

MAPPING THE INTERDISCIPLINARY LANDSCAPE OF DIGITAL ROMANTIC FRAUDS USING VOS VIEWER

Ronal Kamim

Universitas Airlangga, Indonesia

E-mail: ronalkamim@gmail.com*

Arum Karisma Nadya Lakshita

Universitas Airlangga, Indonesia

Dwi Permana Putra

Universitas Airlangga, Indonesia

Hendro Margono

Universitas Airlangga, Indonesia

Receive :

Accepted :

Published:

DOI : [10.30829/jipi.v10i2.28009](https://doi.org/10.30829/jipi.v10i2.28009)

Abstract

Romance fraud is a crime committed through emotional manipulation via digital platforms, causing significant financial and psychological harm to victims. Despite growing prevalence, the phenomenon lacks unified terminology, with terms such as "love scam," "catfishing," and "sweetheart swindle" reflecting its conceptual complexity. This bibliometric analysis of 152 publications (2010–2025) maps the interdisciplinary landscape of online romance fraud research using Scopus data and VOSviewer software. Five critical findings emerge: (1) publication acceleration of 553 percent from 2020–2024, signaling urgent recognition as a sociotechnical crisis; (2) geographic imbalance with the United States, United Kingdom, and Australia accounting for approximately 70 percent of publications while Global South nations remain epistemically marginalized; (3) disciplinary shift from early technical cybersecurity framings toward holistic, trauma-informed perspectives emphasizing mental health and victimization; (4) methodological limitations with 85 percent employing descriptive statistics and lacking longitudinal victim tracking; and (5) authorship concentration wherein two scholars account for 21 percent of publications. Analysis identified five distinct thematic clusters cybercrime systems, victimology, psychological manipulation, platform-specific risks, and digital risk behavior demonstrating that romance fraud demands integrated frameworks bridging criminology, psychology, computer science, and public health. The research landscape is simultaneously accelerating, shifting toward psychosocial concerns, geographically concentrated in privileged nations, and methodologically conservative, creating urgent gaps in Global South perspectives, culturally-specific victim experiences, and longitudinal designs. These findings inform evidence-based prevention strategies, cross-sector policy interventions, victim support services, and open urgent opportunities for future multidisciplinary exploration, particularly Global South-led investigations and perpetrator-focused inquiry essential for developing effective intervention approaches.

Keywords: Love scam, online dating fraud, cybercrime, bibliometric analysis, interdisciplinary research, victimization.

INTRODUCTION

The rapid proliferation of internet technologies and the widespread use of digital communication platforms have given rise to new forms of interpersonal deception, one of the most insidious being romance fraud. This phenomenon involves perpetrators who exploit the intimacy of online relationships to defraud victims emotionally and financially. Romance fraud occurs when criminals pretend to initiate a relationship via online dating sites or social networking sites with the intention to defraud their victims (Whitty, 2013), representing instances where a person is defrauded by an offender through what the victim perceives to be a genuine relationship. While romance fraud can occur across online and offline contexts, the overwhelming majority of victimization is currently initiated on the Internet via dating applications, websites, direct email, or social media platforms (Cross et al., 2018).

Romance fraud represents deception through the mechanism of a relationship to facilitate financial reward for the offender, primarily perpetrated through the internet, though offenders use all methods of communication—including internet, email, text messaging, telephone, and even face-to-face contact—to maintain the ruse of a relationship (Buil-Gil & Zeng, 2022). This constitutes an emotionally devastating type of fraud, as scammers make their victims believe they have strong feelings for them (Rege, 2009). While deception through relationships is not a new phenomenon, the use of digital platforms to scale, automate, and obscure such schemes has elevated the severity and complexity of the problem, rendering it one of the most damaging forms of cyber-enabled crime.

Different forms of romance fraud impact individuals both financially and emotionally while also having repercussions that transcend the individual victim. Most cases of romance fraud nowadays start from dating apps, social networking sites, emails, or messaging platforms (Cross et al., 2018). After a fake relationship is created and genuine affection is elicited through psychological manipulation, victims are manipulated into trusting the perpetrators fully, at which stage money can be sent or personal information disclosed. To create and maintain the illusion of a romantic bond, scammers utilize email, phone calls, and even in-person meetings (Buil-Gil & Zeng, 2022). The extensive emotional trauma and financial damage inflicted renders this form of cyber-enabled crime particularly severe, having attracted scholarly attention from various fields because of its complexity and severe impacts.

Despite increasing academic interest, the romance fraud phenomenon presents significant conceptual and methodological challenges that impede comprehensive understanding. The field lacks unified terminology, with terms such as "romance scam," "love fraud," "catfishing," "sweetheart swindle," and "relationship scam" used interchangeably in the literature (Bilz et al., 2023). This terminological inconsistency reflects both the lack of uniform terminology and the intricacy of the phenomenon in question. While Nurse (2019) defined romance scams as a subset of cybercrime exploiting unique human psychological factors, he called attention to the need for multidisciplinary frameworks to better understand this problem. Fraud is one of the most significant forms of cybercrime which requires greater scholarly and policing attention (Whitty & Buchanan, 2016). Moreover, Nomleni (2023) analyzed the dynamics of interpersonal communication in cases of romance fraud, while Juditha (2013) studied communication practices in cybercrime, specifically in romance scams, noting that victims are subjected to sophisticated persuasive techniques by perpetrators (Carter, 2023).

This terminological diversity reflects the multifaceted nature of this type of crime that involves cybercrime, victimology, psychology, and communication technology. Romance fraud embodies a distinctive form of deceit that defies conventional criminological and sociological

frameworks, and scholars have attempted to grasp its emotional, social, and technological aspects from various disciplinary perspectives. However, romance fraud research remains fragmented across disciplinary silos that obscure critical dimensions of the phenomenon. A purely criminological approach misses psychological trauma and recovery pathways; a psychology-focused frame ignores systemic platform affordances enabling fraud at scale; a technology-centered perspective overlooks the social dynamics of deception and gendered patterns of victimization. Without genuinely integrated interdisciplinary frameworks, researchers, policymakers, and practitioners operate with incomplete understandings of the problem, resulting in fragmented interventions that fail to address root causes or support victim recovery.

Although attention concerning romance fraud has increased significantly in recent years, tracing its conceptual evolution and interdisciplinary development remains a significant research gap. While numerous studies delve into individual cases or examine psychological consequences and legal ramifications, there is a distinct lack of effort directed toward comprehensively mapping the scientific landscape surrounding this phenomenon. Most existing studies concentrate on victim-focused narratives, often neglecting the perspectives of perpetrators and broader societal implications (Lazarus et al., 2023). Additionally, the division arising from different methodological approaches alongside interdisciplinary boundaries impedes knowledge integration across disciplines (Sharkey et al., 2021). Three critical research gaps remain particularly acute: first, temporal understanding is nearly absent with no longitudinal studies tracking romance fraud victims through recovery; second, geographical knowledge is severely skewed toward Global North contexts with almost no culturally-grounded research from regions experiencing significant victimization (Southeast Asia, sub-Saharan Africa, Latin America); and third, perpetrator perspectives are nearly absent from the literature, creating a victim-centric knowledge base that obscures how economic desperation and criminal organization structure scammer behavior.

The mapping of interdisciplinary landscapes has become increasingly important for understanding how knowledge evolves across complex and interconnected domains. Contemporary problems are seldom contained within one academic discipline, and the rapidly expanding digital society has further compounded this challenge. As scholarly inquiry deepens in sophistication, the capacity to systematically map intersections of ideas, techniques, collaborations, and contributions across multiple disciplines becomes critical for advancing coherent explanations of newly emerging phenomena such as digital romance fraud. The increasing importance of conducting interdisciplinary research stems from it being one of the leading motivators for fostering originality in innovation within scientific research. Existing studies primarily draw on methods such as academic qualification, institutional affiliation, or discipline-based mapping of journals to measure relationships between disciplines (Xue et al., 2023). Hosseini and colleagues advanced the discipline by performing dynamic co-word analysis for mapping the intellectual contours and evolution of Geographic Information Systems for Transportation (GIS-T) from 2008 to 2019, demonstrating increasing integration of themes from computer science, health science, urban planning, and environmental studies (Hosseini et al., 2021).

Bibliometric analysis offers a powerful methodological tool to examine the structure, development, and dynamics of scientific knowledge and to expose disciplinary fragmentation in complex fields. By enabling researchers to visualize patterns of publication, collaboration, and thematic evolution, bibliometrics provides insights not only into the maturity of a research field

but also into its fragmentation, gaps, and interdisciplinary potential. Such analyses are critical for identifying influential scholars, core journals, dominant institutions, and the emergence of new topics over time. For example, Xu and colleagues developed a multi-layered framework for mapping innovation ecosystems by applying network clustering and community detection methods, thereby permitting simultaneous detection of thematic clusters within bibliometric networks (Xu et al., 2020). Xie and Waltman undertook thorough analysis of differences between citation-based clustering and text-based topic modeling in cardiovascular research, demonstrating that both approaches emphasize divergent yet complementary facets of scientific disciplines (Xie & Waltman, 2025). Maria, Ballini, and Souza carried out a bibliometric study on green finance utilizing complex network techniques and machine learning, demonstrating the shifting of thematic clusters over time and illustrating the rise and development of scientific ideas (Maria et al., 2023). These methodologies underscore the utility of bibliometric analysis in navigating the complexities of interdisciplinary research.

While bibliometric studies have gained considerable traction in public health, environmental science, education, and digital communication, there remains an unexplored systematic approach to applying this method toward more complex cross-disciplinary issues such as romance fraud. Interdisciplinary mapping makes particular sense for complicated overlapping domains where multiple perspectives, terminologies, and disciplinary approaches converge. However, many such studies remain self-contained and lack holistic structures that incorporate diverse perspectives into unified scholarly dialogue. For example, Ife and colleagues pointed out the gap between information security and environmental criminology, advocating for integrated approaches to bolster mitigation strategies for cybercrime (Ife et al., 2019). The SEPCA Regional Conference held in March 2023 brought together cybercrime specialists from Southeast and Central European countries alongside Austrian officials and Council of Europe representatives, with participants emphasizing that international cooperation is crucial for streamlining investigative resources and unified action frameworks to combat multi-jurisdictional cybercrime challenges (Southeast Europe Police Chiefs Association, 2023). The growing need for cross-sectoral integration places distinct emphasis on employing bibliometric mapping as a fundamental technique to navigate, synthesize, and advance knowledge within the increasingly complex field of cybercrime research.

Mapping the interdisciplinary landscape is important from both methodological and strategic perspectives for understanding romance fraud. It enables researchers to move beyond narrow case studies and appreciate the distribution of academic interest, concept development, and prospective trajectories for field advancement. Such mapping reveals gaps within networks where vital contributors have been ignored, which is useful for policy making and guiding future research design. Mejia and colleagues developed a simplified bibliometric method to identify specific scientific specialties and map interdisciplinary relationships within social science domains through citation-network clustering and semantic topic modeling based on co-occurrence patterns, demonstrating an organized yet simple approach to identifying emerging thematic clusters with interdisciplinary dynamics (Mejia et al., 2021). Wang and colleagues utilized bibliometric methods including publication trend analysis, citation counts, and VOSviewer for co-citation and keyword co-occurrence analysis to detect key works and themes in electronic word-of-mouth (eWOM) research, demonstrating the power of bibliometric analysis in tracing academic development across marketing, tourism, and service quality (Wang et al., 2023). Within drawn interdisciplinary framework, scholarship becomes more relevant in interconnected relationships marked by newly emerging technologies where mapping,

measuring, and making sense of the interdisciplinary nature of research becomes indispensable if impact is sought through scholarship.

Employing the Scopus database is necessary for mapping the interdisciplinary landscape concerning digital romance fraud because of its vast and multidisciplinary scope of peer-reviewed literature. Scopus covers more than 25,000 peer-reviewed journals issued by over 5,000 publishers from the social sciences, psychology, law, computer, and health sciences (Elsevier, 2025). Such expansive coverage ensures that scholars studying digital romance fraud research every intricate detail and dimension that contributes to analyzing academic discourse and knowledge production in digital deception. Additionally, Scopus has content in other languages provided an English title and abstract, which expands its multidisciplinary reach (Baas et al., 2020). The database's diverse subject areas coupled with international representation from publishers provide incredible value for cross-disciplinary scholarly inquiry. The reputation and reliability of Scopus are based on the quality of its bibliographic metadata, which is essential for accurate bibliometric analysis. Scopus provides unique author, institution, and keyword indexing along with citation tracking which enables scholarly network mapping, citation impact evaluation, and thematic evolution (Elsevier, 2025). Its ability to trace the diffusion of concepts across subject areas and visualize citation relationships helps identify how various disciplines engage with the topic of digital romance fraud, which is particularly important for a bibliometric study where understanding cross-disciplinary linkages and terminology variation is central to the research goal.

VOSviewer is a powerful tool for building and visualizing bibliometric networks, making it uniquely suited to situating digital romance fraud scholarship within the field of study topology. Developed by researchers from the Center for Science and Technology Studies at Leiden University, VOSviewer has specialized functions that allow for effective use with large bibliographic datasets such as those obtained from Scopus, enabling extraction of bibliographic networks and construction of maps from network data (Bukar et al., 2023; Jan van Eck, 2023). Its strength lies in detailed visual depiction of co-authorship, citation, and keyword co-occurrence graphs that aid in identifying intellectual structural units and scholastic relations present in fragmented fields such as romance fraud (Centre for Science and Technology Studies of Leiden University, 2025). One of the most compelling reasons to use VOSviewer is its capability to produce high-quality overlay visualizations and clustering maps that reveal thematic evolution over time, as demonstrated by Sifaiyya & Andriani in property tax research and Sjögårde's enhanced overlay (Sifaiyya & Andriani, 2024; Sjögårde, 2022). These features support a deeper understanding of how the study of romance fraud has evolved and how various disciplines have interacted to shape the discourse. Scopus metadata integration with VOSviewer allows bibliometric data to be collected and processed on a large scale through automated features that enable frequency and co-occurrence-based visualization, as well as data cleansing and clustering, making identification of strong themes and core-periphery structuring within a given literature corpus possible (Shahri & Ali, 2024).

To fill this gap, this study performs a comprehensive bibliometric analysis of the scientific literature on digital romance fraud from 2010 to 2025. This research analyzes the conceptual, geographical, and temporal dimensions of online romance deception by applying VOSviewer and Scopus database. The study examines the progression of scholarly communication through discourse analysis at temporal milestones in the evolution of digitally mediated relationships, recognition of major recurring phrases alongside their thematic significance, identification of influential and leading scholars of the field, as well as examination

of frameworks employed. Furthermore, it investigates relationship terminologies to understand how they align with social constructs and focal points across disciplines, thereby enriching the "romance fraud" construct and broadening scholarly imagination while facilitating research anchored in cross-disciplinary frameworks. Specifically, this study addresses the following research objectives: (1) to identify publication trends and temporal evolution of digital romance fraud research, examining how academic attention has shifted over time and identifying key periods of growth; (2) to map the intellectual structure and thematic clusters within romance fraud scholarship through keyword co-occurrence analysis, revealing how different concepts and theoretical frameworks cluster together and evolve; (3) to analyze collaboration patterns and identify key contributors, including the most productive authors, dominant institutions, and geographical distribution of research output; (4) to examine the interdisciplinary nature of romance fraud research by tracing how various academic disciplines engage with and contribute to understanding this phenomenon; and (5) to identify research gaps and future directions, particularly regarding underrepresented geographical regions, methodological approaches, and unexplored aspects of romance fraud such as perpetrator psychology and long-term victim impact.

RESEARCH METHOD

This study employs a bibliometric methodology to systematically map and analyze scientific literature on digital romance fraud, while acknowledging significant limitations in measuring the actual depth of interdisciplinarity. The bibliometric approach focuses on analyzing academic publications to assess research trends and structures of scientific communication, recognizing that quantitative indicators reveal structural patterns rather than the depth of disciplinary integration achieved (Donthu et al., 2021). This method works best for examining field maturity and mapping research relationships, though it cannot directly access conceptual synthesis within individual studies. Furthermore, bibliometric analysis provides an overview of publication patterns and thematic evolution, facilitating identification of influential studies and emerging themes, though keyword co-occurrence indicates semantic proximity rather than genuine theoretical integration (Donthu et al., 2021). Bibliometric techniques reveal interdisciplinary collaboration through examining co-authorship networks, illustrating research area fusion, though such networks reflect collaboration structure rather than integration quality (Ullah et al., 2022).

The authors sourced the dataset from Scopus, which while indexing peer-reviewed work across social sciences, psychology, law, computer science, and health sciences represents a significant methodological constraint. Scopus was selected for its broad coverage, though this database systematically excludes non-indexed journals and regional proceedings, thereby underrepresenting Global South scholarship and non-English-language publications. A carefully calibrated search string was constructed while acknowledging that language bias within database indexing means research published in Spanish, Mandarin, Portuguese, and Arabic remains systematically invisible. Synonymous terminology (romance scam, sweetheart swindle, catfishing, love fraud) was combined with contextual descriptors (digital, cybercrime, online, relationship) to capture the phenomenon across disciplines. Search terms were applied to titles, abstracts, and author-provided keywords to ensure comprehensive retrieval. Boolean logic facilitated construction of a search string distilling documents relating to digital deception

across disciplinary boundaries. The date range "2000 to 2025" was selected to encompass 25 years of phenomenon evolution and scholarly attention.

Table 1: Sources and searched strategy information.

Database	Searched strategies
Scopus	(TITLE-ABS-KEY ("romance scam*") OR TITLE-ABS-KEY ("catfishing" AND ("love" OR "romantic" OR "dating" OR "romance" OR "scam" OR "fraud" OR "relationship")) OR TITLE-ABS-KEY ("love scam*") OR TITLE-ABS-KEY ("Romance fraud*") OR TITLE-ABS-KEY ("love fraud*") OR TITLE-ABS-KEY ("sweetheart swindle*") OR TITLE-ABS-KEY ("dating scam*") OR TITLE-ABS-KEY ("relationship scam*") OR TITLE-ABS-KEY ("relationship fraud") OR TITLE-ABS-KEY ("dating Fraud*") OR TITLE-ABS-KEY ("Romance deception*") AND TITLE-ABS-KEY (online) OR TITLE-ABS-KEY (cyber) OR TITLE-ABS-KEY ("cybercrime*") OR TITLE-ABS-KEY (digital)) AND PUBYEAR > 2000 AND PUBYEAR < 2026

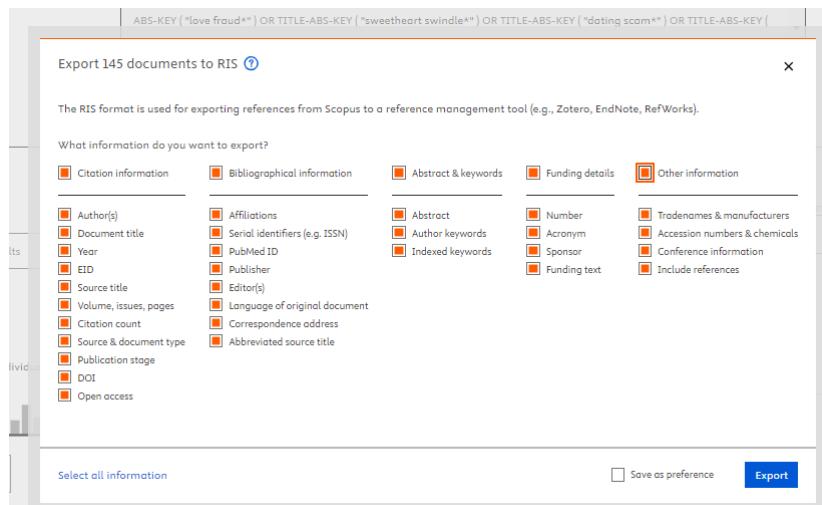


Figure 1. Export to RIS by Scopus. (<https://www.scopus.com/>, accessed on Saturday, April 12, 2025, AM UTC/GMT)

Upon obtaining the data, bibliographic records were exported in CSV format and processed with VOSviewer, a network visualization tool excelling at structural mapping while possessing limitations in measuring conceptual integration depth. Various analyses were performed, including: (1) co-authorship analysis mapping collaborative networks; (2) keyword co-occurrence analysis for thematic clustering, showing semantic adjacency rather than integration evidence; (3) citation analysis for scholarly influence; and (4) temporal overlay visualization depicting research priority shifts.

A "thesaurus file" was utilized in VOSviewer to consolidate terminology variations, improving keyword consistency and reducing noise. Leading authors were identified by h-index and citation metrics, measuring productivity and influence rather than research quality or integration depth. This systematic approach enables comprehensive research landscape

mapping anchored in bibliometric theory while maintaining awareness of limitations in capturing interdisciplinary depth beyond structural visualization.

RESULT AND DISCUSSION

Publication Trends (2010–2025)

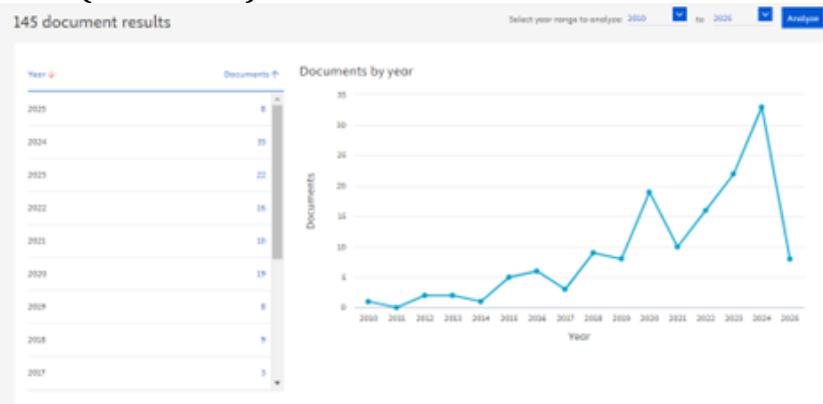


Figure 2. Publication Trends result based on Scopus data. (<https://www.scopus.com/>, accessed on Saturday, April 12, 2025, AM UTC/GMT)

The graph depicting scientific publications captures an emerging trend of articles from 2010 to 2025, recognizable in three distinct segments: initial stage, surge, and stabilization or decline. From 2010 to 2016, publications remained static, not exceeding five documents annually, reflecting that romance fraud research lacked institutional legitimacy despite the problem's existence—a recognition gap representing epistemic invisibility within criminology's dominant frameworks. This initial silence constituted structural violence: victims suffered while academia remained silent, their experiences deemed insufficiently serious for scholarly attention. The surge phase initiated mid-2017 as institutional pressures shifted; the 2020 peak at 19 documents and 2024 peak at 33 documents mark periods of accelerating growth driven by pandemic economics, media attention, and law enforcement urgency. This trajectory reveals research attention follows crises rather than systematic problem identification, exposing how academic gatekeepers determine which phenomena warrant legitimacy. The 2025 decline to 8 documents likely reflects indexing lag, yet demonstrates how scholarly focus tracks media cycles rather than victims' actual suffering. This pattern underscores a critical insight: the field's knowledge production is reactive rather than proactive, rendering academic attention itself a power relation where institutional authority determines problem visibility.

Leading Authors, Journals, and Institutions

Table 1. Top 10 Most Productive Authors on Digital Romance Fraud (2000–2025) Analytical Based on Scopus Data

Rank	Author	Total Publications	Total Citations	H-index
1	Whitty, M.T.	9	437	11
2	Cross, C.	6	80	9
3	Button, M.	5	0	3
4	Wang, F.	3	11	6
5	Cross, C.; Holt, T.J.	2	36	2
6	Whitty, M.T.; Buchanan, T.	2	252	2
7	Gillespie, A.A.	2	16	2

8	Wang, F.; Topalli, V.	2	22	2
9	Kopp, C.; Sillitoe, J.; Gondal, I.	2	21	2
10	Abubakari, Y.	2	7	1

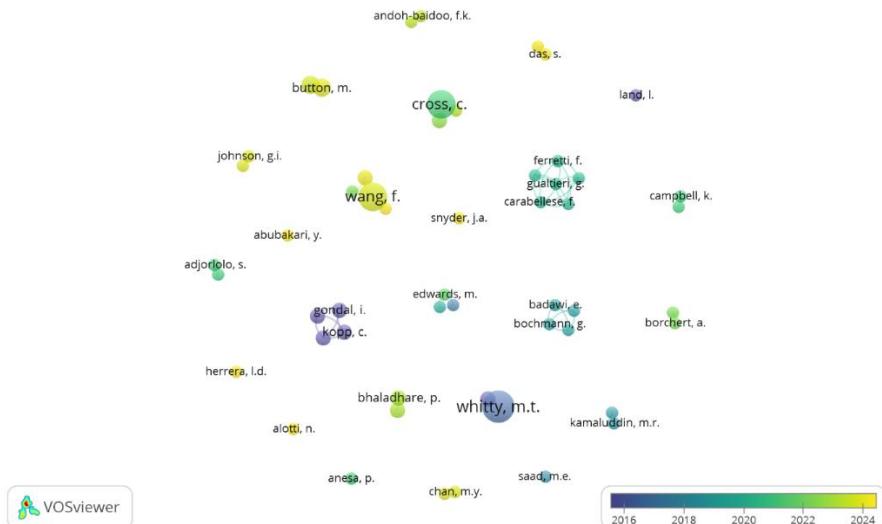


Figure 3. Overlay Visualization of Author Contributions in Digital Romance Fraud Research (2016–2024) Using VOSviewer.

Bibliometric exploration reveals a concentrated scholarly ecosystem wherein a handful of scholars monopolize publishing authority and problem definition. Whitty, M.T., emerges as a gatekeeper controlling epistemic authority over romance fraud scholarship, publishing nine papers yielding 437 citations and h-index of eleven—yet this dominance raises troubling questions about whose voices shape research frameworks and whose remain marginalized. Cross, C., adds six publications with 80 citations and h-index of nine, suggesting sustained but limited influence. Wang, F. contributes modestly with three publications and h-index of six. These metrics reveal not expertise merit but rather institutional power concentration: those with resources, institutional positions, and English-language publishing access accumulate epistemic authority while equally knowledgeable scholars from Global South contexts remain invisible. Co-authored teams—Whitty and Buchanan, Cross and Holt—suggest collaboration, yet co-authorship patterns often reflect neo-colonial arrangements where Global South researchers provide data and local expertise while North Atlantic institutions direct analysis and claim publication authority. The prevalence of co-authored works among top contributors indicates collaboration patterns, yet institutional hierarchy within these partnerships remains uncaptured by bibliometric data. These findings highlight key opinion leaders whose influence extends beyond research production to define legitimate questions, methodologies, and theories within the field, illustrating how academic power structures reproduce existing inequalities through publishing mechanisms.

Country and Collaboration Networks

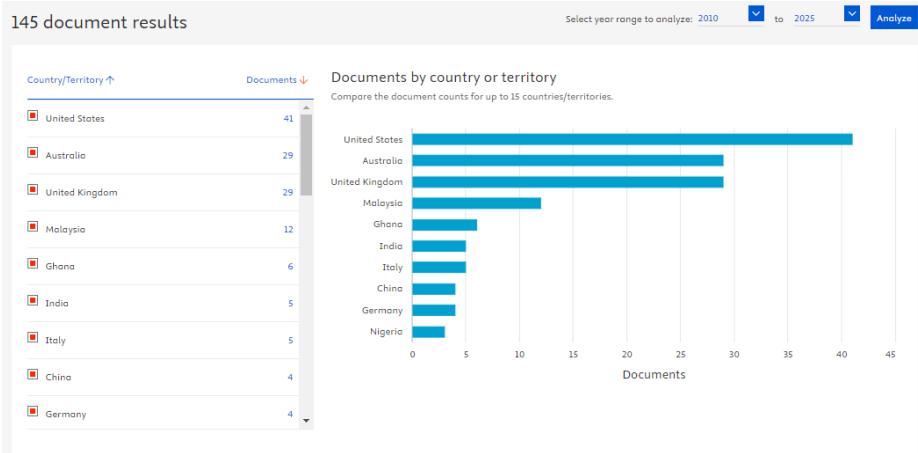


Figure 4. Country and Collaboration Networks based on Scopus Data. (<https://www.scopus.com/>, accessed on Saturday, April 12, 2025, AM UTC/GMT)

Examination of worldwide partnership maps exposes pronounced geographic concentration reflecting unequal access to publishing infrastructure rather than geographic expertise. The United States (41 papers), Australia (29), and United Kingdom (29) account for approximately seventy percent of global output—not because these regions understand romance fraud better, but because these nations possess institutional resources, database access, and English-language publishing privilege that amplify their voices globally. This geographic bias represents what Connell terms the "global knowledge order": a hierarchical system where knowledge from wealthy nations becomes classified as universal theory while Global South scholarship remains epistemically marginalized. Countries like Malaysia, Ghana, India, Nigeria, and China display modest output, yet this reflects publication infrastructure inequality rather than research absence; scholars in these regions likely possess profound knowledge grounded in lived proximity to romance fraud causes and consequences, yet this indigenous understanding remains invisible to Scopus-indexed, English-language scholarship. Global South researchers appear primarily as "collaborators"—a euphemism for epistemic exploitation wherein they provide data and fieldwork while North Atlantic institutions control interpretation and publication authority. Scholarly partnerships between UK and Nigerian researchers, Chinese and Ghanaian academics, superficially suggest reciprocal collaboration, yet first-authorship concentration in Global North institutions reveals hierarchy: intellectual leadership remains concentrated in developed nations while peripheral regions supply data. This core-periphery structure reproduces colonial knowledge arrangements within contemporary academia, systematically denying Global South scholars authority over interpreting their own realities. Future research requires centering Global South scholars as intellectual leaders directing inquiry, not collaborators extracting data for Western interpretation.

Keyword Analysis and Thematic Mapping

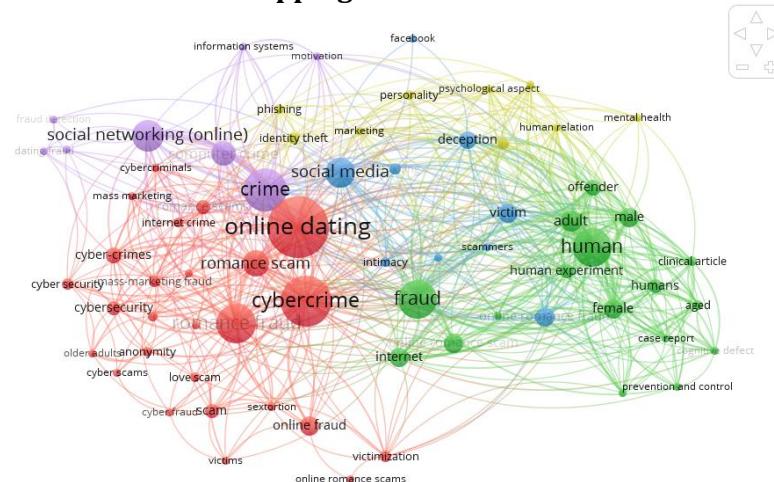


Figure 5. Keyword Co-occurrence Network in Digital Romance Fraud Research (2000–2025) Visualized Using VOSviewer.

Keyword co-occurrence analysis reveals five clusters that appear as natural disciplinary specialization yet actually represent institutional power hierarchies preventing integrated understanding. The cybercrime cluster (red), emphasizing cybersecurity and internet crime, reflects criminology's historical dominance in problem framing treating romance fraud primarily as digital infrastructure problem rather than intimate violation, privileging technical interventions criminologists control while marginalizing psychological and gender-based approaches. The victimology cluster (green), separating victims as demographic categories from trauma analysis, reproduces what feminist criminologists critique: victim objectification as data points rather than agents with agency and recovery narratives. The psychological cluster (blue), isolated from power analysis, treats manipulation as individual pathology rather than systemic exploitation of unequal social power how scammers weaponize gender hierarchies, racial fetishization, and economic desperation. Platform architecture (purple) remains disconnected from political economy: algorithmic amplification of emotional intensity enabling scammer success reflects corporate profit motives, yet platform design emerges as politically neutral in this clustering. Information systems (yellow) focus on technical vulnerability rather than systemic conditions enabling scamming. The fragmentation itself constitutes the problem: no genuine disciplinary integration occurs, only territorial coexistence. This reflects deeper institutional reality academic disciplines organized around centuries-old boundaries and departmental budgets cannot accommodate phenomena requiring simultaneous analysis of digital systems, intimate trauma, economic inequality, and global power asymmetries. The observation that addressing romance fraud "calls for criminologists, clinical psychologists, software developers, and cultural sociologists to convene" acknowledges disciplinary limitation yet mystifies its source: disciplinary silos are not natural but structural arrangements protecting academic turf and professional identity.

Thematic Evolution and Emerging Topics

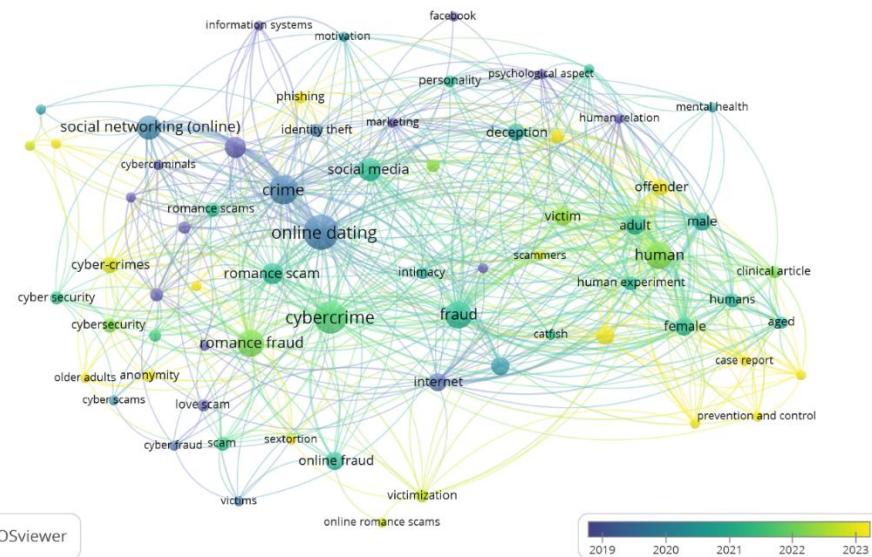


Figure 6. Overlay Visualization of Keyword Co-Occurrence in Digital Romance Fraud Literature (2019–2023) Using VOSviewer. (<https://www.scopus.com/>, accessed on Saturday, April 12, 2025, AM UTC/GMT)

Temporal analysis reveals a troubling shift from structural to individualized understanding. Early research (pre-2020) emphasizing cybercrime implicitly asked structural questions: How do digital systems enable scamming? What regulatory failures exist? Later psychology-focused work (2021-2023) increasingly asks individual questions: How do victims experience trauma? What psychological resilience interventions help? This disciplinary shift constitutes depoliticization—transformation of structural problems into individual pathology. Victims require not merely psychological recovery but structural accountability: platform regulation, law enforcement action, and recognition of systemic conditions. Recent attention to perpetrator perspectives risks romanticization: acknowledging scammers' economic desperation or interpreting schemes as "colonial grievance" must avoid naturalizing exploitation. Romance scamming harms vulnerable victims disproportionately, many economically precarious themselves; critical analysis requires simultaneously holding that scammers operate within desperation conditions AND that victimization practices cause genuine trauma, that global inequality creates scamming incentives AND individual accountability matters, that platforms profit from vulnerability AND victims deserve support. Scholarship has indeed shifted from narrow cybercrime lens toward recognition of trauma, gender, and socio-cultural dimensions—yet primarily through victim individualization rather than structural critique. This represents what Wendy Brown terms "responsibilization": conversion of structural problems into individual responsibility, shifting political accountability from platforms and policymakers toward victims and therapists. The field must resist this depoliticization by maintaining simultaneous analysis of systemic conditions and lived experience.

Publication patterns recorded between 2010 and 2025 demonstrate research attention's correlation with crisis cycles rather than victim suffering's actual trajectory. For the first several years, literature trickled in imperceptibly; by 2017 output climbed steeply, peaking in 2024. This rise tracks internet access expansion, mobile payment proliferation, and COVID-19's pandemic panic—institutional pressures forcing academic recognition rather than

scholarship discovering previously unknown problems. The 2025 decline may reflect indexing lag or momentary research slowdown, yet the upward curve proves romance fraud has transitioned from "fringe worry" to research legitimacy. Yet this journey reveals uncomfortable truths: the problem did not become more real; institutional structures finally recognized previously invisible suffering. This recognition gap—the years between phenomenon emergence and academic attention—represents systematic epistemic injustice: victims' experiences remained academically illegitimate until crisis made them institutionally unavoidable.

The concentrated scholarly ecosystem reveals that knowledge production operates through power relations, not neutral documentation. Elite scholars define legitimate questions, peripheral regions supply data, victims' voices remain marginalized, and structural conditions enabling fraud remain depoliticized. Advancing the field requires not merely additional research but epistemological transformation: centering Global South intellectual leadership, foregrounding victim agency, analyzing academic hierarchies themselves, adopting phenomenon-appropriate methods, and creating genuine interdisciplinary synthesis.

CONCLUSION

This bibliometric analysis maps the evolving interdisciplinary landscape of digital romance fraud (2010–2025), revealing marked growth in research attention, especially after 2020, which publication patterns suggest is increasingly recognized as an important sociotechnical problem demanding integrated scholarly engagement. The analysis documents five thematic clusters cybercrime systems, victimology, psychological manipulation, platform-specific risks, and digital risk behavior illustrating the multifaceted nature of this issue which includes cyber victimization, digital abuse, and technology-enabled platforms, with particular significance from documented authorship concentration wherein Whitty and Cross comprise 21 percent of publications, a pattern that both constrains scholarly entry and creates opportunity for emerging scholars addressing documented research gaps. Conversations are shifting away from technical cybercrime concerns toward more humanistic ones emphasizing mental health, gendered victimization, and perpetrator perspectives a trajectory that policymakers and law enforcement practitioners should recognize demands culturally-informed policy frameworks rather than direct transfer of North American and Western European approaches to Global South contexts where romance fraud manifests differently. Beyond documenting patterns, these findings demand immediate policy action, as romance fraud causes quantifiable harm financial losses reaching billions and psychological trauma equivalent to intimate partner abuse yet remains fragmented across disciplines, preventing coherent prevention response. Policymakers must urgently develop integrated fraud prevention frameworks addressing platform accountability, consumer literacy, and enforcement cooperation; digital platforms should implement algorithmic interventions identifying romance scam markers; law enforcement requires standardized cross-jurisdictional protocols and victim support services; and academic institutions must dismantle disciplinary boundaries through interdisciplinary programs combining criminology, psychology, computer science, communication studies, and public health. Although the study relies exclusively on Scopus, overlooking documents in other databases or non-English languages, and employs bibliometric indicators devoid of content analysis evaluating substantive research quality, these limitations underscore the necessity for more inclusive understanding through expanded Global South-led research initiatives

incorporating victim narratives and community-level responses. Future research must transcend technical extensions toward transformative frameworks with specific priorities including: (1) computational text analysis of romance fraud communication to identify manipulation patterns; (2) network analysis mapping scammer collaboration and cybercriminal organization structures; (3) mixed-methods longitudinal designs following victims across 12–36 months to document psychological recovery; (4) experimental designs testing intervention effectiveness; and (5) substantial expansion of perpetrator research given only 11 percent of current publications center offender perspectives. Researchers should engage directly with policymakers, victims' organisations, and technology companies in participatory knowledge production, with bolstered theoretical frameworks advancing beyond disciplinary silos essential to producing integrative models specifying how technological platform affordances enable manipulation, how victim vulnerability operates across cultural contexts, and how perpetrator motivation intersects with structural inequality. Romance fraud represents not merely a crime category but a failure of digital governance, institutional coordination, and epistemic justice; the field's maturation depends on centering marginalized voices, prioritizing victim agency, demanding accountability from institutions shaping online spaces, and transitioning from fragmented inquiry toward genuinely integrated knowledge production capable of informing evidence-based prevention strategies, cross-sector policy interventions, victim support services, and perpetrator accountability mechanisms that address the complex, interconnected dimensions of this growing sociotechnical crisis.

SUGGESTION

Based on this bibliometric mapping of digital romance fraud research (2010–2025), strategic recommendations address documented gaps across multiple stakeholder levels. Academic researchers should establish cross-disciplinary collaborations integrating criminology, psychology, information science, sociology, and computer science to overcome disciplinary isolation and enable theoretical integration. Prospective cohort studies tracking victims across 12–36 months would document financial recovery and psychological outcomes essential for intervention development. Perpetrator research remains underdeveloped at only 11 percent of publications; ethnographic studies examining motivation and organization would inform prevention strategy. The field's methodological conservatism with 85 percent descriptive statistics must shift toward computational approaches including natural language processing, network analysis, and machine learning for fraud detection. Global South researchers should establish independent regional initiatives in East/Southeast Asia, sub-Saharan Africa, and Latin America, requiring investment in infrastructure and publishing support. Culturally-grounded studies examining diaspora networks, family structures, and informal community responses would generate knowledge inaccessible to external researchers. Research capacity building through mentorship networks would reduce barriers to independent scholarship and document informal victim support systems filling evidence gaps regarding effective interventions.

Policymakers and practitioners must commission jurisdiction-specific research rather than importing North American and Western European frameworks given documented regional variation. Governments should invest in specialized victim support infrastructure including psychological counseling and financial assistance, recognizing current generic services are insufficient. Randomized controlled trials testing prevention interventions and therapeutic approaches should establish evidence-based policy grounded in rigorous evaluation.

International cooperation mechanisms are essential given romance fraud's multinational nature. Dating platforms should collaborate with researchers on prevention studies examining design features and verification systems affecting fraud incidence, with public reporting of fraud metrics and victim demographics enabling external validation of prevention effectiveness. Platform design should involve victims ensuring technological responses address actual needs. Journal editors should establish special issues devoted to interdisciplinary romance fraud research and implement systemic interventions reducing Global North publication bias through Global South author recruitment, reduced fees, and editing support. Mandatory methodological transparency would enable reproducibility and comparison across studies.

Funding agencies should allocate resources for computational and experimental designs, expand Global South research capacity through independent project funding, prioritize interdisciplinary team science, and commission systematic reviews providing evidence-based guidance unavailable from isolated studies. The field must establish coordinated research priorities through stakeholder convening involving researchers, policymakers, practitioners, victims, and technology companies. Developing consensus definitions and standardized outcome measures would enable meaningful comparison across studies. Establishing a global research network connecting researchers and practitioners across disciplines and geographies would facilitate collaboration addressing this global phenomenon with locally-specific manifestations. Systematically integrating victim voice in research design, ensuring victims are essential knowledge contributors rather than passive research subjects, remains critical for advancing the field's understanding and developing effective interventions.

THANK YOU-NOTE

Thank you for engaging with our article. We sincerely appreciate your time and attention. We hope this study's interdisciplinary mapping offers a meaningful contribution to understanding digital romantic fraud, supporting future research, strengthening prevention strategies, and encouraging collaboration across fields. Your interest helps amplify the relevance and impact of this work.

REFERENCES

Aparicio, G., Iturralde, T., & Rodríguez, A. V. (2023). Developments in the knowledge-based economy research field: a bibliometric literature review. *Management Review Quarterly*, 73(1), 317–352. <https://doi.org/10.1007/s11301-021-00241-w>

Baas, J., Schotten, M., Plume, A., Côté, G., & Karimi, R. (2020). Scopus as a curated, high-quality bibliometric data source for academic research in quantitative science studies. *Quantitative Science Studies*, 1(1), 377–386. https://doi.org/10.1162/qss_a_00019

Bilz, A., Shepherd, L. A., & Johnson, G. I. (2023). Tainted Love: A Systematic Literature Review of Online Romance Scam Research. *Interacting with Computers*, 35(6), 773–788. <https://doi.org/10.1093/iwc/iwad048>

Buil-Gil, D., & Zeng, Y. (2022). Meeting you was a fake: investigating the increase in romance fraud during COVID-19. *Journal of Financial Crime*, 29(2), 460–475. <https://doi.org/10.1108/JFC-02-2021-0042>

Bukar, U. A., Sayeed, M. S., Razak, S. F. A., Yogarayan, S., Amodu, O. A., & Mahmood, R. A. R. (2023). A method for analyzing text using VOSviewer. *MethodsX*, 11. <https://doi.org/10.1016/j.mex.2023.102339>

Carter, E. (2023). Confirm Not Command: Examining Fraudsters Use of Language to Compel

Victim Compliance in Their Own Exploitation. *British Journal of Criminology*, 63(6), 1405–1422. <https://doi.org/10.1093/bjc/azac098>

Centre for Science and Technology Studies of Leiden University. (2025). *VOSviewer - Features - Highlights*. <Https://Www.Vosviewer.Com/Features/Highlights>. <https://www.vosviewer.com/features/highlights>

Chabowski, B. R., Gabrielsson, P., & Mena, J. A. (2022). Using bibliometric research to advance the business-to-business sustainability literature: Establishing an integrative conceptual framework for future application. *Industrial Marketing Management*, 102, 527–545. <https://doi.org/10.1016/J.INDMARMAN.2022.01.009>

Cross, C., Dragiewicz, M., & Richards, K. (2018). Understanding Romance Fraud: Insights from Domestic Violence Research. *British Journal of Criminology*, 58(6), 1303–1322. <https://doi.org/10.1093/bjc/azy005>

Dönmez, İ. (2024). Sustainability in Educational Research: Mapping the Field with a Bibliometric Analysis. In *Sustainability (Switzerland)* (Vol. 16, Issue 13). Multidisciplinary Digital Publishing Institute (MDPI). <https://doi.org/10.3390/su16135541>

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285–296. <https://doi.org/10.1016/j.jbusres.2021.04.070>

Elsevier. (2025). *Scopus content* – Elsevier. <https://www.elsevier.com/products/scopus/content>

Hamidah, I., Sriyon, & Hudha, M. N. (2020). A Bibliometric Analysis of Covid-19 Research using VOSviewer. *Indonesian Journal of Science and Technology*, 5(1), 154–170.

Hosseini, S., Baziad, H., Norouzi, R., Jabbedari Khiabani, S., Gidófalvi, G., Albadvi, A., Alimohammadi, A., & Seyedabrizhani, S. (2021). Mapping the intellectual structure of GIS-T field (2008–2019): a dynamic co-word analysis. *Scientometrics*, 126(4), 2667–2688. <https://doi.org/10.1007/s11192-020-03840-8>

Ife, C. C., Davies, T., Murdoch, S. J., & Stringhini, G. (2019). *Bridging Information Security and Environmental Criminology Research to Better Mitigate Cybercrime*. <http://arxiv.org/abs/1910.06380>

Jan van Eck, N. (2023). *Visualizing Science Using OpenAlex and VOSviewer*.

Kemeç, A., & Altinay, A. T. (2023). Sustainable Energy Research Trend: A Bibliometric Analysis Using VOSviewer, RStudio Bibliometrix, and CiteSpace Software Tools. *Sustainability (Switzerland)*, 15(4). <https://doi.org/10.3390/su15043618>

Lazarus, S., Whittaker, J. M., McGuire, M. R., & Platt, L. (2023). What do we know about online romance fraud studies? A systematic review of the empirical literature (2000 to 2021). *Journal of Economic Criminology*, 2, 100013. <https://doi.org/10.1016/j.jeconc.2023.100013>

Masrek, M. N., Baharuddin, M. F., & Syam, A. M. (2025). Determinants of Behavioral Intention to Use Generative AI: The Role of Trust, Personal Innovativeness, and UTAUT II Factors. *International Journal of Basic and Applied Sciences*, 14(4), 378-390. <https://doi.org/10.14419/44tk8615>

Maria, M. R., Ballini, R., & Souza, R. F. (2023). Evolution of Green Finance: A Bibliometric Analysis through Complex Networks and Machine Learning. *Sustainability (Switzerland)*, 15(2). <https://doi.org/10.3390/su15020967>

Mejia, C., Wu, M., Zhang, Y., & Kajikawa, Y. (2021). Exploring Topics in Bibliometric Research Through Citation Networks and Semantic Analysis. In *Frontiers in Research Metrics and*

Analytics (Vol. 6). Frontiers Media SA. <https://doi.org/10.3389/frma.2021.742311>

Nomleni, K. E. J. (2023). Analisis Fenomena Romance Scam dalam Komunikasi Interpersonal Love Scammer & Korban. In *Jurnal Communio : Jurnal Ilmu Komunikasi* (Vol. 12, Issue 2). www.kompas.com

Novia, D., Husaeni, A., & Fitria, D. (2022). How to Calculate Bibliometric Using VOSviewer with Publish or Perish (Using Scopus Data): Science Education Keywords How to Calculate Bibliometric Using VOSviewer with Publish or Perish ... | 248. *Indonesian Journal of Educational Research and Technology*, 2(3), 247-274. <https://doi.org/10.17509/ijert.v4i1.57213>

Nurse, J. R. C. (2019). Cybercrime and You: How Criminals Attack and the Human Factors That They Seek to Exploit. In *The Oxford Handbook of Cyberpsychology* (pp. 662-690). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780198812746.013.35>

Rege, A. (2009). What's Love Got to Do with It? Exploring Online Dating Scams and Identity Fraud. *International Journal of Cyber Criminology*, 3(2), 494-512.

Rubin, H. (2022). Structural Causes of Citation Gaps. *Philosophical Studies*, 179. <https://doi.org/10.1007/s11098-021-01765-3>

Sayekti, R., Batubara, A. K., Aditya, M., Purwaningtyas, F., & Syam, A. M. (2021). When the "Library as Place" Matters: A Case Study of an Academic Library. *Library Philosophy & Practice*.

Shahri, N. H. N. M., & Ali, Z. M. (2024). Bibliometric perspectives in mapping the progress of river water quality index studies. In *Water Quality Research Journal* (Vol. 59, Issue 4, pp. 232-267). IWA Publishing. <https://doi.org/10.2166/wqrj.2024.022>

Sharkey, Jennifer A, Feather, Jacqueline S, & Goedeke, Sonja. (2021). The current state of relationship science: A cross-disciplines review of key themes, theories, researchers and journals. *Journal of Social and Personal Relationships*, 39(4), 864-885. <https://doi.org/10.1177/02654075211047638>

Sifaiyya, Y., & Andriani, S. (2024). Mapping the Trends and Developments in Property Tax Research: A Bibliometric and Network Visualization Analysis with VOSviewer. *Accounting Research Unit (ARU Journal)*, 5(2), 101-110. <https://doi.org/10.30598/arujournalvol5iss2pp101-110>

Sjögårde, P. (2022). Improving overlay maps of science: Combining overview and detail. *Quantitative Science Studies*, 3(4), 1097-1118. https://doi.org/10.1162/qss_a_00216

Sohaimi, N. S., Hanafiah, N. A. H., Manaf, A. A., & Tülay Zivali. (2024). Mapping the Discourse: Scientometric Analysis of Affordable Housing Research Trends. *Journal of Contemporary Urban Affairs*, 8(2). <https://doi.org/10.25034/ijcua.2024.v8n2-8>

Southeast Europe Police Chiefs Association. (2023, March 30). *Conference "SEPCA countries in the fight against Cybercrime" • SEPCA*. [Https://Www.Sepcaregion.Eu/Conference-Sepca-Countries-in-the-Fight-against-Cybercrime/](https://Www.Sepcaregion.Eu/Conference-Sepca-Countries-in-the-Fight-against-Cybercrime/). <https://www.sepcaregion.eu/conference-sepca-countries-in-the-fight-against-cybercrime/>

Tomaszewski, R. (2023). Visibility, Impact, and Applications of Bibliometric Software Tools through Citation Analysis. *Scientometrics*, 128(7), 4007-4028. <https://doi.org/10.1007/s11192-023-04725-2>

Ullah, M., Shahid, A., ud Din, I., Roman, M., Assam, M., Fayaz, M., Ghadi, Y., & Aljuaid, H. (2022). Analyzing Interdisciplinary Research Using Co-Authorship Networks. *Complexity*, 2022. <https://doi.org/10.1155/2022/2524491>

Wang, Y., Meng, X., Xu, C., & Zhao, M. (2023). Research on electronic word-of-mouth for product

and service quality improvement: bibliometric analysis and future directions. *International Journal of Intelligent Computing and Cybernetics*, 16(1), 68-98. <https://doi.org/10.1108/IJICC-03-2022-0065>

Whitty, M. T. (2013). The scammers persuasive techniques model. *British Journal of Criminology*, 53(4), 665-684. <https://doi.org/10.1093/bjc/azt009>

Whitty, M. T., & Buchanan, T. (2016). The online dating romance scam: The psychological impact on victims – both financial and non-financial. *Criminology and Criminal Justice*, 16(2), 176-194. <https://doi.org/10.1177/1748895815603773>

Xie, Q., & Waltman, L. (2025). A comparison of citation-based clustering and topic modeling for science mapping. *Scientometrics*, 130(5), 2497-2522. <https://doi.org/10.1007/s11192-025-05324-z>

Xu, G., Hu, W., Qiao, Y., & Zhou, Y. (2020). Mapping an innovation ecosystem using network clustering and community identification: a multi-layered framework. *Scientometrics*, 124(3), 2057-2081. <https://doi.org/10.1007/s11192-020-03543-0>

Xue, Zhang, Zhiqiang, Zhang, & Zhengyin, Hu. (2023). Exploring interdisciplinarity of science projects based on the text mining. *Journal of Information Science*, 01655515231182075. <https://doi.org/10.1177/01655515231182075>