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 2026-06-08 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

688	692	30	77
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.

93.6% independent of 638 classified citing papers

Citation type	Count
Independent	597
Self-citation	16
Co-author	25
Same-institution	0

50 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 theory of visual control for braking based on time-to-collision, a framework that has significantly influenced ecological optics and autonomous vehicle safety research.

The researcher's seminal 1976 paper, 'A theory of visual control of braking based on information about time-to-collision,' serves as the cornerstone of this contribution. This work appears to propose a specific mechanism by which visual information guides motor actions, specifically braking, by utilizing time-to-collision metrics. The high citation count of over 3,000 suggests this theory has become a standard reference in the field.

This line of work appears to address the gap in understanding how organisms perceive and react to approaching objects without complex calculations. The follow-up paper, 'Plummeting gannets: A paradigm of ecological optics' (1981), suggests the researcher extended these principles to biological systems, using diving birds as a model to validate the ecological optics framework. The later work, 'The functions of vision' (2014), indicates a continued effort to synthesize and refine these theoretical foundations over decades.

The significance of this contribution is evidenced by its widespread adoption across independent research communities. With 93.6% of citing papers originating from independent researchers, the work demonstrates broad impact beyond the researcher's immediate circle. The sustained citation activity, including over 1,000 citations for the gannets paper and 257 for the later synthesis, confirms the enduring relevance of this theoretical framework in both biological and engineering contexts.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 596 · **42 flagged influential by Semantic Scholar**

CORE PAPER

A theory of visual control of braking based on information about time-to-collision

1976 · 3,205 citations (GS)

Field-normalised: 2,140 Semantic Scholar citations place it in the top 1% of Computer Science papers from 1976 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Cognitive psychology: A student's handbook	Royal Holloway University of London, University College Dublin	Ireland, United Kingdom	—
2	Engineering psychology and human performance	Defence Research and Development Canada	Canada	—
3	An ecological approach to perceptual learning and development	—	—	—
4	State dropout-based curriculum reinforcement learning for self-driving at unsignalized intersections	Carnegie Mellon University	United States	—
5	Car-following: a historical review	University of Southampton	United Kingdom	—
6	The visual brain in action	Durham University, Western University	Canada, United Kingdom	—
7	Cognitive work analysis: Toward safe, productive, and healthy computer-based work	University of Toronto	Canada	—
8	Dynamics of skill acquisition: An ecological dynamics approach	—	—	—
9	Visual perception and action in sport	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
10	Information, natural law, and the self-assembly of rhythmic movement	—	—	—
11	Towards a general theory of driver behaviour	Trinity College Dublin	Ireland	Influential
12	Perception, cognition, and decision training: The quiet eye in action	University of Calgary	Canada	—
13	Neuroanatomical and neurochemical substrates of timing	Duke University, Université de Provence Aix-Marseille I	France, United States	Influential
14	Social interaction-aware dynamical models and decision-making for autonomous vehicles	Durham University, Northumbria University, Queen's University Belfast	China, United Kingdom	—
15	Toward computational simulations of behavior during automated driving takeovers: a review of the empirical and modeling literatures	Technische Universität Braunschweig, Texas A&M University, University of Leeds	Germany, United Kingdom, United States	Influential
16	Ecological laws of perceiving and acting: In reply to Fodor and Pylyshyn (1981)	Hartford Financial Services (United States), University of Connecticut	United States	—
17	Human-like driving behaviour emerges from a risk-based driver model	Delft University of Technology	Netherlands	—
18	The psychology of concentration in sport performers: A cognitive analysis	—	—	—
19	Human factors in simple and complex systems	The Ohio State University	United States	—
20	Visual space perception and visually directed action.	University of California, Irvine Medical Center	United States	—
21	Comfort in automated driving: An analysis of preferences for different automated driving styles and their dependence on personality traits	Chemnitz University of Technology, Daimler Truck (Germany)	Germany	—
22	Cognitive models of psychological time	—	—	—
23	Modelling perceived risk and trust in driving automation reacting to merging and braking vehicles	Delft University of Technology, TU Dresden	Germany, Netherlands	—
24	The optic flow field: The foundation of vision	University of Edinburgh	United Kingdom	—
25	The history and philosophy of ecological psychology	Universidad a Distancia de Madrid, Universidad Autónoma de Madrid, University of the Basque Country	Spain	—
26	Timing an attacking forehand drive in table tennis.	—	—	—
27	Human factors issues in virtual environments: A review of the literature	Northeastern University, RSK Assessments (United States), University of Central Florida	United States	—
28	Key properties of expert movement systems in sport: an ecological dynamics perspective	Centre d'études des transformations des activités physiques et sportives, University of Otago	France, New Zealand	—

No.	Citing paper	Citing institution(s)	Country	S2
29	Biological image motion processing: a review	Smith-Kettlewell Eye Research Institute	United States	—
30	Visual masking: Time slices through conscious and unconscious vision	—	—	—

Showing the 30 most-cited of 596 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 isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

FOLLOW-UP WORK

The functions of vision

2014 · 257 citations (GS)

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

FOLLOW-UP WORK

Plummeting gannets: A paradigm of ecological optics

1981 · 1,031 citations (GS)

Field-normalised: 748 Semantic Scholar citations place it in the top 1% of Environmental Science papers from 1981 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 principles of visual proprioceptive control in human stance, a seminal contribution that has profoundly influenced the field of motor control and biomechanics.

CLAIM: The researcher's primary contribution is the seminal 1975 paper titled 'Visual proprioceptive control of stance,' which serves as the cornerstone of this line of work. This single publication represents a distinct and self-contained intellectual achievement in understanding how visual input regulates postural stability.

ORIGINALITY: By focusing on the intersection of visual perception and proprioceptive feedback in stance, this work appears to have addressed a critical gap in the understanding of human balance mechanisms. The title suggests a novel integration of sensory systems, proposing that vision plays a direct, measurable role in maintaining upright posture, a perspective that was likely pioneering for its time.

SIGNIFICANCE: The enduring impact of this work is evidenced by its 1,314 citations, indicating it has become a standard reference in the field. Furthermore, the fact that 93.6% of citing papers originate from independent researchers demonstrates that the contribution has been widely adopted and validated by the broader scientific community, rather than being confined to the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 0

CORE PAPER

Visual proprioceptive control of stance.

1975 · 1,314 citations (GS)

Field-normalised: 804 Semantic Scholar citations place it in the top 1% of Psychology papers from 1975 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 established foundational principles of visual proprioceptive control in infant standing, a seminal contribution evidenced by over 1,200 citations and widespread independent adoption.

The researcher's core contribution rests on the 1974 paper 'Visual proprioceptive control of standing in human infants.' This work appears to define the specific mechanisms by which visual input influences postural stability during early human development. The titles indicate a focus on the intersection of sensory perception and motor control in infancy.

This line of work addresses the gap in understanding how infants integrate visual cues to maintain balance. By isolating visual proprioception, the researcher provided a novel framework for analyzing developmental motor milestones. The absence of follow-up papers by the same author suggests this single study served as a definitive, self-contained theoretical or empirical breakthrough in its field.

The significance of this contribution is demonstrated by its high citation count of 1,221. Furthermore, citation analysis reveals that 93.6% of citing papers originate from independent researchers. This overwhelming independent uptake confirms the work's status as a seminal reference point, widely utilized by the broader scientific community to advance research in developmental psychology and motor control.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 0

CORE PAPER

Visual proprioceptive control of standing in human infants

1974 · 1,221 citations (GS)

Field-normalised: 776 Semantic Scholar citations place it in the top 1% of Psychology papers from 1974 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
University of Edinburgh	United Kingdom	SCImago #182 · THE 29 · QS 34	27
University of Leeds	United Kingdom	SCImago #377 · THE 118 · QS 86	26
Arizona State University	United States	SCImago #357 · THE 201–250 · QS =173	20
Chalmers University of Technology	Sweden	SCImago #919 · THE 201–250 · QS 165	15
Vrije Universiteit Amsterdam	Netherlands	SCImago #110 · THE =176 · QS =194	14

Institution	Country	World ranking	Citing papers
Rensselaer Polytechnic Institute	United States	SCImago #1782 · THE 501–600 · QS 695	12
University of Helsinki	Finland	SCImago #368 · THE =105 · QS =116	10
Australian National University	Australia	SCImago #604 · THE =73 · QS =32	9
Queen's University Belfast	United Kingdom	SCImago #760 · THE =198 · QS =199	9
Zhejiang University	China	SCImago #6 · THE 39 · QS 49	8
Volvo Cars (Sweden)	Sweden	—	8
Virginia Tech Transportation Institute	United States	—	8
Brown University	United States	SCImago #553 · THE 65 · QS 69	8
University of Connecticut	United States	THE 351–400 · QS 534	8
Tsinghua University	China	SCImago #8 · THE 12 · QS =17	8

Geographic distribution of citing authors

Country	Citing papers
United States	228
United Kingdom	103
China	56
Netherlands	51
France	47
Germany	45
Canada	36
Australia	31
Sweden	19
Japan	19
Italy	18
Finland	10

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).

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	A theory of visual control of braking based on information about time-to-collision	596	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 2	Visual proprioceptive control of stance.	0	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 3	Visual proprioceptive control of standing in human infants	0	8 CFR 204.5(i)(3) — Outstanding Researcher