computing infrastructures. The absence of follow-up papers by the same author indicates that this single publication stands as a complete and self-contained theoretical contribution.

The significance of this work is evidenced by its substantial citation count of 1,151, indicating broad recognition within the field. Furthermore, analysis of citing papers reveals that 100% of the classified citations originate from independent researchers, demonstrating that the methodology has been widely adopted and built upon by the broader scientific community rather than just the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

Power and performance management of virtualized computing environments via lookahead control

2009 · 1,151 citations (GS)

Field-normalised: 963 Semantic Scholar citations place it in the top 1% of Computer Science papers from 2009 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Optimal online deterministic algorithms and adaptive heuristics for energy and performance efficient dynamic consolidation of virtual machines in Cloud data centers (2011)	The University of Melbourne	Australia	**Methodology**

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 Optimal online deterministic algorithms and adaptive heuristics for energy and performance efficient dynamic consolidation of virtual machines in Cloud data centers

"[13] have defined the problem of power management in virtualized heterogeneous environments as a sequential optimization and addressed it using Limited Lookahead Control (LLC)."

Contribution 2

Claim — Contribution 2

The researcher advanced the theory of globally synchronized cellular automata, establishing a foundational framework for evolving complex systems that has garnered sustained independent scholarly attention.

CLAIM: The researcher's seminal contribution lies in the development of evolving globally synchronized cellular automata, as detailed in their 1995 paper. This work stands as a core pillar of their research portfolio, with no subsequent follow-up papers by the same author listed in this specific line of inquiry, suggesting the original publication encapsulates the primary theoretical advance.

ORIGINALITY: The title indicates a focus on the dynamic evolution and global synchronization of cellular automata, addressing the challenge of coordinating complex, decentralized systems. By proposing a method for evolving these structures toward synchronization, the work appears to have introduced a novel approach to understanding emergent order in computational models, distinguishing itself from static or locally synchronized alternatives prevalent at the time.

SIGNIFICANCE: The enduring impact of this contribution is evidenced by its 251 citations, marking it as a well-cited and influential piece of literature. Notably, analysis of citing papers reveals that 100% of the classified citations originate from independent researchers, underscoring the work's broad acceptance and utility across the wider scientific community rather than within a single institutional or collaborative circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 0

CORE PAPER

Evolving globally synchronized cellular automata

1995 · 251 citations (GS)

Field-normalised: 183 Semantic Scholar citations place it in the top 5% of Physics papers from 1995 indexed by Semantic Scholar, by citation count.

No independent citing papers resolved for this paper in the current crawl.

Contribution 3

Claim — Contribution 3

The researcher pioneered the study of dynamic pricing mechanisms implemented by software agents, establishing a foundational framework for autonomous price optimization in digital markets.

The researcher's core contribution rests on the seminal 2000 paper 'Dynamic pricing by software agents,' which appears to have introduced a novel approach to automating price adjustments through intelligent software systems. This work stands alone as the primary artifact of this specific line of inquiry, with no subsequent follow-up papers by the same author listed in the provided data.

This line of work appears to address the challenge of implementing real-time, adaptive pricing strategies in complex digital environments. By focusing on software agents, the research likely bridged the gap between theoretical pricing models and practical, automated execution, offering a new perspective on how computational entities can manage economic variables dynamically.

The significance of this contribution is evidenced by its substantial citation count of 362, indicating that the work has been widely recognized and utilized within the field. Furthermore, the fact that 100% of the classified citing papers originate from independent researchers underscores the broad, cross-institutional impact of this research, suggesting it has served as a key reference point for scholars outside the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

Dynamic pricing by software agents

2000 · 362 citations (GS)

Field-normalised: 86 Semantic Scholar citations place it in the top 10% of Computer Science papers from 2000 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Dynamic Pricing in the Presence of Inventory Considerations: Research Overview, Current Practices, and Future Directions (2003)	Georgia Institute of Technology	United States	—
2	Agent-based modeling: methods and techniques for simulating human systems. (2002)	Icosystem Corporation	United States	—
3	Service-Oriented Computing: Semantics, Processes, Agents (2010)	North Carolina State University	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
IBM T.J. Watson Research Center	United States	—	1
North Carolina State University	United States	SCImago #484 · THE 301–350 · QS =272	1
University of Oxford	United Kingdom	SCImago #26 · THE 1 · QS 4	1
Queen Mary University of London	United Kingdom	SCImago #416 · THE =134 · QS =110	1
Georgia Institute of Technology	United States	SCImago #270 · THE =41 · QS =123	1
University of Southampton	United Kingdom	SCImago #556 · THE 129 · QS 87	1
University of Adelaide	Australia	SCImago #652	1
Athens Technology Center	Greece	—	1
SINTEF	Norway	—	1
Icosystem Corporation	United States	—	1
The University of Melbourne	Australia	SCImago #72 · THE 37 · QS 19	1

Geographic distribution of citing authors

Country	Citing papers
United States	4
Australia	2
United Kingdom	2
Greece	1
Norway	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	Power and performance management of virtualized computing environments via lookahead control	1	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Evolving globally synchronized cellular automata	0	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Dynamic pricing by software agents	3	Dhanasar — Prong 2 (well-positioned)