

# ResearchAnalytics: A Unified Interface for Cross-Source Aggregation and Visual Analysis of Researcher Bibliometric Profiles

**Adriana Cristiana Bîrzeanu**

Department of Computers and  
Information Technology  
University of Craiova  
Craiova, Romania

birzeanu.adriana.u3i@student.ucv.ro

**Paul-Ștefan Popescu**

Department of Computers and  
Information Technology  
University of Craiova  
Craiova, Romania

stefan.popescu@edu.ucv.ro

**Marian Cristian Mihăescu**

Department of Computers and  
Information Technology  
University of Craiova  
Craiova, Romania

cristian.mihăescu@edu.ucv.ro

## ABSTRACT

Evaluating a researcher's scientific output increasingly requires consulting several bibliographic platforms, each exposing a different subset of authors, publications and citation indicators through its own data model and access rules. This fragmentation forces users to switch between systems and to manually reconcile inconsistent records. We present ResearchAnalytics, a web platform that unifies four widely used sources – OpenAlex, Semantic Scholar, ORCID and Scopus – behind a single interface and a common data model. Because the Scopus author endpoints were not covered by the API entitlements available to us, the system adopts a reverse “Scopus Enrichment” workflow: publications are first located in the open sources and then matched against Scopus to retrieve extended bibliographic metadata. The platform computes general indicators, per-year productivity and citation profiles, citation dispersion and a cosine-similarity trend score, and presents them through interactive charts and exportable reports. We describe the design, the enrichment mechanism and the visual-analytics module, report a heuristic usability inspection, and discuss limitations and future work.

## Author Keywords

Bibliometric analysis; research evaluation; data aggregation; scholarly APIs; OpenAlex; Semantic Scholar; ORCID; Scopus; information visualization; heuristic evaluation; web application.

**DOI:** 10.37789/icusi.2026.7

## INTRODUCTION

The volume of scientific output has grown rapidly, and assessing the activity and impact of an individual researcher has become both more important and more difficult for universities, funding bodies and research groups. The information needed to build a complete picture of an author – publications, co-authors, venues and citation counts – is spread across several specialised platforms, each with its own coverage, identifiers and access policy.

Such assessment underpins many decisions across the research ecosystem: recruitment and promotion committees weigh a candidate's output and influence, funding bodies and reviewers gauge a track record, researchers look up prospective collaborators or referees, and departments compile activity reports. What these situations share is the need for a comprehensive and comparable view of an author, usually within a short time. Yet because coverage, author identifiers and even citation counts differ from one platform to another, a profile taken from any single source is easily incomplete or inconsistent, and the resulting uncertainty propagates into the decision it was meant to support.

In practice, a user who wants a complete academic profile has to query multiple systems and manually reconcile the results, because no single source provides the full set of data. OpenAlex and Semantic Scholar are convenient for locating authors by name; ORCID resolves name ambiguity through a unique identifier; and Scopus offers rich, curated metadata but restricts the way its data can be queried. The differences between these sources turn even a routine evaluation into a fragmented, time-consuming task.

This paper presents ResearchAnalytics, a web platform that addresses this fragmentation. The system queries OpenAlex, Semantic Scholar, ORCID and Scopus, maps their heterogeneous responses to a common data model, and exposes the consolidated information through a single interface together with interactive statistics and charts. Its main contributions are: (i) a unified interface and a common data model over four complementary bibliographic sources; (ii) a reverse “Scopus Enrichment” mechanism that works around the absence of author-search entitlements in the Scopus API access available to us, a constraint shared by many institutions; (iii) a visual-analytics module that summarises productivity, citation impact, citation dispersion and trend direction; and (iv) report export and an administrative dashboard. We also report a heuristic usability inspection of the interface. The remainder of the paper describes the data sources, the system design, the enrichment mechanism, the analytics and the evaluation, and discusses current limitations.

## BACKGROUND AND RELATED WORK

ResearchAnalytics builds on four established bibliographic data sources. OpenAlex is a fully open scholarly knowledge graph that succeeded Microsoft Academic Graph and provides authors, works, venues and citation links through a well-documented REST API [17]. Semantic Scholar (S2) offers a large open academic graph and an API exposing authors, papers and citation data [12]. Author-name ambiguity is a long-standing problem in bibliographic data [6]; ORCID addresses it by assigning each researcher a unique, persistent identifier [7]. Scopus is a large, curated abstract and citation database that provides high-quality metadata and impact indicators [2].

Other sources were considered. Web of Science is a comparable curated database [3] but, like Scopus, access depends on institutional subscriptions; Google Scholar lacks an official public API; and DBLP, although useful in computer science, exposes limited citation data. These constraints shaped the selection discussed below. Moreover, each platform offers researcher profiles and indicators only within its own ecosystem; consolidating them into a single, researcher-centric view with comparative cross-source analytics remains uncommon, which is the gap ResearchAnalytics targets.

Several tools already aggregate bibliographic sources or compute author-level indicators, and ResearchAnalytics should be positioned against them. Publish or Perish queries Google Scholar, Scopus, Crossref and other backends from a desktop client and computes a range of citation metrics, including the h-index [8]. Dimensions provides a large linked scholarly database with its own web interface and analytics layer [11]. VOSviewer [20] and bibliometrix [1] are established analysis environments, but they target science mapping and corpus-level bibliometrics rather than the interactive inspection of an individual researcher's profile. ResearchAnalytics differs on three points: it queries several sources live within a single web session instead of requiring an export-then-analyse cycle; it keeps per-source values visible rather than consolidating them into one figure; and it persists searches per authenticated user, so a profile can be revisited and exported. It does not attempt to match the analytical depth of VOSviewer or bibliometrix, nor the coverage of Dimensions.

Quantitative indicators are widely used to summarise research activity – for example the h-index [10] – but their use also raises well-known concerns about responsible evaluation, as set out in the Leiden Manifesto [9]. ResearchAnalytics is positioned as a tool that lowers the effort of gathering and inspecting such indicators across sources, rather than as a ranking instrument: the metrics it presents are intended to support, not replace, expert judgement.

## ACADEMIC DATA SOURCES

The platform relies on the strategic integration of four sources that stand in a relationship of complementarity.

Because no single platform offers the complete set of data required for an overview, the four are queried together so that the strengths of one cover the gaps of another, increasing the accuracy and consistency of the final result.

OpenAlex acts as the primary engine for name-based search and for the initial collection of an author's works. It is attractive because of the large volume of metadata it exposes for free, its stable and well-documented API, and its native support for ORCID identifiers, which reduces the classic problem of homonymy.

Semantic Scholar is queried jointly with OpenAlex during name-based search. This hybrid approach widens coverage and returns a richer set of candidate profiles, helping the user identify the intended researcher more quickly.

ORCID is used for the identifier-based search module. Although the bibliographic data it returns are comparatively limited (title, year, publication type and DOI), it offers maximum precision in the identification phase and prevents works from being mis-attributed in the case of identical names.

Scopus plays a distinct role. Elsevier does document an Author Search API, but access to the Scopus APIs is granted by entitlement rather than by API key alone: it requires an institutional subscription to the APIs themselves, asserted either through the institution's IP range or through an institutional token. The key available during development did not carry that entitlement, so author-level queries returned no usable results, whereas the publication-level Scopus Search endpoint remained accessible. This is a deployment constraint rather than a limitation of the Scopus API, and a common one: many institutions hold a Scopus web subscription without the corresponding API entitlement. The platform therefore adopts a reverse flow based on locating works by title, and a dedicated enrichment module retrieves secondary metadata for works already collected from the other sources (see Scopus Enrichment).

## Sources Considered but not Integrated

Several additional sources were evaluated but left out of the final version. Google Scholar was attractive for its coverage but provides no official public API, so integration would have required unofficial scraping. Web of Science requires institutional subscriptions and special usage rights. DBLP offers useful author and work records but limited citation data. IEEE Xplore was also considered, but API access could not be obtained through the official channel during development. OpenAlex, Semantic Scholar, ORCID and Scopus were therefore retained as the best balance between data accessibility, quality and the feasibility of integration through public APIs. This selection has consequences for coverage that are better stated than assumed away. Large-scale comparisons of bibliographic databases report substantial differences in the works and citations each one indexes, with Google Scholar the broadest and the curated databases more selective and unevenly distributed across fields [13, 21]. Leaving out Web of Science and Google

Scholar therefore biases the profiles the platform produces: coverage is likely to be weakest for the humanities, for national-language publications and for grey literature, and citation counts will tend to fall below those reported by Google Scholar. The platform mitigates this only partially,

by exposing the source of every figure instead of presenting a single consolidated number.

Table 1 summarises the capabilities of the four sources as exploited by the platform.

| Capability                   | OpenAlex | Semantic Scholar | ORCID | Scopus |
|------------------------------|----------|------------------|-------|--------|
| Author search by name        | Yes      | Yes              | No    | No*    |
| Author search by ORCID iD    | Yes      | No               | Yes   | No*    |
| Retrieve author publications | Yes      | Yes              | Yes   | No*    |
| Citation counts              | Yes      | Yes              | No    | Yes    |
| DOI                          | Yes      | Yes              | Yes   | Yes    |
| Publication search by title  | Yes      | Yes              | No    | Yes    |
| Detailed bibliometric data   | Partial  | Partial          | No    | Yes    |

**Table 1. Capabilities of the four integrated data sources, as used by the platform (Partial = limited bibliometric detail). \*The Scopus column reflects the API entitlements available during development, not the full documented API surface: author-level endpoints are documented by Elsevier but require an institutional subscription to the Scopus APIs.**

## TECHNICAL IMPLEMENTATION

### System Architecture

ResearchAnalytics follows a client–server architecture built with ASP.NET Core MVC, which separates the system into areas with distinct responsibilities: the user interface, request processing, communication with external sources, and database access (Figure 1).

The frontend is implemented with Razor views, HTML, CSS, Bootstrap and JavaScript. Through it the user runs name-based searches, enters an ORCID iD, searches publications in Scopus, and inspects the results as tables, statistics and charts. The backend, organised around controllers, models and services, receives these requests and decides which services to invoke for each function.

A dedicated **service layer** isolates the logic for talking to each external API: OpenAlex, Semantic Scholar, ORCID and Scopus each have their own service. This separation keeps the code easy to follow and makes the system extensible – a new source can be added without major changes elsewhere. Communication with the external services uses HTTP requests, and the heterogeneous responses are converted into common internal objects before being displayed or persisted.

Data access uses Entity Framework Core over a relational SQL Server database, while authentication and authorisation rely on ASP.NET Identity [14], which manages user accounts and distinguishes ordinary users from administrators.

The architecture also promotes data reuse across different modules of the platform. Information retrieved from OpenAlex, Semantic Scholar and ORCID is stored locally and can subsequently be enriched with additional metadata obtained from Scopus. This approach reduces repeated requests to external services, improves response times for

end users, and enables the generation of consolidated reports based on data originating from multiple academic sources.

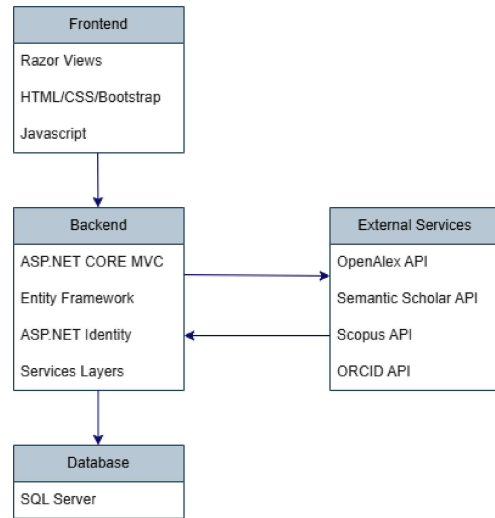


**Figure 1. System architecture: layered ASP.NET Core MVC application with a per-source service layer.**

The data model is organised around three core entities that mirror the main flow of the application: **SearchQuery**, **SearchResult** and **ResearchPaper** (Figure 2). A search issued by an authenticated user is stored as a **SearchQuery**; it may produce several **SearchResult** records, one per identified profile (author name, external identifier, publication and citation counts, and source); and each result may be linked to several **ResearchPaper** records (title, year, citation count, external identifier and URL). The relationships are one-to-many along this chain.

Auxiliary models support processing of external data: **OrcidWork** represents works obtained through the ORCID API, **ScopusPublication** and **ScopusEnrichedPaper** hold data returned by Scopus and the result of the enrichment

step, and **ReportCustomization** configures the fields included in exported reports. Persisting the data keeps a

history of searches, feeds the administrative statistics, and allows results to be reused.

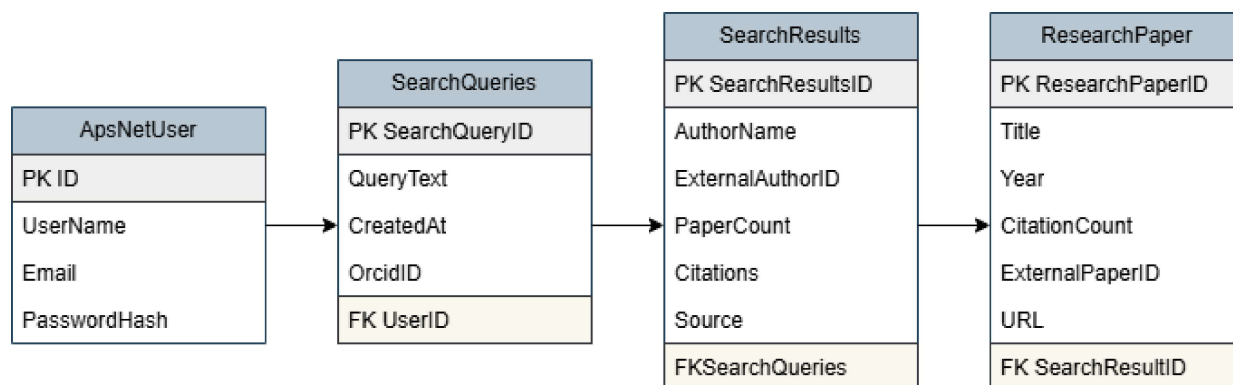


Figure 2. Core data model: the SearchQuery – SearchResult – ResearchPaper chain, linked to the authenticated user.

### Scopus Enrichment

Scopus is the richest of the integrated sources in terms of curated metadata and impact indicators, but the entitlements available to the project did not cover the author-level endpoints: in practice only title- and identifier-based publication queries could be issued. A direct author–works–metrics flow was therefore not possible under this access model.

The platform resolves this with a reverse “Scopus Enrichment” pipeline. Works are first located in the open sources – OpenAlex, Semantic Scholar or ORCID – using name- or identifier-based search. Each collected work is then matched against Scopus by title, and the extended metadata returned – exact title, the full list of co-authors, the indexed venue, the DOI and cited-by counts – is merged into a ScopusEnrichedPaper record that also records whether the work was found in Scopus.

In effect, the usual author–works–metrics direction is inverted into a works–metadata one. This preserves the convenience of name-based discovery from the open sources while still consolidating the high-precision bibliographic indicators that Scopus provides.

### Record Matching and Cross-Source Consistency

Combining several sources raises two questions: how duplicate records are avoided, and what happens when sources disagree. The current design answers the first by avoiding work-level duplication rather than resolving it. OpenAlex and Semantic Scholar are queried jointly only at the candidate-profile stage, where the user disambiguates the intended researcher; once a profile is selected, the publication list is retrieved from that single source. No union of two work lists is formed, so no cross-source deduplication is required. The trade-off is that coverage is bounded by the selected source instead of being pooled across sources, which is a deliberate simplification rather than an oversight.

Matching therefore occurs at a single point, in the enrichment step, where each collected work is looked up in

Scopus by DOI when one is available and by title otherwise. A work is either matched to one Scopus record or explicitly flagged as not found, and this outcome is stored on the ScopusEnrichedPaper record, so an unsuccessful match stays visible in the interface instead of being silently dropped. Citation counts are consequently never merged into a single figure: the count shown for a profile is the one reported by the selected source, while the Scopus cited-by count is displayed separately on enriched works. Presenting the two side by side is intentional, since the divergence between sources is itself informative and averaging them would conceal it.

### Technology Stack

The system is implemented in ASP.NET Core MVC. Database access is centralised in an **ApplicationDbContext** class that maps the entities to SQL Server tables and manages their relationships through Entity Framework Core, removing the need to write SQL for routine create, read, update and delete operations. For each integrated platform a dedicated service class issues the HTTP requests, parses the platform-specific response format, and maps it to the common internal models.

The interface is rendered with Bootstrap, charts are produced with Chart.js [5], and reports are exported to Excel using ClosedXML, with the included fields selected through the ReportCustomization model.

### Visual Analysis of Researcher Activity

On top of the consolidated data, the platform computes a set of indicators and renders them as interactive charts so that the user can read an author’s trajectory without inspecting every publication individually.

As a first step it reports **general indicators**: the total number of publications, the total number of citations, the mean number of citations per publication, and the number of active years. **Productivity** is analysed by grouping publications by year and plotting the counts as a bar chart, which highlights intense periods, interruptions or steady growth. **Citation impact** is analysed by summing, for each year, the citations

of works published in that year, and plotting the result as a line chart.

To describe the distribution of impact, the system computes the **standard deviation** of the citation counts: a low value indicates a relatively uniform impact across works, whereas a high value indicates that a few works accumulate far more citations than the rest. This complements the mean citation count as a measure of consistency.

Finally, a **trend score** estimates the overall direction of the activity for both productivity and citation impact. It is defined as the cosine similarity [18] between the vector of actual per-year values,  $A$ , and an ideal monotonically increasing reference vector,  $B = [1, 2, \dots, n]$ :

$$\text{sim}(A, B) = (A \cdot B) / (\|A\| \cdot \|B\|)$$

where  $A \cdot B$  is the dot product of the two vectors and  $\|A\|$ ,  $\|B\|$  are their norms. The score lies in  $[0, 1]$  and is interpreted in bands: values above 0.80 indicate a strong upward tendency, 0.50–0.80 a moderate increase, 0.30–0.50 a relatively stable evolution, and below 0.30 a weak or undefined direction. For example, an author whose yearly

publication counts form the vector  $A = [2, 3, 5, 7, 9]$  yields a score close to 1, because the series follows a clearly increasing pattern.

Considering several indicators together provides a more balanced view of a researcher’s activity than relying on a single metric. For example, two authors may have a similar total citation count while exhibiting very different publication patterns or long-term productivity trends. The combination of summary statistics and temporal indicators therefore helps users interpret research activity from multiple perspectives.

The charts and indicators are organised so that summary measures and trends are seen before per-publication detail, following the overview-first principle common in information-visualization design [19]. Combining the indicators, the trend scores and the charts gives a far more complete view of a researcher’s activity than a flat list of publications, and makes it possible to assess the consistency of the work and the direction of impact at a glance (Figure 3).



Figure 3. Visual-analytics view: per-year publication and citation charts together with the productivity and citation-impact trend scores.

## CASE STUDY

To illustrate the end-to-end behaviour of the platform, we analysed the profile of an established machine-learning researcher whose most-cited work is the widely cited topic-modelling paper “Latent Dirichlet Allocation”. Starting from a name-based search, the system queried OpenAlex and Semantic Scholar, returned the candidate profiles and – once the intended researcher was selected – collected the

associated works and, through the Scopus Enrichment step, augmented them with curated Scopus metadata. The consolidated profile was then summarised in the analytics view (Figure 3) without any manual reconciliation across the four sources.

The resulting view makes the researcher’s trajectory immediately legible. The publications-per-year chart shows activity rising from the late 1990s to a peak of about fourteen papers around 2012, while the citation chart peaks near

27,000 citations for works published in the early 2000s – essentially driven by the most-cited paper, which alone accounts for roughly 27,000 citations. The productivity trend score of 0.69 (“moderate productivity trend”) and the citation-impact score of 0.46 (“stable citation impact”) condense these patterns into a single value each, and the lower impact score reflects the citation lag of recent work rather than a decline in quality. Producing the same overview by hand would require separate queries to each source and manual aggregation, whereas the platform delivers it in a single interaction – the core practical benefit the system sets out to provide.

## HEURISTIC EVALUATION

To assess the interface beyond its functional description, we conducted an expert inspection using the heuristic evaluation

method [16] against Nielsen’s ten usability heuristics [15]. For each heuristic, Table 2 reports the aspects the platform already satisfies, the issues identified, and a severity rating on Nielsen’s 0–4 scale [15] (0 = not a usability problem, 1 = cosmetic, 2 = minor, 3 = major, 4 = catastrophe). The inspection was carried out by a single evaluator, an author of this paper with a background in human–computer interaction and web application development, who worked through the three search modes, the enrichment step, the analytics dashboard and the export and administration views in one session of approximately two hours. Severity ratings were assigned individually; no consensus procedure was applied, because only one evaluator took part. This is below the three to five evaluators Nielsen recommends for uncovering the majority of usability problems, and the results should be read accordingly: they identify problems that are present, but they are not evidence that others are absent.

| Usability heuristic                                | Assessment of ResearchAnalytics                                                                                                                                                                                                                                                                                                                                             | Severity |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <b>1. Visibility of system status</b>              | Search results show the source, identifier and publication/citation counts for each profile, and the analytics view reports computed indicators and explicit trend labels. Because external API calls can be slow, clearer progress indicators during search and enrichment would improve perceived status.                                                                 | <b>2</b> |
| <b>2. Match with the real world</b>                | The interface uses familiar academic terms (author, publication, citation, DOI, ORCID iD) and standard chart types. A few technical labels, such as the enrichment step, may be unfamiliar to non-technical users and could be reworded.                                                                                                                                    | <b>1</b> |
| <b>3. User control and freedom</b>                 | Users move freely between the three search modes, choose which profiles to view and export, and customise report fields. Long-running enrichment offers limited cancel/undo, which could be added.                                                                                                                                                                          | <b>2</b> |
| <b>4. Consistency and standards</b>                | The Bootstrap-based layout keeps navigation, controls and record presentation consistent across pages, and the common data model displays authors and works uniformly regardless of source.                                                                                                                                                                                 | <b>0</b> |
| <b>5. Error prevention</b>                         | Role-based access restricts actions to authenticated users, and ORCID-based search avoids name-matching errors. Validation of malformed identifiers and empty queries, and handling of empty API responses, could be strengthened.                                                                                                                                          | <b>2</b> |
| <b>6. Recognition rather than recall</b>           | Searches are persisted and results are shown as labelled lists and tables with selectable profiles, so the user recognises options rather than recalling identifiers.                                                                                                                                                                                                       | <b>0</b> |
| <b>7. Flexibility and efficiency</b>               | Multiple entry points (name, ORCID, title) and joint OpenAlex/Semantic Scholar querying suit different needs and speed discovery, and Excel export supports reuse. Previously executed author searches are stored and can be revisited, reducing the effort required for repeated analyses. Dedicated researcher bookmarking and comparison features are not yet available. | <b>1</b> |
| <b>8. Aesthetic and minimalist design</b>          | The dashboard surfaces key indicators (trend scores, most-cited work) and charts prominently without clutter, following an overview-first presentation.                                                                                                                                                                                                                     | <b>0</b> |
| <b>9. Recognise, diagnose, recover from errors</b> | This is the weakest area: results depend on external APIs that may be incomplete or empty, so plain-language messages (for example, “no Scopus match found” or “source unavailable”) are needed to help users diagnose and recover.                                                                                                                                         | <b>3</b> |
| <b>10. Help and documentation</b>                  | The flow is largely self-explanatory, but there is no in-app help or onboarding; tooltips explaining the trend score and the enrichment step would benefit first-time users.                                                                                                                                                                                                | <b>2</b> |

**Table 2. Heuristic inspection of the ResearchAnalytics interface against Nielsen’s ten usability heuristics, with severity ratings (0–4).**

No catastrophic problems were found: the most severe issue (rated major) concerns error recognition and recovery, while

the remaining issues are minor or cosmetic. Overall the platform performs well on consistency, recognition and

minimalist design, whereas the main opportunities for improvement concern error handling and recovery, status visibility during slow external calls, and the absence of in-app help. As a preliminary, small-scale inspection this has known limits – individual evaluators typically uncover only part of the existing usability problems [16] – so these findings inform the future work below, where we also plan a study with several evaluators and the System Usability Scale [4].

## DISCUSSION AND LIMITATIONS

The platform achieves its functional goals, but several limitations follow mainly from its dependence on external sources. The same researcher may appear under different forms in OpenAlex and Semantic Scholar, and publication or citation counts may vary between databases; the information shown therefore reflects the accuracy and freshness of each provider’s data, and incomplete indexing can mean that the displayed profile does not capture the author’s entire activity.

The Scopus access constraints made the enrichment workaround necessary. Because enrichment relies on matching works by title, it is subject to the usual precision and recall trade-offs of string matching, and a work may occasionally fail to match or match an incorrect record; using DOIs and identifiers where available mitigates but does not eliminate this.

Three further limitations concern what has not yet been measured. First, the accuracy of the enrichment step has not been quantified: we report no match rate for the title-based Scopus lookup and no manual verification of matched records, so its precision is currently unknown. Second, the system depends on external APIs, yet no latency, throughput or failure-rate measurements are reported, and its behaviour under load is therefore undocumented. Third, the case study covers a single researcher, which is enough to illustrate the end-to-end flow but not enough to show consistent behaviour across disciplines and career stages, since a favourable individual case can conceal systematic problems. Closing these gaps is the first priority for the next version, through a validation over a set of researchers drawn from several fields, with a manually verified sample used to report the precision and recall of title-based matching, and through instrumented measurement of per-source response times and failure rates.

The trend score is a lightweight heuristic for alignment with a monotonically increasing pattern rather than a formal statistical test. Because cosine similarity is scale-invariant and any non-negative series aligns fairly well with a positive ramp, the bands should be read as indicative; more rigorous measures, such as a linear-regression slope or the Mann–Kendall test, are planned. The system also surfaces the fact that recent publications have had less time to accumulate citations. Consistent with responsible-metrics guidance [9], the indicators are intended to assist expert assessment, not to substitute for it.

A further gap concerns the indicators themselves. The current version reports publication and citation counts, mean citations per work and citation dispersion, but not the h-index [10] or i10, which are the indicators evaluation committees most often expect; both are computable from the data already collected and are the most immediate addition planned. The trend score is also computed over the full active period, which makes it insensitive to recent change: a long and productive early career can hold the score high while current output declines. Reporting the score over a moving window alongside the career-long value would make recent activity legible, and is planned together with the more rigorous trend measures noted above.

## CONCLUSION AND FUTURE WORK

We presented ResearchAnalytics, a web platform that reduces the fragmentation of researcher evaluation by unifying OpenAlex, Semantic Scholar, ORCID and Scopus behind a single interface and a common data model. The system contributes a reverse Scopus Enrichment mechanism that compensates for the absence of author-search entitlements in the Scopus API access available to us, a visual-analytics module that summarises productivity, citation impact, dispersion and trend direction, and supporting features for Excel export and administrative monitoring; a heuristic inspection confirmed the main strengths of the interface and identified concrete usability improvements.

Future work includes integrating additional sources such as Web of Science, DBLP and Google Scholar; adding standard bibliometric indices such as the h-index [10] and i10; dedicated researcher bookmarking, comparison and tracking features; addressing the usability issues identified above; and exploring AI techniques for automatic trend detection, similar-researcher recommendation and predictive impact analysis.

Another potential extension involves the automatic identification of research topics and thematic evolution over time. By analysing publication metadata and keywords, the platform could provide a higher-level view of how a researcher’s interests change throughout their career.

## ACKNOWLEDGMENTS

The platform was developed as part of a Bachelor’s diploma project at the University of Craiova. The authors thank the colleagues who provided feedback on earlier versions of the system.

## REFERENCES

1. Aria, M., and Cuccurullo, C. bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics* 11, 4 (2017), 959–975.
2. Baas, J., Schotten, M., Plume, A., Côté, G., and Karimi, R. Scopus as a curated, high-quality bibliometric data source for academic research in quantitative science

- studies. *Quantitative Science Studies* 1, 1 (2020), 377–386.
3. Birkle, C., Pendlebury, D. A., Schnell, J., and Adams, J. Web of Science as a data source for research on scientific and scholarly activity. *Quantitative Science Studies* 1, 1 (2020), 363–376.
4. Brooke, J. SUS: A quick and dirty usability scale. In *Usability Evaluation in Industry*, P. W. Jordan, B. Thomas, B. A. Weerdmeester, and I. L. McClelland, Eds. Taylor & Francis, London, UK, 1996, 189–194.
5. Chart.js Contributors. Chart.js Documentation. <https://www.chartjs.org/docs/>.
6. Ferreira, A. A., Gonçalves, M. A., and Laender, A. H. F. A brief survey of automatic methods for author name disambiguation. *ACM SIGMOD Record* 41, 2 (2012), 15–26.
7. Haak, L. L., Fenner, M., Paglione, L., Pentz, E., and Ratner, H. ORCID: a system to uniquely identify researchers. *Learned Publishing* 25, 4 (2012), 259–264.
8. Harzing, A.-W. *The Publish or Perish Book*. Tarma Software Research, Melbourne, Australia, 2010.
9. Hicks, D., Wouters, P., Waltman, L., de Rijcke, S., and Rafols, I. Bibliometrics: The Leiden Manifesto for research metrics. *Nature* 520, 7548 (2015), 429–431.
10. Hirsch, J. E. An index to quantify an individual’s scientific research output. *Proceedings of the National Academy of Sciences* 102, 46 (2005), 16569–16572.
11. Hook, D. W., Porter, S. J., and Herzog, C. Dimensions: Building context for search and evaluation. *Frontiers in Research Metrics and Analytics* 3 (2018), 23.
12. Kinney, R., Anastasiades, C., Authur, R., et al. The Semantic Scholar Open Data Platform. *arXiv:2301.10140* (2023).
13. Martín-Martín, A., Thelwall, M., Orduna-Malea, E., and Delgado López-Cózar, E. Google Scholar, Microsoft Academic, Scopus, Dimensions, Web of Science, and OpenCitations’ COCI: a multidisciplinary comparison of coverage via citations. *Scientometrics* 126, 1 (2021), 871–906.
14. Microsoft. ASP.NET Core Documentation. <https://learn.microsoft.com/aspnet/core/>.
15. Nielsen, J. Enhancing the explanatory power of usability heuristics. In *Proc. CHI 1994*, ACM Press (1994), 152–158.
16. Nielsen, J., and Molich, R. Heuristic evaluation of user interfaces. In *Proc. CHI 1990*, ACM Press (1990), 249–256.
17. Priem, J., Piwowar, H., and Orr, R. OpenAlex: A fully-open index of scholarly works, authors, venues, institutions, and concepts. *arXiv:2205.01833* (2022).
18. Salton, G., and McGill, M. J. *Introduction to Modern Information Retrieval*. McGraw-Hill, New York, USA, 1983.
19. Shneiderman, B. The eyes have it: A task by data type taxonomy for information visualizations. In *Proc. IEEE Symposium on Visual Languages* (1996), 336–343.
20. van Eck, N. J., and Waltman, L. Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics* 84, 2 (2010), 523–538.
21. Visser, M., van Eck, N. J., and Waltman, L. Large-scale comparison of bibliographic data sources: Scopus, Web of Science, Dimensions, Crossref, and Microsoft Academic. *Quantitative Science Studies* 2, 1 (2021), 20–41.