

conference version

# Computational Analysis of Literary Communities: Event-Based Social Network Study of St. Petersburg 1999–2019

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## Note

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**Abstract.** This paper presents a computational analysis of literary networks in St. Petersburg from 1999 to 2019, using data from the SPbLitGuide newsletter and exploring cultural connections through event co-participation. By processing 15,012 cultural events with 11,777 participants in 862 venues, we reveal the structure and evolution of the literary network in post-Soviet Russia. Our methodology combines network, spatial, and temporal approaches, demonstrating how systematic event recording can capture patterns of literary community formation typically invisible to traditional literary history. The study covers the last decades of St. Petersburg's predominantly offline literary life before its digital and geopolitical disruptions, providing both a historical record and a methodological framework applicable to other cultural contexts. Our findings show a complex ecosystem characterised by dense local clusters, influential bridge figures, and distinct community boundaries, while documenting crucial shifts in the city's literary infrastructure over two decades.

## 1. Introduction

Literary communities can be understood through multiple analytical lenses — aesthetic movements, stylistic affiliations, publication networks, institutional memberships, translation flows, or interpretive strategies. This study examines literary community formation through the material practices and embodied experiences of literary life: event co-participation, venue selection, and the situated social interactions that constitute the lived reality of literary culture.

Cultural events are pivotal sites for both the formation of literary communities and the circulation of cultural meanings. Here individual actors coalesce into recognizable communities, and exposure to dialogue, diverse voices, aesthetic positions, and creative practices shapes personal literary development. These gatherings serve as spaces where collective memory — shared understandings of literary tradition, influential figures, and aesthetic values — is performed and transmitted. Attending particular readings, discussions, or festivals reflects not only social affiliation but also intellectual curiosity and aesthetic preferences, creating communities bound together by both personal relationships and shared creative influences.

These patterns of shared participation in readings, discussions, book launches, and festivals both reflect existing relationships and create new ones, forming complex networks

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of cultural association where aesthetic alignments manifest through social interaction. 19  
Yet these crucial patterns of literary life often remain invisible to historical analysis. 20

This study presents a computational framework for mapping these networks through 21  
event participation, drawing on a unique dataset of cultural events in St. Petersburg from 22  
1999 to 2019. By combining network analysis with spatial and temporal approaches, we 23  
describe the structure of literary life as it manifests in physical spaces and evolves over 24  
time, and the patterns of community formation in the cultural capital of post-Soviet 25  
Russia. 26

This approach offers a distinct perspective that complements text-based analyses by 27  
exploring how communities are actively constituted and sustained through patterns of 28  
direct engagement in specific urban spaces and temporal rhythms. It captures ephemeral 29  
interactions that leave few textual traces, maps the concrete geographies and temporal 30  
rhythms of literary engagement, and brings to light the "hidden figures" — event 31  
organizers, moderators, and facilitators — who function as essential nodes in literary 32  
networks despite their absence from traditional publication metrics. 33

The literary ecosystem of St. Petersburg presents an optimal case study for this 34  
computational approach to cultural network analysis. As a metropolis with a historically 35  
rich tradition of literary salons and public readings, St. Petersburg has always been the 36  
perfect place to explore literary communities. Our framework shows who participates 37  
in literary life and how, and generates spatio-temporal mappings of cultural interaction 38  
and offer new approaches to geocultural evolution. 39

Significantly, our data covers a transformative period in Russian cultural life. The years 40  
1999–2019 witnessed major shifts: from Soviet-era divisions between official, unofficial 41  
and émigré literature to a more integrated literary field; from purely offline interaction to 42  
the use of internet tools to drive a community; and from chaotic and almost underground 43  
cultural movements to an increasingly commercialised literary infrastructure. Since 44  
2020, this literary ecosystem has undergone even more dramatic changes — first through 45  
the forced digitisation of cultural life by the COVID pandemic, and then through the 46  
profound disruption and geographical dispersion of literary networks following the 47  
events of 2022. Our analysis thus preserves a detailed record of the last decades of a 48  
literary world that has since been fundamentally transformed. 49

## 2. Network Analysis in Literary Studies 50

The computational analysis of literary networks has evolved through distinct method- 51  
ological paradigms, each implementing specific algorithmic approaches to capture 52  
different dimensions of literary relationships. Initial frameworks focused on three pri- 53  
mary data architectures: the algorithmic extraction of character interaction networks 54  
(David Elson 2010), bibliometric analysis of publication and citation patterns (So and 55  
Long 2013), and the computational mapping of translation flows (Roig-Sanz and Fólica 56  
2021). Moretti's seminal work (2005) established network visualization as a foundational 57  
analytical framework, subsequently expanded through contemporary investigations of 58  
digital literary spaces (Basnet and Lee 2021). 59

Traditional bibliometric approaches examine co-authorship patterns and publisher affil- 60

iations to reveal formal literary relationships. Institutional data provide information on organisational memberships and collaborations, while social media analysis enables the mapping of contemporary digital literary communities. Biographical sources — including memoirs, personal documentation and travel records — provide complementary evidence for understanding historical literary networks. 61  
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Correspondence network analysis has proved particularly valuable in the study of historical literary figures. Notable projects include the *Republic of Letters* and the correspondence network of early modern merchants. While these analyses provide valuable insights into specific literary figures and their immediate connections, there are obvious limitations to their scope. 66  
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While these approaches have significantly advanced our understanding of literary networks, we believe that the potential of network analysis extends far beyond texts, quotations, and correspondence. Cultural events — readings, discussions, festivals, and informal gatherings — represent a rich but largely untapped source of data on the formation of literary communities. These events reflect actual patterns of interaction and collaboration that often precede or exist independently of textual production. By treating event records as historical sources, we can examine how literary communities form and evolve through direct participation rather than through textual traces alone. 71  
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### 3. Event-Based Network Analysis

This event-based approach introduces an experimental framework for analysing literary networks, focusing on cultural events as the primary unit of interest. Here we have a possibility to observe direct social interactions as they occur in physical spaces. This direct observation reveals informal relationships and emerging communities that may never be recorded in published works or correspondence. This provides a different picture of how literary networks actually function. 79  
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While social media analysis captures casual acquaintances and declared or performative connections, co-participation in events identifies deeper conceptual and aesthetic alignments between participants. Co-participation in poetry readings, book presentations or literary discussions indicates not only physical co-presence, but also meaningful cultural collaboration or artistic affinity. Moreover, event-based analysis describes interactions across generations, including influential figures from older cohorts who have never established a digital presence. This focus on real-world cultural engagement documents both operational and aesthetic relationships, revealing how literary networks function through concrete patterns of artistic collaboration and shared cultural projects. 86  
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The event-based methodology captures a broader range of actors than traditional analyses. Beyond examining authors solely through their published works, the data reveals the organisational and curatorial activities performed by poets, writers, and other cultural actors who form literary life through event programming and community building. These figures, often invisible in traditional literary histories focused on textual production, emerge as key nodes in the network of cultural production and transmission 95  
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102 through their dual roles as both creative practitioners and cultural mediators. They perform crucial mediating functions of gatekeeping (selecting speakers/themes), con-

necting (bringing together diverse participants), legitimizing (providing platforms for emerging voices), and framing (shaping how literary activities are perceived and categorized) (Janssen and Verboord 2015). This reveals how literary communities are sustained not only through textual creation but through the organizing labor that creates spaces for cultural exchange and collaboration. 103  
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### 3.1 Events as Community-Structuring Mechanisms 108

Cultural events serve as powerful mechanisms for structuring literary communities, creating patterns of interaction that sculpt the literary landscape. Events are not merely passive reflections of existing networks, but active sites where communities form and evolve. Each event contributes to the establishment of literary connections, while patterns of participation reveal how different groups within the literary world interact. 109  
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The spatial dynamics of literary life matter. Venues vary in their centrality to literary life, and their geographical distribution affects patterns of access and participation. Some spaces become cultural hubs through repeated use, while others remain peripheral, creating distinct patterns of literary activity across the urban landscape. For example, some venues become regular meeting places for particular literary communities, while others facilitate interaction between different groups. The cultural geography of St. Petersburg creates hierarchies of venue appeal rooted in both practical accessibility and literary memory. Historically significant venues like the Podval Brodyachev Sobaki (Stray Dog Cellar) or the Pushkin Museum at Moyka 12 carry profound cultural resonance, connecting contemporary literary events to the city's literary past and adding symbolic weight that transcends their immediate practical function. Established institutions in the historic center benefit from this layered cultural prestige alongside mainstream visibility, making them accessible to diverse audiences and facilitating broad community interaction. In contrast, peripheral venues — local district libraries, night clubs, or alternative spaces in city margins — serve as essential spaces for literary communities that exist outside the mainstream cultural hierarchy: alternative groups who deliberately reject heritage culture and institutional legitimacy, and marginalized communities (such as naive poetry groups) who are excluded from prestigious venues. These peripheral spaces provide necessary cultural territory for authentic artistic expression beyond the constraints of official literary culture. This dynamic means that venue selection reflects not just aesthetic preferences but strategic decisions about cultural legitimacy, audience reach, and connection to St. Petersburg's literary tradition. 114  
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## 4. Saint Petersburg's Case 136

Event-based approach appears particularly promising for analysing the literary scene in St. Petersburg. The city's dense network of cultural institutions, which mix traditional venues (such as the Akhmatova Museum) with alternative spaces (such as the Poryadok Slov bookshop or the city's streets) and informal meeting places (including the apartment concerts, квартирики, that continue the Soviet tradition), provides an ideal setting for studying how physical spaces affect literary life. The spatial concentration of literary activity in the historical centre, particularly along Nevsky Prospekt and in the area between the Fontanka and Moika rivers, maintains historical patterns of cultural 137  
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geography, while new literary spaces emerge in peripheral areas. 145

The complex interaction between formal and informal literary circles in St. Petersburg 146  
 makes it a natural case for the event-based approach. The coexistence of multiple cultural 147  
 venues — from established academic institutions and state libraries to independent 148  
 bookstores and experimental poetry bars — creates a rich field for studying how different 149  
 literary groups interact with the city's environment. Event data includes large-scale 150  
 events at major cultural institutions and informal gatherings in alternative spaces, giving 151  
 a full picture of literary life at various scales and in different settings. 152

## 5. SPbLitGuide Dataset 153

The primary data corpus for the event-based exploration of the literary network is based 154  
 on the SPbLitGuide newsletter (1999-2019) announcing upcoming literary events, an 155  
 information bulletin that provides unprecedented longitudinal coverage of St. Peters- 156  
 burg's literary ecosystem. Initiated by the philologist and poet Darya Sukhovey, this 157  
 chronicle project originated in the circles of experimental poetry and academic philology, 158  
 although its scope expanded significantly over time. 159

The evolution of the newsletter can be traced through three distinct phases. The first 160  
 phase established distribution through both email and web platforms (via Moscow 161  
 poet Alexander Levin's website), primarily serving experimental and academic literary 162  
 networks. A significant expansion took place in the second phase (2010-2015) through 163  
 a collaboration with *DK Krupskoy*, a permanent book fair in St. Petersburg. This part- 164  
 nership expanded the newsletter's coverage to include mainstream cultural events and 165  
 commercial venues, creating a more nuanced representation of the city's literary life. 166

In the third phase, beginning in 2015, the newsletter's archives and updates were 167  
 collected and transferred to the digital platform of the independent publishing house 168  
*Svoe Izdatelstvo*. Over the years, thanks to Darya Sukhovey's methodical approach, 169  
 the newsletter maintained weekly periodicity and systematic documentation practices, 170  
 resulting in a consistent and detailed record of both central and peripheral literary 171  
 phenomena. 172

The period from 1999 to 2019 came to an end prior to two significant disruptions: the 173  
 COVID-19 pandemic's forced digitalisation of literary life and the 2022 war against 174  
 Ukraine's fundamental reconfiguration of the cultural field. The latter caused a global 175  
 dispersal of literary actors and new ideological break-ups within the community. The 176  
 profound impact of these events is echoed in the newsletter's publication pattern: after 177  
 February 2022, there was a one-year hiatus before publication resumed with a much 178  
 reduced frequency (seven issues in 2023) and a modified scope. 179

The scale of SPbLitGuide becomes clear when compared with similar projects. The 180  
 Moscow-based *MosLitGuide* project (2016-2020) by Anna Golubkova produced about 100 181  
 issues before being closed during the pandemic. The "Literary Life of Moscow" section 182  
 of Dmitry Kuzmin's *Vavilon.Ru* (1997-2003, also reproduced in print) published 66 183  
 issues. SPbLitGuide stands out with more than 1,400 issues, consistent documentation 184  
 methods and wide-ranging coverage of the city's literary life. 185

The newsletter's explicit selection principles, as stated by the curator, demonstrate 186 a commitment to broad and unbiased coverage from the very start. It focused on 187 publicly accessible literary events in St. Petersburg, presenting information without 188 aesthetic evaluation to allow readers to make their own choices. The newsletter covered 189 contemporary literary activities, including author readings, book launches, discussions 190 of contemporary literature, and autograph sessions. While it excluded closed writing 191 groups, routine activities of professional unions, and purely theatrical or musical events, 192 it did include academic conferences on contemporary authors and art exhibitions related 193 to the current literary situation. Significantly, with the permission of the organisers, 194 it also documented informal events such as street actions and home readings. This 195 deliberate inclusivity suggests that while the project originated in experimental poetry 196 circles, its documentary approach aimed to capture the full spectrum of the city's literary 197 landscape. 198

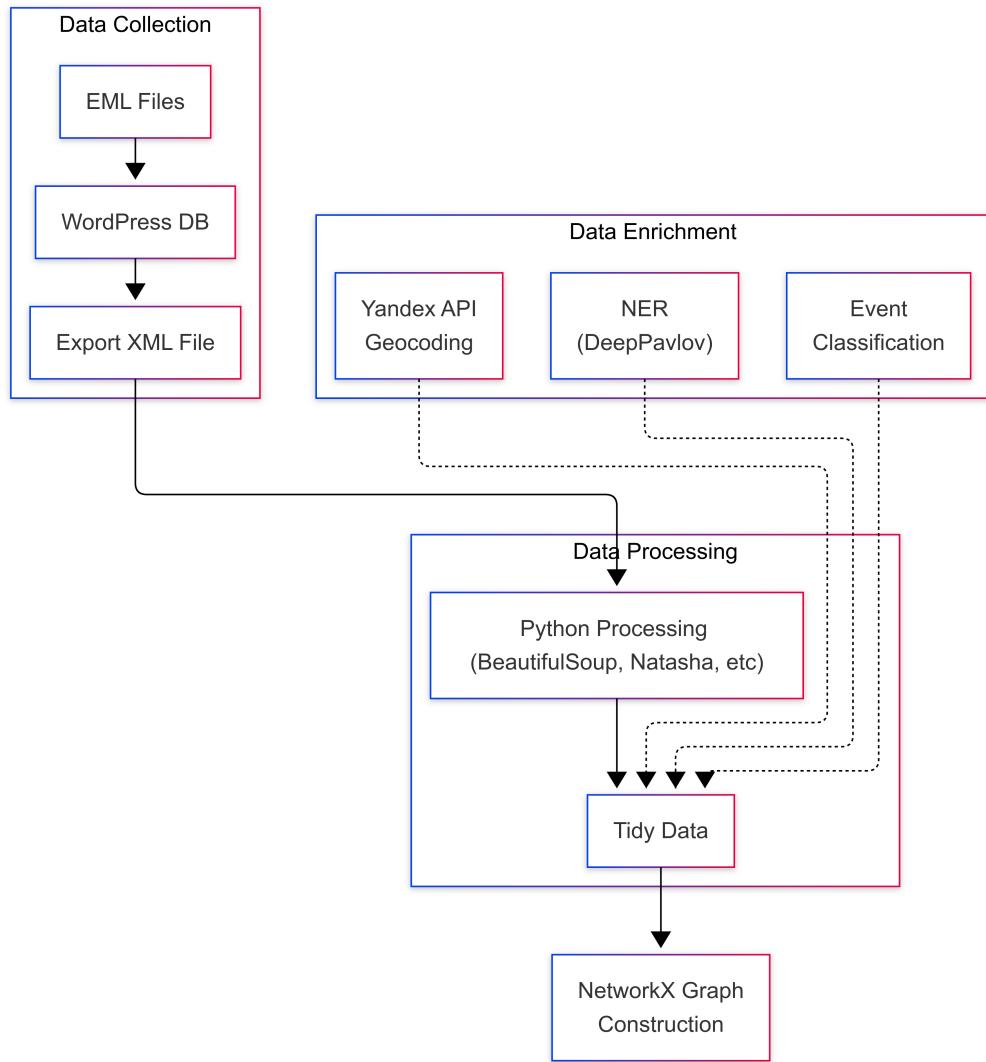
## 5.1 Event Entries and Role Identification

Event descriptions in the SPbLitGuide newsletter range from very brief notices to de- 200 tailed multi-part announcements, but all consistently include the date, time, and place as 201 core attributes. Addresses for all venues are typically listed at the end of each newsletter, 202 which may include anywhere from one to thirty events per issue, depending on the 203 season and level of cultural activity. The source of each entry — be it event organisers, 204 venue owners, presenting authors or the curator herself — is often specified, and this 205 variety of authorship results in significant stylistic diversity: some entries are concise 206 and factual, while others are highly appraising or expressive. Below are two examples: 207

24.04.06 понедельник 19.00 Платформа  
Поэтический вечер. Александр Горнон.

28.04.06 пятница 19.00 Библиотека им. Маяковского  
«АзиЯ-плюс» представляет. Юбилейный вечер к 70-летию Виктора Сосноры. 211  
В программе вечера примут участие: Виктор Соснора, артисты Сергей 212  
Дрейден и Лев Елисеев, музыканты Евгения Логвинова и Николай Якимов, 213  
а также петербургские литераторы и издатели. Будут представлены 214  
аудиокнига с авторским чтением стихов «В. Соснора. Избранное» из 215  
серии «Голос поэта» («АзиЯ-плюс», 2006) и книга «Куда пошёл? И где 216  
окно?» (переиздание — СПб., «Пушкинский фонд», 2006) В фойе — 217  
выставки книг, архивных фотографий и авторской графики Сосноры. 218

Almost every event description lists the names of active participants — such as speakers, 219 performers, organizers, or moderators. Sometimes these roles are explicit; in other cases, 220 they are implied by context. Alongside these, event texts may mention other individuals: 221 as part of an organization's name, as the subject of commemoration, or in promotional 222 contexts highlighting connections with well-known figures. Although references to 223 absent or associated figures can emphasise broader cultural connections, our analysis 224 focuses on actual participation. Hence, we only extract the names of individuals who 225 were directly involved in the events, as these represent veritable social connections 226 within the literary community. 227

**Figure 1:** Data Processing Pipeline

## 6. Data processing pipeline

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In 2015, during the migration of the newsletter to the *Svoe Izdatelstvo* platform, the entire archive of previous letters was collected from the mailboxes of the maintainer and her friends, which formed the basis for the creation of the dataset. Since then, all new issues have been published through the same database, providing a secure and complete text corpus. The transformation of raw digital born data into a structured analytical dataset required the design and implementation of a multi-stage processing architecture (shown in Figure 1).

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The pipeline begins with source data collection, where primary data is preserved in electronic mail (EML) format, preserving original message structures and metadata integrity. This initial corpus is then systematically converted into a structured database format within the WordPress environment, providing a stable storage layer with XML export functionality for future processing operations.

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The primary processing layer uses several Python tools to extract and structure the raw data. BeautifulSoup facilitates HTML parsing, while the Natasha library provides a

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specific processing feature for Russian language content. String matching operations 243  
are handled by the difflib library, complemented by regular expression processing for 244  
content extraction. 245

After initial processing, data is normalised to achieve consistency and compatibility. This 246  
stage standardises the extracted information and implements uniform data structures in 247  
preparation for the analysis stage. Geographical enrichment follows, using the Yandex 248  
API for coordinate extraction and address standardisation, enabling precise spatial 249  
mapping of literary events across St. Petersburg. 250

The entity recognition layer is a critical component of the processing architecture. Build- 251  
ing on the systematic evaluation of NER models for Russian cultural texts (Levchenko 252  
[2024a](#)), a multi-stage automated pipeline with final manual validation was implemented. 253  
This stage used DeepPavlov's multilingual BERT model for named entity recognition, 254  
followed by a post-processing step to handle Russian grammatical forms, different 255  
writing styles, patronymics and institution names. 256

The automated pipeline continued with entity enrichment, where identified entities 257  
were automatically mapped to VIAF and Wikidata identifiers using their respective 258  
APIs. This automated enrichment process significantly improved the interoperability of 259  
the dataset with other cultural heritage resources. The entire dataset was then manually 260  
validated as a final quality control step, verifying both the entity recognition results and 261  
the automated identifier assignments. 262

The final stage focuses on network analysis, using NetworkX for graph construction and 263  
implementing community detection algorithms. This layer enables the computation of 264  
various network metrics, providing the analytical basis for understanding the structure 265  
and evolution of the St. Petersburg literary communities. 266

The execution of this pipeline has produced significant results, successfully processing 267  
15,012 discrete event instances and identifying 11,777 normalised attendee entities. The 268  
pipeline has also mapped 862 venue nodes to 817 unique geospatial coordinates and 269  
documented over 100,000 attendance records. 270

Yet, processing the SPbLitGuide dataset presented several significant procedural challenges, 271  
particularly in the areas of entity recognition and normalisation. Three main 272  
categories of challenges arise during the data processing implementation. 273

First, the complexity of name variations caused a significant difficulty for entity recognition. 274  
The dataset contained multiple representations of the same individual across 275  
different events and time periods. For example, a single author could appear as both 276  
a patronymic and diminutive full name, or with different combinations of initials and 277  
surnames. This complexity was multiplied by the diverse cultural origins of the names 278  
in the dataset, ranging from Russian and post-Soviet to European and Asian naming 279  
conventions. The literary nature of the dataset also introduced different formatting 280  
conventions, including the use of pseudonyms, artistic names and alternative spellings. 281

Second, contextual ambiguity created significant issues for accurate entity resolution. 282  
Names often appeared in multiple roles within event descriptions - as organisers, par- 283  
ticipants or referenced authors - requiring careful disambiguation. The dataset often 284  
contained references to historical figures alongside contemporary participants, requiring 285

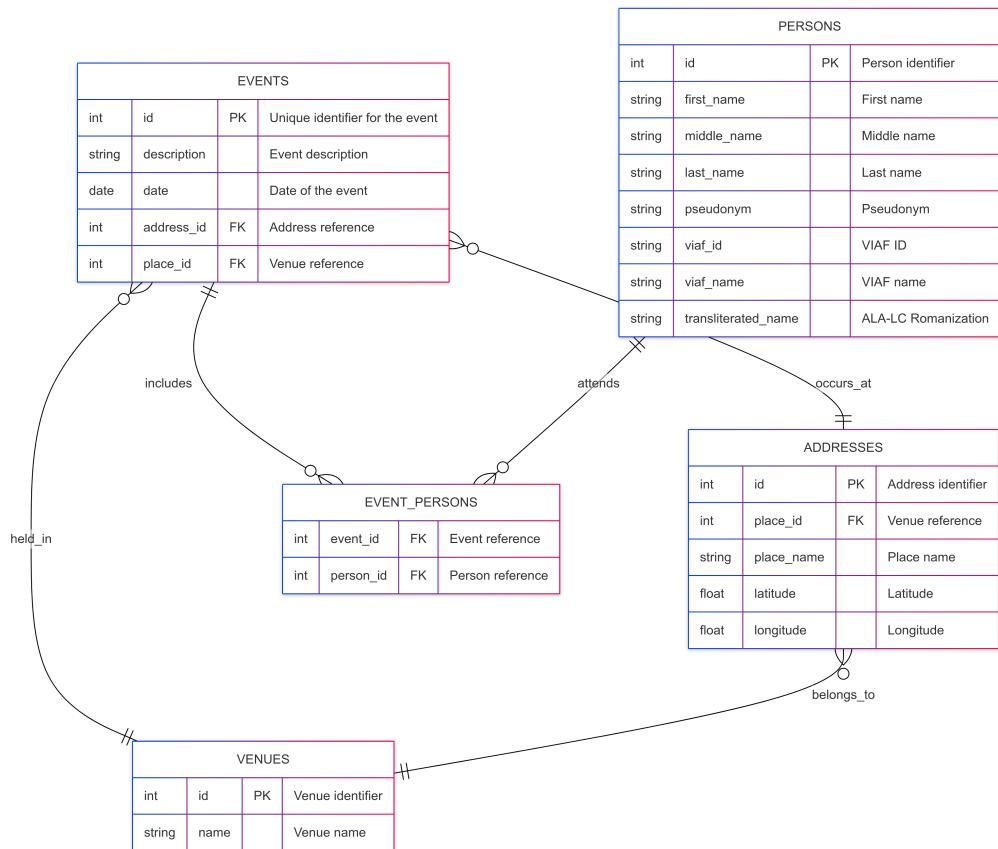


Figure 2: Entity-relationship diagram of the relational structure of the SPbLitGuide dataset

a distinction to be made between actual event participants and mentioned personalities. 286 This complexity was particularly evident in events such as literary commemorations or 287 academic conferences, where historical figures were often referenced but not present. 288

Thirdly, the mixed use of formal and informal name presentations required additional 289 attention. The integration of multilingual content, particularly for international events 290 or cross-cultural literary gatherings, added another layer of complexity to the processing 291 pipeline. 292

The processing combined DeepPavlov/Natasha libraries for initial normalization, Lev- 293 enshtein distance calculations to merge name variants of the same individuals, and 294 context-based analysis of event descriptions to distinguish different persons with similar 295 names, with manual validation of all suggestions. The resulting dataset implements a 296 relational structure optimised for network analysis and spatio-temporal queries (Figure 297 ??). The data model comprises five core entities: events serve as the central unit linking 298 persons, venues, addresses, and participation records. This architecture enables diverse 299 analytical queries: tracking individual activity across communities and venues, map- 300 ping geographical clustering of communities, analysing temporal patterns in event types 301 and participation, identifying bridge and key figures, and measuring spatial evolution 302 of literary activity. The full technical specification and dataset are available via Zenodo 303 (Levchenko 2024b). 304

## 7. Network construction methodology

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Using the resulting dataset with the list of participants extracted from the event description, we construct an undirected weighted graph based on event co-participation, operating on the premise that shared event attendance indicates social interaction and cultural connection between literary actors. Nodes represent individual participants, while edges represent co-participation in events.

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To account for event size differences, we implement a normalisation strategy that reflects the intuition that interactions in smaller gatherings are likely more significant than those in larger events. For each event, if there are  $n$  participants, every participant can potentially interact with  $(n-1)$  other participants. Therefore, we assign a weight of  $1/(n-1)$  to each pair of participants in that event. For example, in a small reading with 3 participants, each pair receives a weight of  $1/2$ , while in a large festival panel with 10 participants, each pair receives a weight of  $1/9$ . When participants co-occur in multiple events, their edge weight is the sum of these normalized interaction weights across all shared events.

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The complete network consists of 10,656 nodes connected by 106,127 edges, showing a distinct core-periphery structure with 387 separate connected components. The largest connected component contains 9,621 nodes (90% of the participants), representing the core of the active St Petersburg literary community. This main component has a high clustering coefficient (0.753), indicating strong local group formation, with an average shortest path length of 3.702 and a network diameter of 13. The low network density (0.002) and skewed degree distribution (mean: 19.92, median: 8) reveal a selective and hierarchical structure, where a small number of participants maintain extensive connections while most operate in smaller networks.

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This network structure exhibits classic "small world" characteristics, combining high local clustering with efficient global connectivity. In particular, the clustering coefficient of our network (0.753) exceeds those found in Broadway musical collaboration networks (0.41, Uzzi and Spiro 2005) and scientific collaboration networks (0.45, M.E.J.Newman 2001), suggesting that literary communities in St. Petersburg form particularly tight local groups. However, this strong local clustering exists alongside multiple unconnected components, reflecting a literary field that combines intense local collaboration with distinct subcommunities.

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### 7.1 Community detection and basic structure

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Application of the Louvain community detection algorithm (resolution 1.0) has identified 49 distinct communities within the main component, demonstrating the complex segmentation of the St. Petersburg literary world. These communities show clear differences in size and patterns of activity, with several large groups emerging as particularly significant (see Table 1).

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The analysis of the largest detected communities in the St. Petersburg literary network finds remarkably similar structural characteristics despite differences in size. While the communities range from 584 to 1363 members, they maintain comparable internal structural metrics: clustering coefficients fall within a narrow range (0.697-0.781) and

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**Figure 3:** Network visualization of the largest connected component ( $N = 9,621$  nodes). Communities identified by modularity optimization are shown in different colors. Edge weights  $\geq 13$  displayed. Layout: OpenOrd algorithm.

ID	Size	Events/Year	Clustering	Internal Density	External Connections	Key Figures
1	1363	73.55	0.772	0.014	7164	Vladimir Antipenko Maria Agapova Ilya Zhigunov
5	1286	120.98	0.777	0.024	16603	Darya Sukhovey Arsen Mirzaev Dmitry Grigoriev
3	911	85.32	0.729	0.010	5180	Yakov Gordin Andrey Ariev Alexander Kushner
0	866	60.44	0.781	0.014	6633	Alexander Skidan Pavel Arseniev Arkady Dragomoshchenko
4	605	33.83	0.778	0.022	3107	Ivan Pinzhenin Roma Gonza Andrey Nekrasov
7	590	70.27	0.741	0.027	8014	Evgeny Myakishev Evgeny Antipov Galina Ilyukhina
17	584	70.71	0.697	0.014	4244	Pavel Krusanov Sergey Nosov Alexander Sekatsky

**Table 1:** Major Literary Communities in St. Petersburg (1999-2019): Size, Activity, Network Metrics, and Key Figures (sorted by community size). Key figures identified by highest degree centrality within each community, representing the most connected participants

internal densities are consistently low (0.010-0.024).	347
<p>The most notable quantitative difference is in external connections, where Community 5 has a much higher connectivity (16,603 external connections) than the other communities (ranging from 4,244 to 8,014). However, this difference in external connections does not correspond to substantial differences in internal structure, as evidenced by the similar clustering and density values.</p>	
<p>The consistency of these network metrics across communities of different sizes suggests that literary groups in St. Petersburg tend to develop similar patterns of internal organisation, regardless of their size or central figures. The Louvain algorithm successfully identified stable groupings, but their structural similarities suggest that these communities, while distinct, follow comparable patterns of connection and interaction.</p>	
<b>7.2 Aesthetic Validation of Detected Communities</b>	358
<p>The communities identified through event co-participation by the Louvain algorithm could be qualitatively examined to see if they correlate with known aesthetic groupings or stylistic schools within the St. Petersburg literary scene: as the physical manifestations or activations of these latent, often text-centered, communities of interest, interpretation, and affective connection. We have an opportunity to explore whether these structural cleavages correlate with distinct aesthetic schools, ideological stances, or institutional affiliations that actively maintain boundaries and limit interaction with "outside" groups. For instance, do traditionalist poets, who might cluster in one computationally detected community, consciously avoid (or remain uninvited) to events dominated by experimental poets, who cluster in another? Such dynamics would suggest that the network structure reflects not just passive preference but active processes of distinction and boundary maintenance driven by aesthetic or ideological commitments.</p>	
<p>Event co-participation forms our empirical basis: if two writers frequently appear at the same readings or panels, we infer a latent affinity. Yet an "aesthetic community" implies deeper commonalities — shared poetics, interpretive frameworks, thematic preoccupations — publicly enacted and negotiated at literary gatherings. Because events serve as sites where aesthetics are performed, debated, and transmitted, we can test whether attendance patterns indeed serve as reliable proxies for these richer, affective connections.</p>	
<p>Below, we demonstrate three communities identified in Table 1 that map convincingly onto established aesthetic schools, institutional affiliations, and critical networks documented in prior scholarship.</p>	
<p><b>Community 0 (Experimental/Avant-Garde Poetry).</b> Key figures: Alexander Skidan, Pavel Arseniev, Arkady Dragomoshchenko (also Dmitry Golynko-Volfson, Roman Osminkin, Galina Rymbu, Natalia Fedorova).</p>	
<p>This cluster precisely maps onto what Bozović terms the <i>Translit</i> avant-garde circle — a cohesive literary formation with explicit institutional structures, shared experimental poetics, and collective political commitments (Bozović 2023). The group centers on the <i>Translit</i> almanac, where Arseniev serves as co-editor and Skidan sits on the advisory board, creating both institutional coherence and collaborative initiatives like the "Laboratory of Poetic Actionism" (Bozović 2023; Platt 2017). Their aesthetic program</p>	

unites around experimental strategies that synthesize 1920s avant-garde traditions (LEF, 390 Russian Formalism) with contemporary critical theory. Skidan's collage-based, de- 391 constructive poetics and Dragomoshchenko's "quantum" ideogrammatic experiments 392 represent sophisticated engagements with language poetry and conceptual art practices 393 (Hock 2021; Orlitskiy 2017). Critical recognition confirms their status as a named avant- 394 garde circle with shared poetics, political commitments, and institutional structures 395 (Bozović 2023). Multiple scholars treat them as a cohesive unit rather than loose affilia- 396 tions, validating the computational detection of their network boundaries (Hock 2021; 397 Platt 2017; Vivaldi 2019). 398

**Community 3 (Literary Traditionalism “Thick Journals”).** Key figures: Yakov 399 Gordin, Andrey Ariev, Alexander Kushner (also Valery Popov, Samuil Lurie, Natalia 400 Sokolovskaya, Daniil Granin). 401

This cluster corresponds to St. Petersburg's established intelligentsia tradition, epitomized by the “thick journal” model — particularly *Zvezda* and *Neva*, and structuring discourse around continuity with Russia's literary past. Yakov Gordin (historian, writer) 402 and Andrey Ariev (literary scholar, critic, prose writer) have served as co-editors-in- 403 chief of *Zvezda* since 1992. Within Bourdieu's framework (Bourdieu 1983), they occupy 404 a segment of the field where cultural capital derives from custodianship of tradition 405 rather than avant-garde innovation. The community's defining mindset centers on 406 cultural stewardship and historical consciousness. Rather than pursuing formal experi- 407 mentation, they embrace what might be termed a “guardianship mentality” — viewing 408 themselves as thoughtful preservers and reinterpreters of Russia's literary inheritance. 409 This orientation manifests in their commitment to neo-classical aesthetics, particularly 410 evident in Alexander Kushner's Neo-Acmeist poetics, which deliberately emphasizes 411 clarity and cultural continuity over radical innovation (Ar'ev 2019). 412

**Community 17 (“New Prose” Petersburg Fundamentalists).** Key figures: Pavel Kru- 413 sanov, Sergey Nosov, Alexander Sekatsky (also Tatiana Moskvina, Viktor Toporov, 414 Andrey Astvatsaturov, Nikolai Yakimchuk, Ilya Boyashov). 415

This group epitomizes the so-called “new prose” movement, often labeled *the Petersburg 416 Fundamentalists*. Krusanov and Nosov's novels — published by *Amfora* and *Limbus Press* 417 — exemplify an “imperial novel” aesthetic, fusing patriotic or nationalist discourses with 418 mythological motifs and postmodern irony (Fenghi 2023). Sekatsky's philosophical 419 writings (e.g., *The Mogs and Their Might*) provide the group's conservative-esoteric 420 underpinnings (Fenghi 2023). Their work frequently acts as a reaction against 421 1990s postmodern nihilism, seeking a new cultural myth rooted in neo-Eurasianist and oc- 422 cultist subcultures (Lipovetsky 2008; Noordenbos 2011). Critical recognition confirms 423 their conscious self-definition as a literary circle, with manifestos, public performances, 424 and dedicated institutional support (Fenghi 2023; Noordenbos 2011). 425

The remarkable alignment between algorithmically detected communities and published 426 accounts of St. Petersburg's literary factions confirms that event co-participation reliably 427 indexes deeper aesthetic affinities and institutional ties. 428

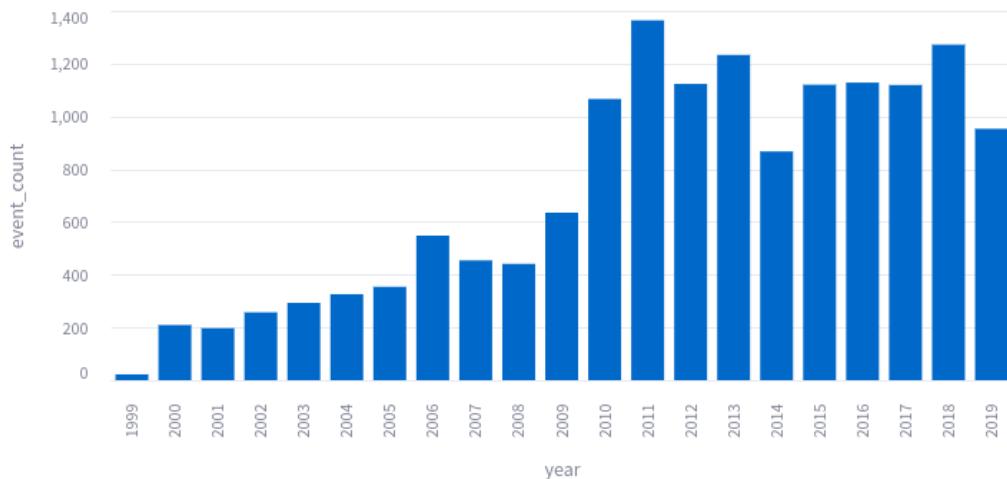


Figure 4: Annual Event Frequency: the total number of events that occurred each year

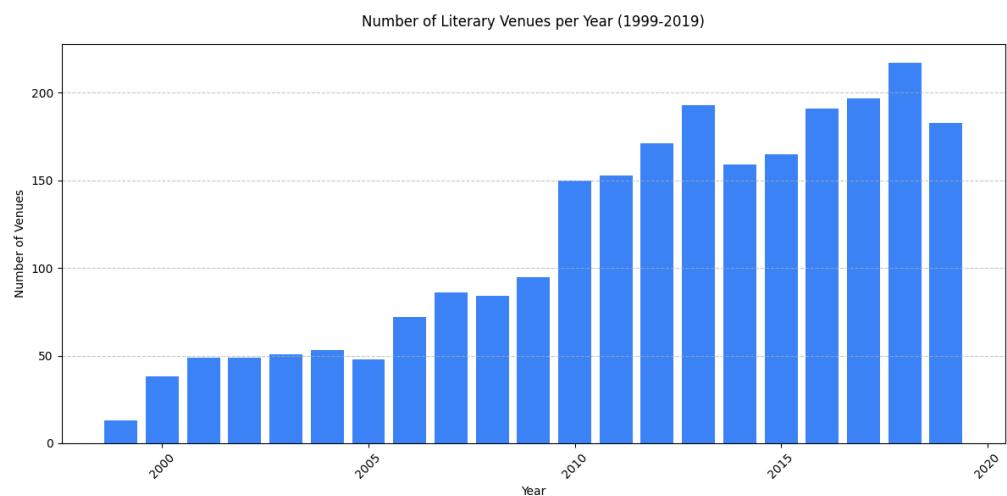


Figure 5: Number of Active Venues

## 8. Temporal Evolution

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The evolution of St. Petersburg's literary landscape reflects the wider post-Soviet cultural transformation. The launch of SPbLitGuide in 1999 coincided with - and helped to document — a crucial moment when the city's literary scene was being fundamentally reshaped. This period marked the inclusion of previously unofficial literary trends into public visibility, alongside the rise of new independent venues and voices. The increase in the number of documented venues from 1999 to the following years reflects not only improved documentation, but also the formation of a new literary infrastructure that bridged Soviet underground traditions with post-Soviet cultural energies.

439

The data then show two subsequent major shifts. The first occurred around 2010 and was marked by dramatic growth in both events and venues (Figures 4-5). The number of active venues increased from 95 to 150, reflecting both the increased coverage following SPbLitGuide's collaboration with *DK Krupskoy* and the actual expansion of the literary scene, particularly with the development of commercial venues such as the *Bookvoed* network.

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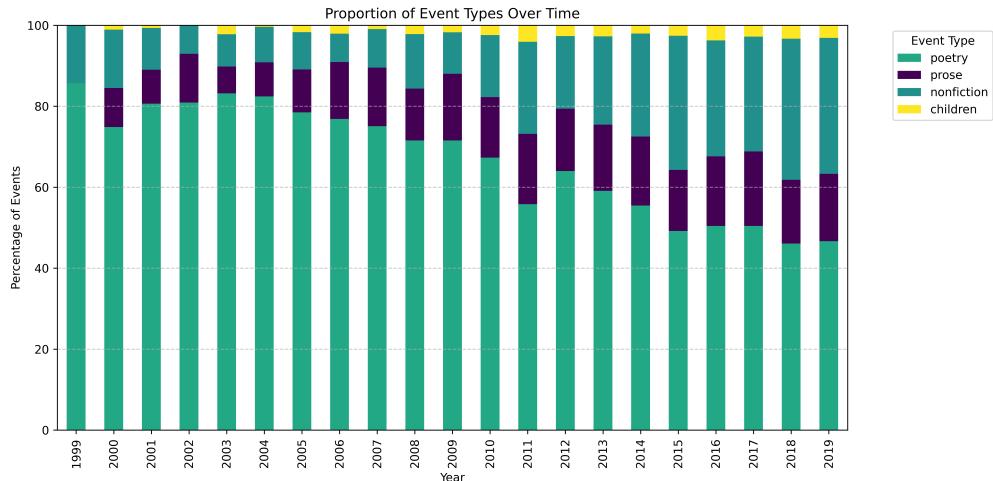
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**Figure 6: Proportion of Event Types Over Time**

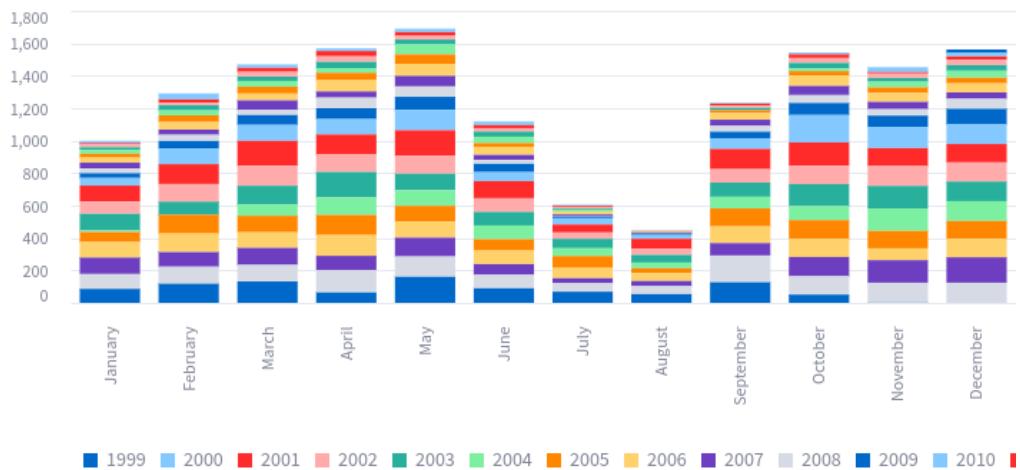
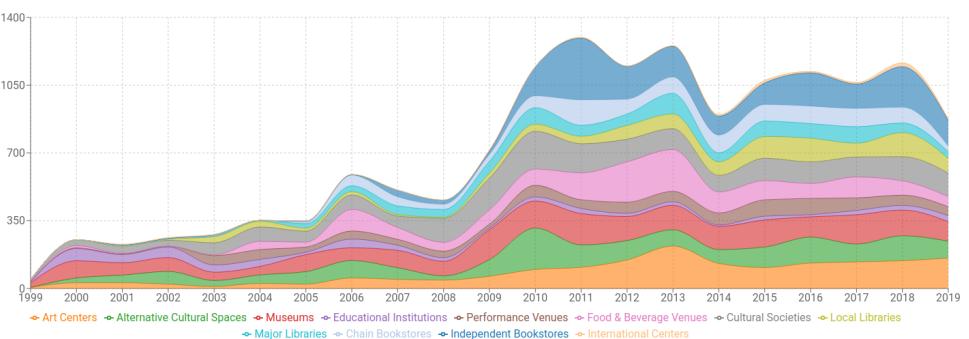
A second shift occurred in 2014, when the economic crisis following geopolitical events 446 had a significant impact on the cultural infrastructure. The sharp decline in the number 447 of venues (from 193 in 2013 to 159 in 2014) particularly affected independent spaces, 448 which were more vulnerable to economic pressures. 449

The post-2014 period shows a pattern of resilience and adaptation. While the number 450 of venues fluctuated between 159 and 217, the literary scene maintained a significantly 451 higher baseline than in the pre-2010 period. This resilience suggests that the diver- 452 sification of literary spaces achieved in the early 2010s created a more solid cultural 453 ecosystem. Traditional institutions provided stability, while surviving independent 454 venues and commercial spaces continued to support diverse forms of literary activity 455 despite economic challenges. 456

Another perspective on the evolution of St Petersburg's literary landscape is provided 457 by the AI-based classification of event types. Event descriptions were automatically 458 classified using OpenAI's language model (o3-mini) with a predefined taxonomy of 21 459 tags covering event formats, genres, and characteristics. Each event was assigned up to 460 4 relevant tags through structured prompts (classification process used OpenAI's batch 461 API with JSON schema validation to ensure consistent output format). The stacked bar 462 chart (Figure 6) focuses on four primary content categories: poetry, prose, nonfiction, 463 and children's literature events, illustrating the proportional distribution of these core 464 literary content types over time. 465

While St Petersburg has always been a poetry city, the graph shows that since 2010, 466 poetry's relative share of events has decreased as the literary scene diversified. This shift 467 reflects not a decline in poetry activities, which remained relatively stable in absolute 468 numbers, but rather significant growth in prose and nonfiction events. The increasing 469 prominence of non-fiction events may indicate a move towards analytical, journalistic 470 and educational discourses within the literary community, in line with wider cultural 471 and intellectual developments in Russia during the 2010s. 472

The monthly distribution of events (Figure 7) shows consistent seasonal rhythms in 473 St. Petersburg's literary life: activity peaks in the spring (March-May) and autumn 474

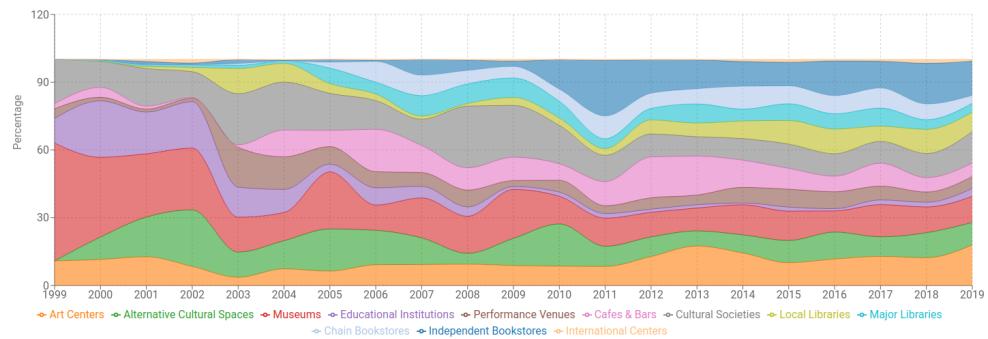
**Figure 7:** Monthly Event Frequency Over the Years**Figure 8:** Annual Distribution of Literary Events by Venue Type in Saint Petersburg, 1999–2019 (absolute numbers)

(October–December), with a significant decline in the summer months (July–August). 475 This pattern, which lasted throughout the study period, reflects both institutional 476 calendars and established cultural traditions. Even as the literary scene expanded and 477 diversified after 2010, it maintained these characteristic seasonal fluctuations. 478

The variation in venue types (Figure 8–9) highlights significant shifts in the spatial 479 organisation of literary life in St. Petersburg from 1999 to 2019. The most striking 480 change occurred around 2010, marked by the dramatic rise of independent bookstores 481 (shown in dark blue) as cultural spaces. This growth coincided with broader changes 482 in the commercial book trade, but represented a distinct phenomenon: indie bookstores 483 weren't just commercial spaces aimed primarily at the reading public, but became active 484 cultural centres, hosting literary events that were important for literary development 485 and bringing together key figures from the city's literary landscape. 486

Another notable trend is the steady growth of art centers (orange) and alternative 487 cultural spaces (green) throughout the 2000s, which provided flexible venues for literary 488 events outside of traditional institutional frameworks. This diversification of venue 489 types suggests a diversification of literary space away from the Soviet-era model, where 490 literature was primarily housed in official cultural institutions or privately. 491

The data also show the resilience of traditional venues such as museums (red) and 492



**Figure 9:** Relative Distribution of Literary Events by Venue Type in Saint Petersburg, 1999-2019 (percentage of total events per year)

educational/academic institutions (purple), which maintained a consistent presence 493 throughout the period. However, their relative share of the overall venue landscape 494 declined as new types of spaces emerged. The growth of cafes and bars (pink) as literary 495 venues, particularly after 2010, indicates another significant shift: the integration of 496 literary events into unconventional settings. 497

The period after 2014 shows interesting adaptations to economic pressures. While there 498 was some fluctuation in the total number of events, the diversity of venue types remained 499 relatively stable, suggesting that the literary scene had developed sound networks across 500 different types of spaces. 501

## 9. Spatial Evolution

The spatial dimension of literary events displays the concentration of literary life across St. 503 Petersburg's urban landscape. As shown in Figure 10, the most intense literary activity 504 is located in the historical centre, particularly in the area bounded by the Fontanka River 505 and Nevsky Prospekt. This core zone has the highest density of events, with notable 506 hotspots around major cultural institutions such as the Akhmatova Museum and the 507 Mayakovskiy Library. 508

However, this aggregate view masks significant venue specialization and community- 509 specific spatial preferences. Literary venues in St. Petersburg operate along a spectrum 510 from generalist to highly specialized spaces. Generalist venues such as major book- 511 store chains (Bukvoed network) and large cultural institutions (Mayakovskiy Library) 512 host diverse events across different literary communities and genres. In contrast, cul- 513 turally engaged venues develop strong aesthetic affiliations: independent bookshops 514 like Poryadok Slov become closely associated with experimental literature and cul- 515 tural studies communities, while alternative spaces like Fish Fabrique Nouvelle cater to 516 underground and performance-based literary activities. 517

Different literary communities exhibit distinct geographical preferences, as illustrated 518 by the comparative analysis of Communities 0 and 4 (Figure 11). Community 0 (experi- 519 mental poetry, centred around Alexander Skidan and Pavel Arseniev) demonstrates 520 concentrated activity in the historical centre, with strong clustering around the Poryadok 521 Slov and Andrey Belyj centres. It also includes street events on the Neva embankment 522 and post-industrial spaces such as old marine ports, reflecting their preference for es- 523

conference version

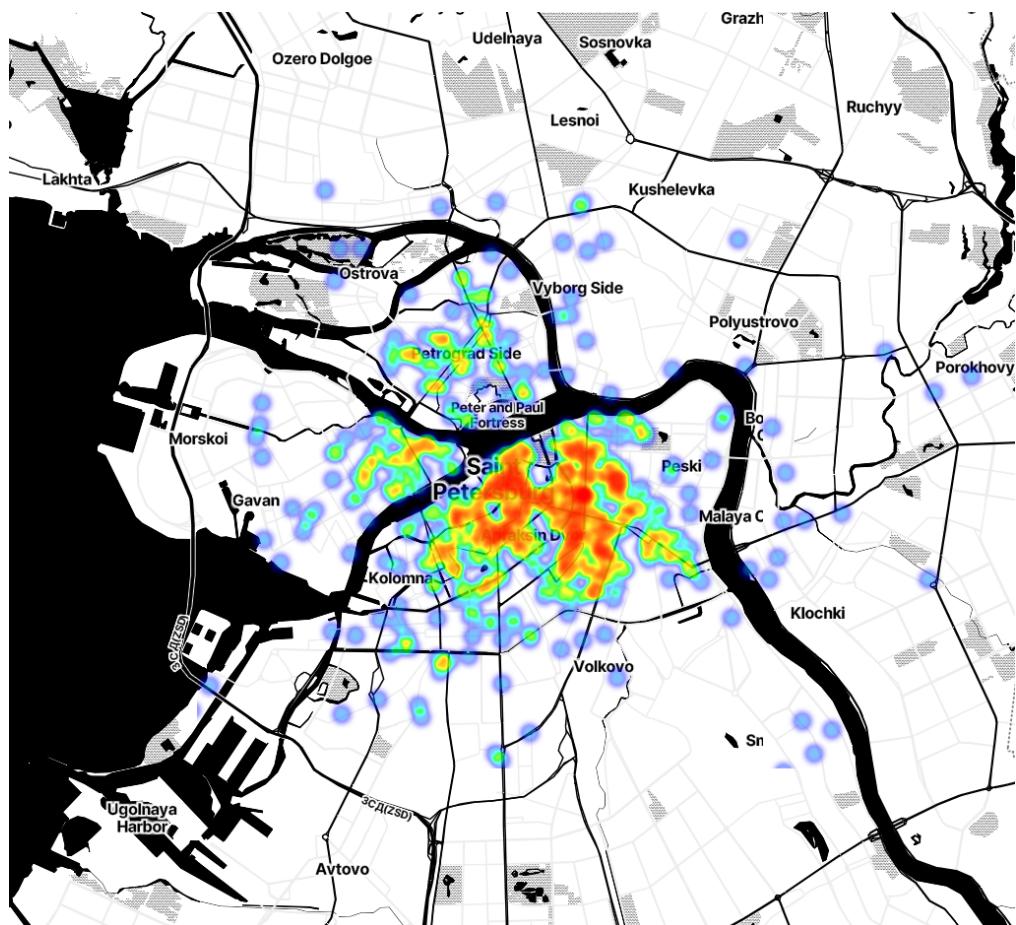
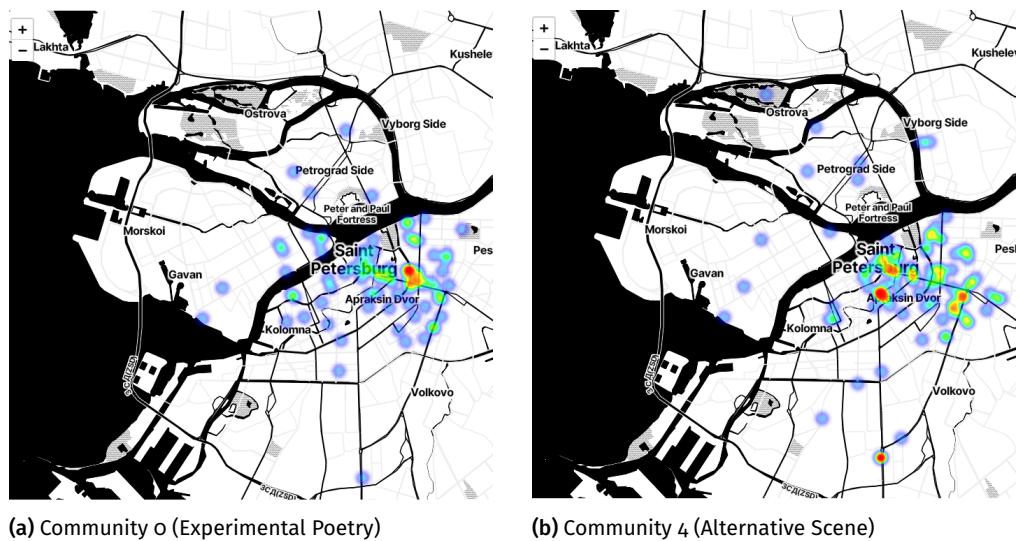


Figure 10: Heat Map of Event Frequency at Various Locations in Saint-Petersburg



**Figure 11:** Spatial distribution comparison showing distinct venue preferences and geographical patterns between communities

Established alternative cultural spaces combined with experimental urban interventions. 524  
In contrast, Community 4 (the younger alternative scene, led by Ivan Pinzhenin and 525  
Roma Gonza) exhibits a more dispersed pattern, extending into peripheral areas and 526  
utilising unconventional venues such as bars and nightclubs. 527

The spatial data also reveals individual literary careers trajectories through venue transitions. 528  
Prose authors like German Sadulaev, Andrey Astvatsaturov, and Ilya Stogoff 529  
demonstrate a characteristic migration pattern from independent alternative spaces 530  
(Platform, Fish Fabrique Nouvelle) to mainstream commercial venues (Dom Knigi, 531  
Bukvoed). This spatial mobility reflects not only literary success and increased reader- 532  
ship, but also the evolution of authors' relationships with different literary communities 533  
and their integration into broader cultural institutions. 534

This venue-community co-evolution demonstrates how literary groups actively reshape 535  
the cultural geography of the city, while individual careers create bridges between 536  
different spatial and social literary worlds. 537

## 10. Conclusion

538

**Network structure and community formation.** The St Petersburg literary ecosystem 539  
is characterised by dense local clusters with strategic connections. The high clustering 540  
coefficient (0.753) suggests that literary activity takes place primarily within established 541  
communities, while the presence of influential bridging figures enables cross-community 542  
exchange. The hierarchical structure of the network is reflected in the skewed degree 543  
distribution, with an average of 19.92 connections but a median of only 8. This disparity 544  
suggests that while most participants operate in relatively small circles, certain key 545  
figures maintain extensive connections across the literary landscape, acting as crucial 546  
nodes for information flow and community bridging. Betweenness centrality analysis 547  
confirms the strategic importance of these bridge figures: while the network mean 548  
is 0.0003, key intermediaries show dramatically higher values, with Арсен Мирзаев 549  
(0.0399), Дмитрий Григорьев (0.0386), and Дарья Суховей (0.0365) emerging as the 550  
550

most critical bridges. These figures, concentrated in Community 5, facilitate the strongest inter-community connections in the network, particularly the extensive links between Communities 0, 5, 7, and 11. The existence of 387 separate components in the network depicts a literary world composed of distinct subcommunities with limited interaction, suggesting that despite the presence of bridge figures, significant barriers to cross-community interaction remain.

**Spatial and temporal dynamics.** The growth from 13 venues in 1999 to 217 in 2019 represents a massive expansion of cultural infrastructure, even if the trajectory was not linear. A significant decline after 2014 particularly affected independent spaces, while the emergence of commercial venues such as the Bookvoed bookshop chain introduced new patterns of literary participation. Geographically, venues remained concentrated in the historical centre of St. Petersburg, maintaining traditional cultural patterns, while, after 2010, new literary spaces emerged in peripheral areas. Throughout these changes, certain venues, such as Poryadok Slov and the Akhmatova Museum, maintained their positions as community anchors, providing stability in the evolving literary landscape.

**Historical transitions.** The dataset covers three distinct periods in St. Petersburg's literary evolution. The post-Soviet transformation (1999-2009) saw the integration of formerly unofficial literary trends into public visibility, alongside the emergence of new independent venues and the establishment of regular event cycles. This was followed by a period of commercial expansion (2010-2013), marked by dramatic growth in both events and venues, particularly through the entry of commercial bookstore chains and the diversification of event types. The final period (2014-2019) reflects economic adaptation, characterised by a decline in independent venues, while established institutions have shown resilience and literary events have shifted towards more commercially viable formats. Each period represents not just changes in infrastructure, but fundamental shifts in how literary life is organised and sustained. Significantly, the dataset documents the last major phase of predominantly offline literary activity in St. Petersburg before the dramatic disruptions of 2020-2022. This makes the dataset particularly valuable as a record of literary practices and community structures that have since undergone radical transformation.

**Methodological Implications and Limitations.** The potential of event-based network analysis for understanding literary communities also has important methodological limitations. It can't capture audience information, and we can only analyse the active participants in literary events, not their full social impact. And our method of network construction, which gives equal weight to all instances of co-participation, may oversimplify the complex nature of literary relationships and interactions, whether those interactions take place in formal institutions or informal settings.

The data collection process itself reflects interesting network dynamics. While SP-bLitGuide maintainer Darya Sukhovey personally documented many events, her high centrality in our network analysis (0.37) indicates her position as a trusted information hub. Event organisers actively submitted announcements to the newsletter, recognising its role as a key communication channel for the literary community. This organic flow of information suggests that while the dataset may have initially been selection biased due to its origins, it evolved to capture a broader range of literary activities as the newsletter became an established cultural institution.

**Future directions.** Similar event-based data may exist for other cities and historical periods, from pre-revolutionary literary chronicles to contemporary cultural news sites. In Russian literary studies alone, several publications document early 20th-century literary gatherings in detail comparable to the dataset (Galushkin 2006; Lavrov 2002, 2017). This methodological approach could be applied to the analysis of such historical records, allowing a systematic comparison of literary community structures across periods and locations.

One particularly promising approach is to combine event-based analysis with textual and publication data in order to create comprehensive models of literary community formation. While our event networks capture patterns of social interaction and collaboration, they represent only one dimension of literary relationships. Future research could integrate publication networks (e.g. co-authorship, citation patterns and publisher affiliations), textual influence networks (e.g. intertextuality, stylistic borrowing and translation flows) and institutional networks (e.g. journal editorships, prize committees and academic affiliations) with event participation data. This multi-layered approach would address fundamental questions about how social literary life corresponds to textual production. Do communities that frequently gather together also influence each other's writing? How do patterns of co-participation in events correlate with citation networks, collaborative publications or shared aesthetic preferences? Developing new computational methods to link social and textual data would be required for such integration, but it could further investigate whether the communities we identify through events represent real artistic movements or primarily social phenomena.

A uniquely comprehensive dataset of literary events can illuminate community structures across multiple analytical dimensions. By systematically documenting over 15,000 events between 1999 and 2019, the SPbLitGuide newsletter allows us to combine network, spatial, and temporal approaches to understand literary life in detail. This integrated analysis helps to visualise patterns of community formation and evolution. The dataset's rich documentation of literary life in St. Petersburg before 2019 preserves an original historical record of cultural practices that have since undergone radical change. Combining these different aspects of analysis opens up new possibilities for understanding how cultural communities function and evolve, and provides a framework that could be productively applied to similar historical records from other times and places.

## 11. Data Availability

Data can be found here: <https://zenodo.org/records/13753154>

## 12. Software Availability

Software can be found here: [https://github.com/mary-lev/literary\\_communities](https://github.com/mary-lev/literary_communities)

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