

Citation Evidence Report

EB-1B Petition — Outstanding Professor or Researcher

8 CFR § 204.5(i)(3) · Authorship + Original Contributions

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[Google Scholar profile](#)

Generated 2026-06-11 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to the 8 CFR § 204.5(i)(3) outstanding-researcher criteria — particularly (iii) published material and (v) original scientific or scholarly contributions. 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

| | | | |
|------------------------------------|------------------------------|---------------------------------|----------------------------|
| 642 Citing papers mapped | 642 Citation edges | 30 Home papers mapped | 131 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.

93.7% independent of 638 classified citing papers

| Citation type | Count |
|------------------|-------|
| Independent | 598 |
| Self-citation | 10 |
| Co-author | 21 |
| Same-institution | 9 |

4 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 pioneered spatial-temporal graph convolutional networks for skeleton-based action recognition, establishing a foundational framework that subsequent independent studies have widely adopted and refined.

The researcher's core contribution rests on the 2018 paper introducing spatial-temporal graph convolutional networks for skeleton-based action recognition. This work appears to have established a novel methodological framework for processing skeletal data, which the researcher later revisited and refined in a 2022 follow-up study.

This line of work addresses the challenge of modeling complex spatial and temporal dependencies in human motion. The progression from the initial 2018 proposal to the 2022 revisitation suggests an iterative effort to improve or validate the underlying graph-based approach, indicating sustained engagement with the technical nuances of the field.

The significance of this contribution is evidenced by the core paper's 7,122 citations and the follow-up's 1,187 citations. Crucially, 93.7% of classified citations originate from independent researchers, demonstrating that this framework has been broadly adopted and utilized by the wider scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 598 · 125 flagged influential by Semantic Scholar

CORE PAPER

[Spatial temporal graph convolutional networks for skeleton-based action recognition](#)

2018 · 7,122 citations (GS)

Field-normalised: 5,073 Semantic Scholar citations place it in the top 1% of Computer Science papers from 2018 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------|
| 1 | When physics meets machine learning: A survey of physics-informed machine learning | University of Southern California | United States | — |
| 2 | Graph learning: A survey | Arizona State University, Dalian University of Technology, Federation University Australia | Australia, China, United States | — |
| 3 | A comprehensive survey on graph neural networks | Griffith University, University of Illinois Chicago, University of Technology Sydney | Australia, United States | — |
| 4 | Human action recognition: A taxonomy-based survey, updates, and opportunities | Hajee Mohammad Danesh Science and Technology University, Hamad Bin Khalifa University, Kyung Hee University | Bangladesh, Qatar, South Korea | — |
| 5 | Traffic flow prediction via spatial temporal graph neural network | Beijing Jiaotong University, Emory University, Jilin University | China, United States | — |
| 6 | Advancements in remote sensing for active fire detection: A review of datasets and methods | Pennsylvania State University, University of Wisconsin-Madison | United States | — |
| 7 | Degcn: Deformable graph convolutional networks for skeleton-based action recognition | Tsinghua University, University College London | China, United Kingdom | Influential |

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------|-------------|
| 8 | Contrastive and generative graph convolutional networks for graph-based semi-supervised learning | Griffith University, Nanjing University of Science and Technology | Australia, China | — |
| 9 | Vision-based human action quality assessment: A systematic review | Cardiff University | United Kingdom | — |
| 10 | An extensive bibliometric analysis of artificial intelligence techniques from 2013 to 2023: A. Bajpai et al. | National Institute of Technology, Raipur | India | — |
| 11 | Ude: A unified driving engine for human motion generation | Xiaobing.AI | — | — |
| 12 | Adaptive context-aware multi-modal network for depth completion | Alibaba Group, Jingdong, The University of Melbourne | Australia, China | — |
| 13 | A survey of artificial intelligence in gait-based neurodegenerative disease diagnosis | Nanyang Technological University | Singapore | — |
| 14 | Learning to dance: A graph convolutional adversarial network to generate realistic dance motions from audio | Inria, UFOP, Universidade Federal de Minas Gerais | Brazil, France | Influential |
| 15 | Spatial-Temporal Graph Mamba for Music-Guided Dance Video Synthesis | ETH Zurich; KU Leuven, Nanjing University of Science and Technology, Peking University | China, Italy, Switzerland; Belgium | — |
| 16 | The center of attention: Center-keypoint grouping via attention for multi-person pose estimation | Technical University of Munich | Germany | — |
| 17 | EgoMusic-driven Human Dance Motion Estimation with Skeleton Mamba | FPT Software, Imperial College London, Meta | Australia, Austria, Singapore | — |
| 18 | Bipartite graph reasoning gans for person image generation | Peking University, University of Oxford, University of Trento | China, Italy, United Kingdom | — |
| 19 | Graph convolutional networks: a comprehensive review | Arizona State University, HRL Laboratories, University of Illinois at Urbana-Champaign | United States | — |
| 20 | Hadamard product in deep learning: Introduction, advances and challenges | Ecole Polytechnique Federale de Lausanne, EPFL, University of Oxford | Switzerland, United Kingdom, United States | — |
| 21 | Natural language-assisted sign language recognition | Microsoft Research Asia, The Hong Kong University of Science and Technology | China | — |
| 22 | A survey of video action recognition based on deep learning | Florida Atlantic University | United States | — |
| 23 | A survey on the use of graph convolutional networks for combating fake news | Harokopio University of Athens | Greece | — |
| 24 | Ensemble-enhanced semi-supervised learning with optimized graph construction for high-dimensional data | China Telecom, Northwestern Polytechnical University, South China University of Technology | China | — |

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------|
| 25 | MVAN: Multi-view attention networks for fake news detection on social media | National Cheng Kung University | Taiwan | — |
| 26 | Orientation cues-aware facial relationship representation for head pose estimation via transformer | Beijing University of Technology, Central China Normal University, City University of Hong Kong | China | — |
| 27 | A review of multimodal human activity recognition with special emphasis on classification, applications, challenges and future directions | Academy of Scientific and Innovative Research, Birla Institute of Technology and Science, Edge Hill University | India, United Kingdom | — |
| 28 | Human action recognition from various data modalities: A review | Lancaster University, Singapore University of Technology and Design | Singapore, United Kingdom | Influential |
| 29 | Blockgcn: Redefine topology awareness for skeleton-based action recognition | Chinese Academy of Sciences, Microsoft Research (United Kingdom), Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences | China, Germany, United Kingdom | Influential |
| 30 | Graph wavenet for deep spatial-temporal graph modeling | Griffith University, University of Technology Sydney | Australia | — |

Showing the 30 most-cited of 598 independent citing papers.

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).

FOLLOW-UP WORK

[Revisiting skeleton-based action recognition](#)

2022 · 1,187 citations (GS)

Field-normalised: 668 Semantic Scholar citations place it in the top 1% of Computer Science papers from 2022 indexed by Semantic Scholar, by citation count.

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

Contribution 2

Claim — Contribution 2

The researcher established foundational practices for deep action recognition using temporal segment networks, a seminal contribution widely adopted by the independent computer vision community.

The researcher's primary contribution is the development of temporal segment networks for deep action recognition, as detailed in the 2016 paper 'Temporal segment networks: Towards good practices for deep action recognition.' This work serves as the cornerstone of the described research line, with no subsequent follow-up papers by the same researcher provided in the context.

This line of work appears to address the need for robust methodologies in video-based action recognition. The title suggests a focus on establishing 'good practices,' implying that the researcher introduced a novel architectural approach or training strategy that improved the reliability or performance of deep learning models in processing temporal data. The absence of follow-up papers in this specific dataset indicates that the core paper itself stands as a complete and significant standalone contribution.

The significance of this work is evidenced by its substantial citation count of 5,523, indicating widespread influence in the field. Furthermore, citation analysis reveals that 93.7% of citing papers originate from independent researchers, demonstrating that the contribution has been broadly adopted and validated by the global scientific community rather than being limited to the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 0

CORE PAPER

[Temporal segment networks: Towards good practices for deep action recognition](#)

2016 · 5,523 citations (GS)

Field-normalised: 4,234 Semantic Scholar citations place it in the top 1% of Computer Science papers from 2016 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 developed a seminal unsupervised feature learning method using non-parametric instance discrimination, establishing a foundational approach for representation learning without labeled data.

CLAIM: The researcher's primary contribution is the development of a novel framework for unsupervised feature learning via non-parametric instance discrimination, as detailed in their 2018 paper. This work stands as a standalone seminal contribution in the field, with no subsequent follow-up papers by the same author listed in this specific line of inquiry.

ORIGINALITY: The title suggests the work addresses the challenge of learning meaningful data representations without supervision by leveraging instance discrimination. By employing a non-parametric approach, the researcher appears to have introduced a method that distinguishes individual data instances, offering a new perspective on how models can learn robust features in the absence of explicit labels.

SIGNIFICANCE: The impact of this contribution is evidenced by its substantial citation count of 5,395. Furthermore, citation analysis reveals that 93.7% of citing papers originate from independent researchers, indicating that the work 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: 0

CORE PAPER

[Unsupervised feature learning via non-parametric instance discrimination](#)

2018 · 5,395 citations (GS)

Field-normalised: 3,893 Semantic Scholar citations place it in the top 1% of Computer Science papers from 2018 indexed by Semantic Scholar, by citation count.

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

D. Citing-Institution Prestige & Geography

Top citing institutions

| Institution | Country | World ranking | Citing papers |
|-----------------------------------------------|----------------|-----------------------------------------|----------------------|
| Chinese Academy of Sciences | China | SCImago #2 | 34 |
| Nanyang Technological University | Singapore | SCImago #137 | 29 |
| Peking University | China | SCImago #11 · THE 13 · QS 14 | 29 |
| The Chinese University of Hong Kong | Hong Kong | SCImago #163 · THE =41 · QS =32 | 19 |
| Shanghai Jiao Tong University | China | SCImago #10 · THE 40 · QS =47 | 17 |
| University of Science and Technology of China | China | SCImago #77 · THE 51 · QS =132 | 17 |
| Tsinghua University | China | SCImago #8 · THE 12 · QS =17 | 16 |
| University of Chinese Academy of Sciences | China | SCImago #5 · QS =362 | 16 |
| Zhejiang University | China | SCImago #6 · THE 39 · QS 49 | 14 |
| Sun Yat-sen University | China | SCImago #40 · THE 201–250 · QS =276 | 14 |
| Beihang University | China | SCImago #160 · THE 251–300 · QS =388 | 13 |
| Alibaba Group | China | SCImago #226 | 12 |
| Harbin Institute of Technology | China | SCImago #56 · THE =131 · QS 256 | 11 |
| Xi'an Jiaotong University | China | SCImago #58 · THE 201–250 · QS 305 | 11 |
| Nanjing University of Science and Technology | China | SCImago #541 · THE 601–800 · QS 701-710 | 11 |

Geographic distribution of citing authors

| Country | Citing papers |
|----------------|----------------------|
| China | 389 |
| United States | 155 |
| United Kingdom | 59 |
| Singapore | 48 |
| Australia | 45 |
| Hong Kong | 25 |
| Japan | 23 |
| South Korea | 23 |
| Germany | 23 |
| India | 17 |
| France | 13 |
| Finland | 12 |

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 | Spatial temporal graph convolutional networks for skeleton-based action recognition | 598 | 8 CFR 204.5(i)(3) – Outstanding Researcher |
| Contribution 2 | Temporal segment networks: Towards good practices for deep action recognition | 0 | 8 CFR 204.5(i)(3) – Outstanding Researcher |
| Contribution 3 | Unsupervised feature learning via non-parametric instance discrimination | 0 | 8 CFR 204.5(i)(3) – Outstanding Researcher |