

Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

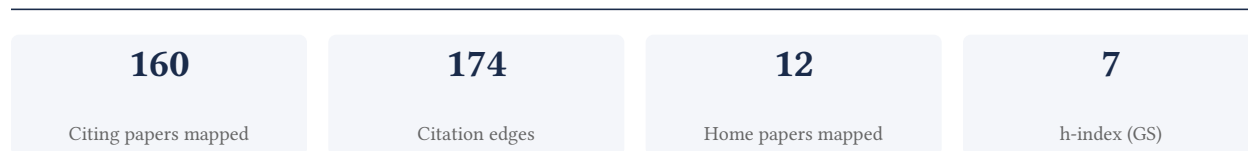
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[Google Scholar profile](#)

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Criterion 5 (original contributions of major significance). 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



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.

84.5% independent of 58 classified citing papers

Citation type	Count
Independent	49
Self-citation	4
Co-author	5
Same-institution	0

102 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 a framework for modeling temporal user-item interactions using local low-rank Hawkes processes, subsequently extending this approach to geometric graph structures and fairness criteria.

The researcher established a foundational contribution in temporal interaction modeling with the 2018 paper 'Local low-rank Hawkes processes for temporal user-item interactions.' This core work serves as the basis for a sustained line of inquiry into complex event sequences.

This line of work appears to address the challenge of capturing intricate dependencies in temporal data. The titles suggest an evolution from basic low-rank approximations to more sophisticated architectures, including geometric Hawkes processes with graph convolutional recurrent neural networks in 2019 and list-wise fairness criteria in 2020. This progression indicates a methodological expansion from core interaction modeling to structural and ethical dimensions.

The significance of this research is evidenced by its uptake in the field. The core paper has received 19 citations, while the 2019 follow-up has garnered 56 citations, suggesting growing interest in the geometric extensions. Notably, 84.5% of the 58 classified citations originate from independent researchers, indicating that this work has influenced scholars outside the researcher's immediate circle and institution.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 26 · 2 flagged influential by Semantic Scholar

CORE PAPER

[Local low-rank Hawkes processes for temporal user-item interactions](#)

2018 · 2018 IEEE International Conference on Data Mining (ICDM), 427-436, 2018 · 19 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	A generalized and fast-converging non-negative latent factor model for predicting user preferences in recommender systems	Chongqing Institute of Green and Intelligent Technology Chinese Academy of Sciences	China	—
2	Optimizing video caching at the edge: A hybrid multi-point process approach	Huazhong University of Science and Technology, Macquarie University, Sun Yat-sen University	Australia, China, Hong Kong	—
3	Adaptive structure-constrained robust latent low-rank coding for image recovery	Harbin Institute of Technology (Shenzhen), Hefei University of Technology, Soochow University	China, United States	—

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.

FOLLOW-UP WORK

[Geometric Hawkes processes with graph convolutional recurrent neural networks](#)

2019 · Thirty-Three AAAI Conference on Artificial Intelligence (AAAI'19), 2019 · 56 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Popularity Prediction on Social Platforms with Coupled Graph Neural Networks	Chinese Academy of Sciences & University of Chinese Academy of Sciences, Institute of	China	—

No.	Citing paper	Citing institution(s)	Country	S2
		Computing Technology, Chinese Academy of Sciences		
2	Hawkes models and their applications	National University of Singapore, University of New South Wales, University of Queensland	Australia, Singapore	—
3	Deep Spatiotemporal Point Processes: Advances and New Directions	Duke University, Georgia Institute of Technology	United States	—
4	Neural point process for learning spatiotemporal event dynamics	Adobe Research, National University of Singapore, UC San Diego	Singapore, United States	—
5	THPs: Topological Hawkes processes for learning causal structure on event sequences	Guangdong University of Technology, Huawei, Shantou University	China, France	—
6	Automatic integration for spatiotemporal neural point processes	University of California, San Diego	United States	—
7	Structural Hawkes processes for learning causal structure from discrete-time event sequences	Guangdong University of Technology, Huawei, Shantou University	China, France	—
8	Learning neural point processes with latent graphs	University College London	United Kingdom	—
9	Input snapshots fusion for scalable discrete-time dynamic graph neural networks	Dalian University of Technology, Pennsylvania State University, Zhejiang Lab	China, United States	—
10	Hawkes processes modeling, inference, and control: An overview	Samsung R&D Institute Brazil	Brazil	—
11	Learning multivariate Hawkes process via graph recurrent neural network	KAIST, Shinhan Card	South Korea	—
12	Deep graph kernel point processes	Duke University, Georgia Institute of Technology	United States	—
13	Sparse Transformer Hawkes process for long event sequences	Kingston and St George's University, Sheffield Emergency Care Forum, University of Bath	United Kingdom	—
14	Modeling events and interactions through temporal processes: A survey	ICAR-CNR, Italian National Research Council, Scuola Normale Superiore di Pisa	Italy, Portugal	—
15	Influence network reconstruction from discrete time-series of count data modelled by multidimensional Hawkes processes	Georgia Institute of Technology, University of Surrey	United Kingdom, United States	—
16	A variational autoencoder for neural temporal point processes with dynamic latent graphs	Great Bay University, The Chinese University of Hong Kong, Shenzhen	China	—
17	Deep Graph Kernel Point Processes over Networks	Duke University, Georgia Institute of Technology	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
18	DyGSSM: Multi-view Dynamic Graph Embeddings with State Space Model Gradient Update	University of North Texas	United States	—
19	Mitigating performance saturation in neural marked point processes: Architectures and loss functions	Nanyang Technological University, Sea AI Lab	Singapore	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.

FOLLOW-UP WORK

List-wise fairness criterion for point processes

2020 · Proceedings of the 26th ACM SIGKDD International Conference on Knowledge ..., 2020 · 13 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Algorithmic Fairness Datasets: the Story so Far	University of Padua	Italy	—
2	Improving social media use for disaster resilience: challenges and strategies	Louisiana State University	United States	Influential
3	Neural spatiotemporal point processes: Trends and challenges	Boston College, Georgia Institute of Technology, German Research Center for Artificial Intelligence	Germany, Morocco, United States	—
4	Reducing AI Model Biases with a Bilevel Learning Framework: A Case Study of Leveraging Twitter Data for Damage Estimation	Emory University, Texas A&M University, University of Houston	United States	—

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 established how folded and crumpled graphene oxide morphologies influence polymer nanocomposite mechanical performance, a foundational finding widely adopted by independent scholars.

The researcher’s core contribution centers on the 2015 paper examining the effect of folded and crumpled morphologies of graphene oxide platelets on the mechanical performances of polymer nanocomposites. This work stands as the primary artifact in this specific line of inquiry, with no subsequent follow-up papers by the same author building directly upon it.

This research appears to address a critical gap in understanding how specific structural deformations of graphene oxide impact the mechanical integrity of polymer composites. By isolating the variables of folding and crumpling, the work suggests a novel approach to optimizing nanocomposite performance through morphological control rather than solely chemical modification.

The significance of this contribution is evidenced by its citation record, with 60 citations indicating sustained academic interest. Notably, 84.5% of the citing papers originate from independent researchers, demonstrating that the findings have been widely recognized and utilized by the broader scientific community beyond the researcher’s immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

CORE PAPER

Effect of folded and crumpled morphologies of graphene oxide platelets on the mechanical performances of polymer nanocomposites

2015 · Polymer 68, 131-139, 2015 · 60 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Mechanical properties of graphene and graphene-based nanocomposites	—	—	—
2	Recent advances in the multifunctional properties and applications of carbon nanotube/graphene hybrid polymer nanocomposites	Bahcesehir University, Istanbul Technical University	Turkey	—
3	Suppressing the radiation-induced corrosion of bismuth nanoparticles for enhanced synergistic cancer radiophototherapy	Chinese Academy of Sciences, Henan University of Technology, Third Military Medical University	China	—
4	Extrinsic wrinkling and single exfoliated sheets of graphene oxide in polymer composites	Delft University of Technology, Science and Technology Facilities Council, The University of Sheffield	Netherlands, United Kingdom	—
5	New insight into design of highly ordered calcium silicate hydrate with graphene oxide	Wuhan University of Technology	China	—
6	Effect of adhesive and nanocomposite layers on lap shear strength of layup bonded joints	Sahand University of Technology	Iran	—

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 demographic inference in cross-domain recommender systems by pioneering knowledge transfer techniques to address data sparsity and cold-start challenges.

CLAIM: The researcher’s core contribution lies in the 2018 paper 'Demographic inference via knowledge transfer in cross-domain recommender systems,' which establishes a framework for leveraging cross-domain data to infer user demographics. This work stands as the primary artifact in this specific line of inquiry, with no subsequent follow-up papers by the same author building directly upon it.

ORIGINALITY: The title suggests the researcher addressed the challenge of limited user data in recommender systems by applying knowledge transfer across different domains. This approach appears to offer a novel solution for demographic inference, potentially mitigating cold-start problems where traditional single-domain methods fail due to insufficient interaction history.

SIGNIFICANCE: The work has garnered 18 citations, indicating a measurable impact on the field. Notably, 84.5% of the 58 citing papers classified for this scholar originate from independent researchers, suggesting that the methodology has been adopted and validated by the broader academic community beyond the researcher’s immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

Demographic inference via knowledge transfer in cross-domain recommender systems

2018 · 2018 IEEE International Conference on Data Mining (ICDM), 1218-1223, 2018 · 18 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Cross-domain recommendation: challenges, progress, and prospects	Ant Group, Macquarie University, Zhejiang University	Australia, China	—
2	DA-DAN: A dual adversarial domain adaptation network for unsupervised non-overlapping cross-domain recommendation	Monash University, Qilu University of Technology (Shandong Academy of Sciences), Shandong Normal University	Australia, China	—
3	MCRPL: A pretrain, prompt, and fine-tune paradigm for non-overlapping many-to-one cross-domain recommendation	Chongqing University, Kyoto University, Shandong Normal University	Australia, China, Japan	—
4	A cross-domain recommender system using deep coupled autoencoders	Patras University	Greece	—
5	A cross-domain recommender system using deep coupled autoencoders	Patras University	Greece	—
6	Combining vs. transferring knowledge: Investigating strategies for improving demographic inference in low resource settings	Georgetown University	United States	—

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
Georgia Institute of Technology	United States	SCImago #270 · THE =41 · QS =123	5
Louisiana State University	United States	THE 601–800 · QS 851-900	5
Duke University	United States	SCImago #115 · THE 28 · QS 62	3
The Ohio State University	United States	THE =108 · QS 190	3
Dalian University of Technology	China	SCImago #250 · THE 401–500 · QS =482	2
University of North Texas	United States	SCImago #2445 · QS 901-950	2
Shandong Normal University	China	SCImago #2468	2
Amazon	United States	—	2
Rochester Institute of Technology	United States	SCImago #2608 · THE 601–800 · QS 951-1000	2
Nanyang Technological University	Singapore	SCImago #137	2
Patras University	Greece	—	2
Hefei University of Technology	China	SCImago #638	2

Institution	Country	World ranking	Citing papers
Huawei	France	—	2
National University of Singapore	Singapore	SCImago #59 · THE 17 · QS 8	2
The Hong Kong Polytechnic University	Hong Kong	SCImago #256 · THE 80 · QS 54	2

Geographic distribution of citing authors

Country	Citing papers
United States	24
China	19
Australia	5
Singapore	4
United Kingdom	4
Hong Kong	3
France	2
Italy	2
Greece	2
Portugal	1
P.R China	1
Russia	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	Local low-rank Hawkes processes for temporal user-item interactions	26	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 2	Effect of folded and crumpled morphologies of graphene oxide platelets on the mechanical performances of polymer nanocomposites	6	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 3	Demographic inference via knowledge transfer in cross-domain recommender systems	6	8 CFR 204.5(h)(3)(v) – Criterion 5