

CUDAN @ DH Pizza

Friday May 21, 2021

# Yan Asadchy

Junior Research Fellow

*School of Humanities, Tallinn University*

Yan is an interdisciplinary researcher working at the junction of computer science and the humanities, implementing contemporary digital methods to study online dating platforms and digital culture.



Introduction of smartphone created new possibilities for online dating and expanded the interaction to the next level by allowing instant access to people nearby on the go. Starting from 2006, swiping photos of singles in close proximity became a natural and expected way of finding a friend or partner. Even though the mobile devices have not changed significantly, instead became more accessible, prominent and faster, resulting in the emergence of "Swipe Culture". However, not all services adapted their design to new way of matching people online. An expert review of the design of popular dating applications in Southern and Northern European countries reveals the nature of in-app interactions and how they are perceived by users.

Synthesis of results of walkthrough analysis (Light, Burgess, and Duguay 2018) of user-scenarios made it possible to come up with defined design space that reflects differences between interfaces of various dating applications. It is evident that audience of the Nordic countries prefer conservative interfaces and complex interactions. On the other hand, users from Southern Europe enjoy modern interfaces and simple interactions.

Using this space in development allows to better navigate design decisions, and eventually enable better user experience for specific audiences.

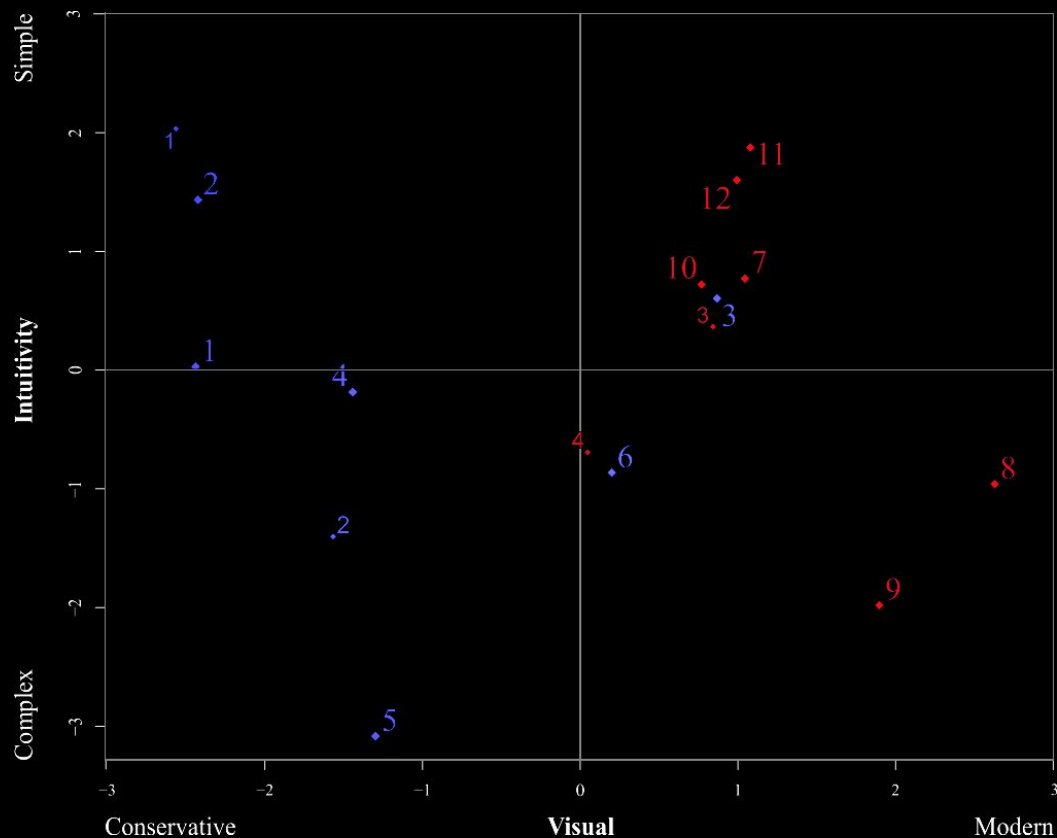


Figure 1. Interaction and visual complexity of main user-scenarios in popular dating apps in Southern (red) and Northern (blue) european countries

# A study of Black Lives Matter protests on TikTok using the digital snowball method, 2020

Often self-positioning as a platform for fun and creativity, TikTok has been keenly isolating itself from politics ever since it achieved immense popularity. According to documents leaked to the media, TikTok labels political content relating to demonstrations and controversial topics (e.g. separatism, racial and ethnic conflicts) as “not recommend” or “nor for feed” (Köver and Reuter, 2019) As such, users are restricted from political exposure, even if it has abundance of political content.

In practice, these "not recommended" videos are not removed, but are tactfully hidden from users’ algorithmically fed “For You” page after they reach a limited view count. This biased algorithmic practice suggests that TikTok manipulates content visibility in ways of drowning out or “deplatforming” voices of certain groups, events, or issues (Rogers, 2020).

In this project, we apply the digital snowball method to sampling short videos that are related to Black Lives Matter protests on TikTok in order to investigate how the recommendation algorithm shapes and engages with political contents on the platform.

The project aims to surface how the “For You” page recommends certain types of blm’s content, more peaceful and creative, although others get more engagement.

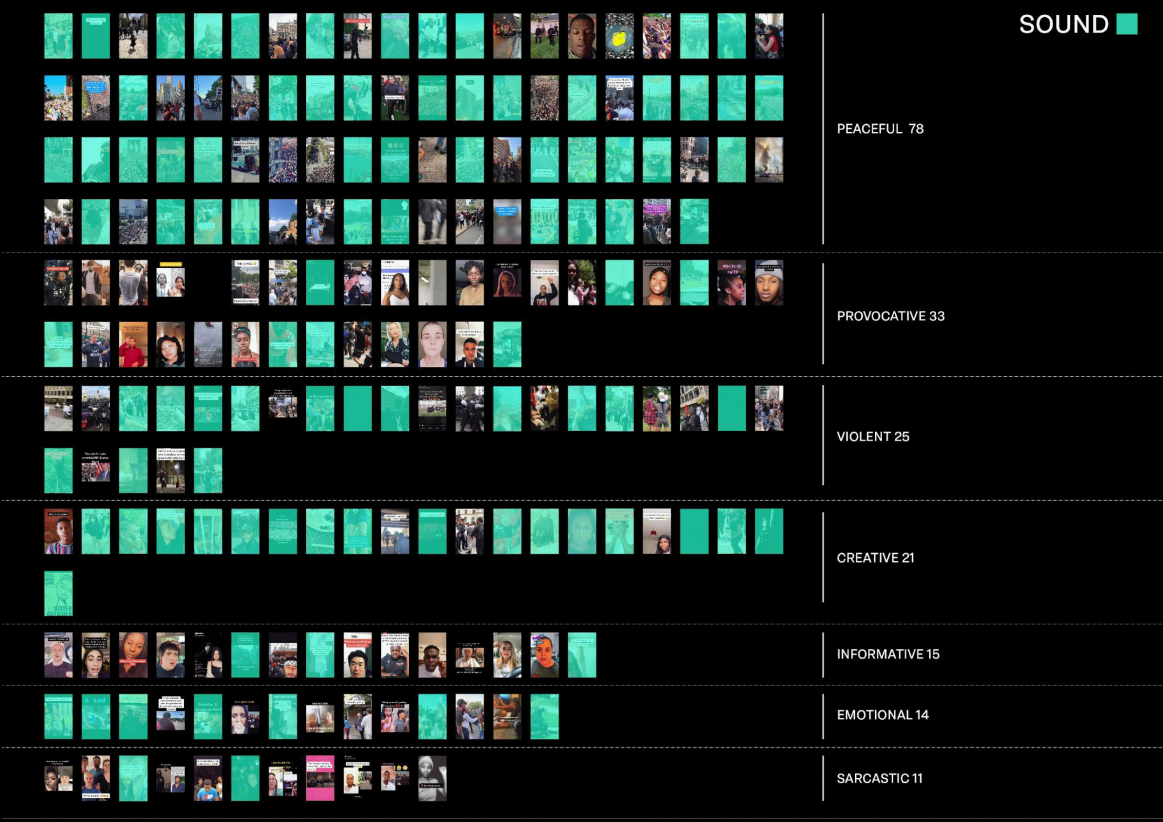


Figure 1. Overview of creative techniques and content categories



# A study of Black Lives Matter protests on TikTok using the digital snowball method, 2020

Results of this study suggest that TikTok 's policies for content moderation and the algorithmic "For You" page follow specific guidelines in line with information leaked and reported by Netpolitik (Köver & Markus, 2019). For instance, in this sample, videos coded as "peaceful" and "emotional" displayed the highest number of views, which could suggest that the algorithm is more likely to promote this type of content as opposed to "political speech" in line with the aforementioned leaked moderation guidelines (Hern, 2019a; Chen, 2019).

Hearn (2019a) found that TikTok limits its political content in electoral periods. In this sense, some of the content moderation rules of interest for this sample include the labeling as "not for feed" and "not recommended" of content related to police and riots/protests (Chen, 2019). This may have motivated the initial blocking of the hashtags #BlackLivesMatter and #GeorgeFloyd, for which TikTok later apologized (Harris, 2020). Despite "the glitch" that caused these hashtags to be blocked, our analysis provides a glimpse of what these algorithmic policies may imply for political content and content related to activism.

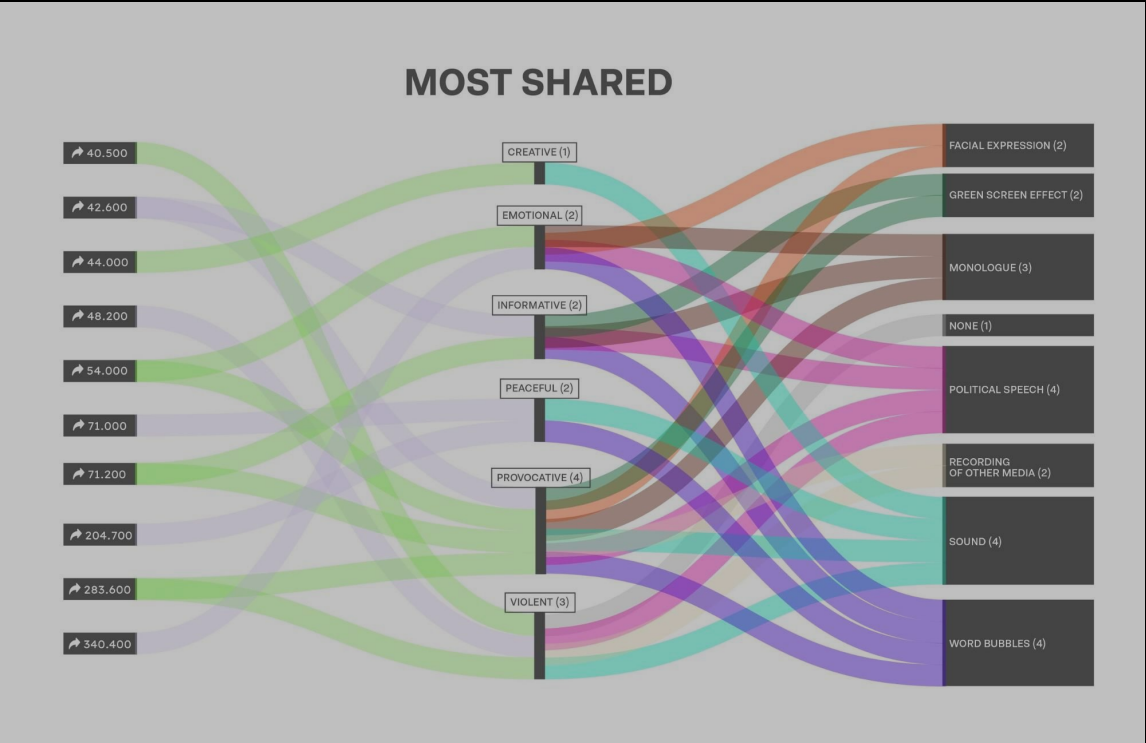


Figure 2. Overview of creative techniques and content categories among most shared videos

# Objects and scenes of love - sentiment analysis and big data study of biographies and pictures on Tinder

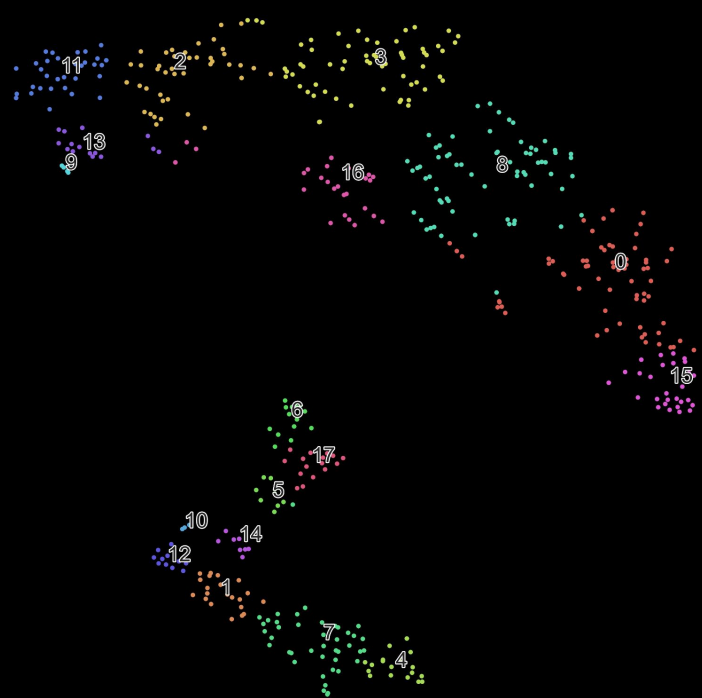


Figure 1. t-Sne plot of distribution of biographies on the affective space

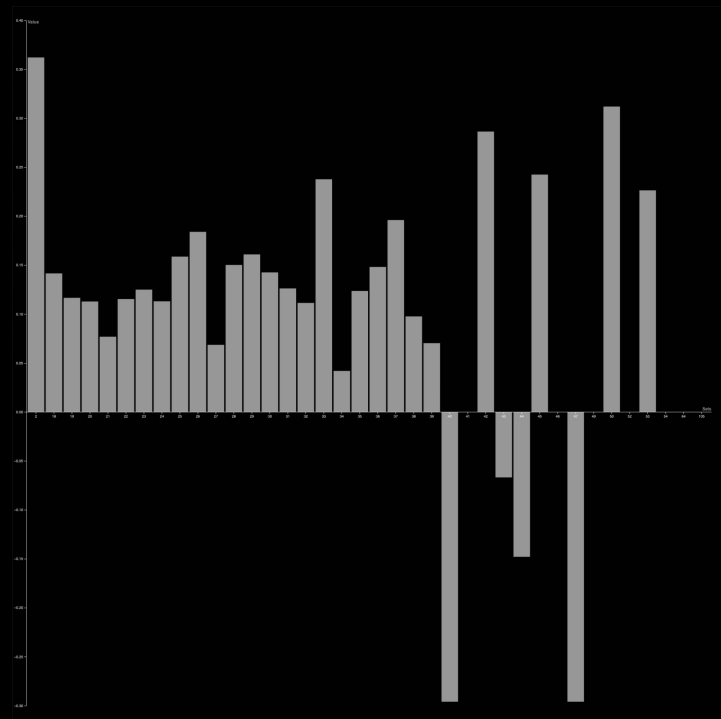


Figure 2. Compound score of Tinder biographies across ages, all genders avg.

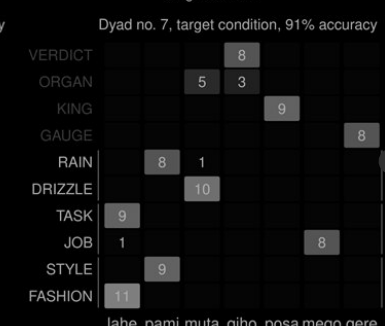
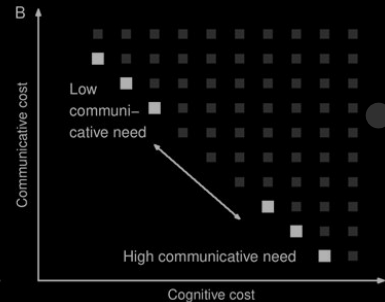
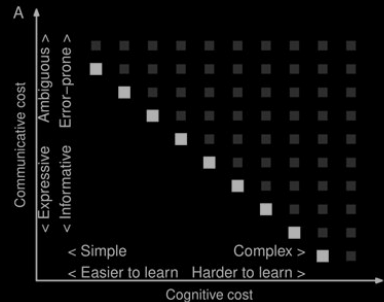
# Dr. Andres Karjus

Senior Research Fellow

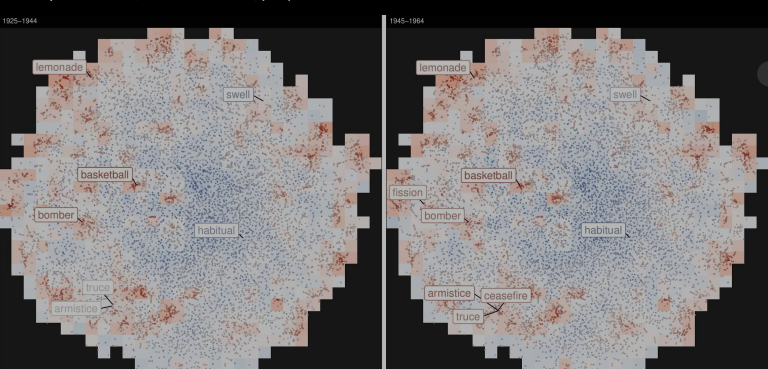
*School of Humanities, Tallinn University*

Andres wants to know why and how all languages and cultures keep changing over time. To that end, he makes use of a variety of methods – machine learning applied to large text corpora, computational simulations, and communication experiments with human participants.





neme quto nopo fita mefa mumi honi  
lahe pami muta qiho posa mego qere  
(Karjus, et al. Conceptual similarity and communicative need shape colexification. Accepted @ Cognitive Science | [preprint](#))



(Karjus 2020. Competition, selection and communicative need in language change. PhD thesis, University of Edinburgh)

# Dr. Andres Karjus

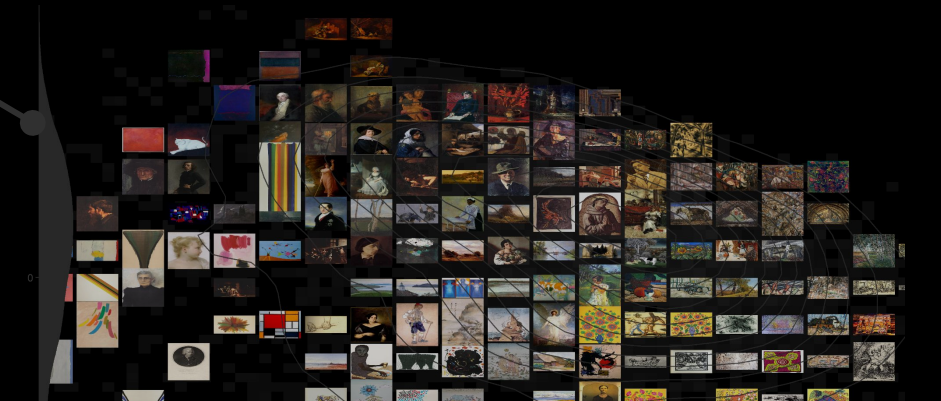
[andreskarjus.github.io](https://andreskarjus.github.io) | [twitter.com/AndresKarjus](https://twitter.com/AndresKarjus)

I'm interested in why and how (all) languages and cultures keep changing over time, what are the constraints and drivers.

Different methods combined for different methods: machine learning applied to large text corpora, computational simulations to verify models of change, communication experiments with human participants to figure out individual-level processing effects.

Also in the works: semantic divergence in polarized social media, using methods from Lexical Semantic Change Detection.

Recent work in collaboration with Max and others.: complexity in visual art & evolution of the possibility space of art.



(Karjus et al 2021. Capturing aesthetic complexity in art using compression ensembles. Culture Conference)

# Antonina Korepanova

Junior Research Fellow

*Baltic Film, Media and Arts School, Tallinn University*

Antonina studies cognitive modelling and the usage of cultural data in art education.

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NEW ART SCHOOL

=

+ CULTURAL DATA +

COGNITIVE  
SCIENCE

COLLABORATIVE  
DRAWING

+

TECHNOLOGY

+





3 ARTICLES

EXPERIMENTS



ESTONIAN  
CONTEXT

THEORETICAL  
BACKGROUND





# Mark Mets

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Junior Research Fellow

*School of Humanities, Tallinn University*

Mark aims to make sense of phenomena related to the cultural other, including homogenization, antagonization, and transmission. His interdisciplinary research brings together methods of cultural data analysis and cultural semiotics.



Divisions are sometimes hard to notice and to be aware of.

They are:

*Complex & Complicated*

Divisions are visible through Othering  
*Othering people & Cultures & Knowledge*

How can novel digital methods help us to understand such Othering?

*In texts?*

*In pictures?*

*In videos?*

How do these representations of Othering change?

*... emerge?*

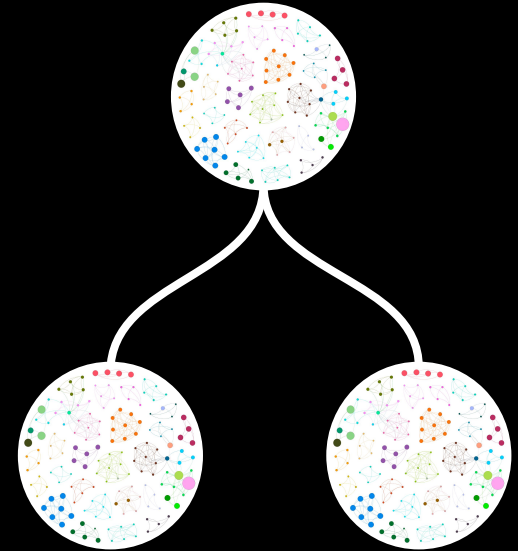
*... transfer?*

How to understand Othering through Cultural Analytics and Cultural Semiotics?

*Through Cultural Science (Hartley, Potts 2014)*

*&*

*Manovich's Cultural Analytics (2020)*



# Dr. Ksenia Mukhina

Senior Research Fellow

*School of Digital Technologies, Tallinn University*

Ksenia focuses on studying urban socio-cultural dynamics. She utilizes statistics and machine learning methods to explore attention and perception patterns through social media data.

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# Dr Ksenia Mukhina

Senior Research Fellow

School of Digital Technologies

- Location-based social media
- Tourists detection
- Time series patterns in museums

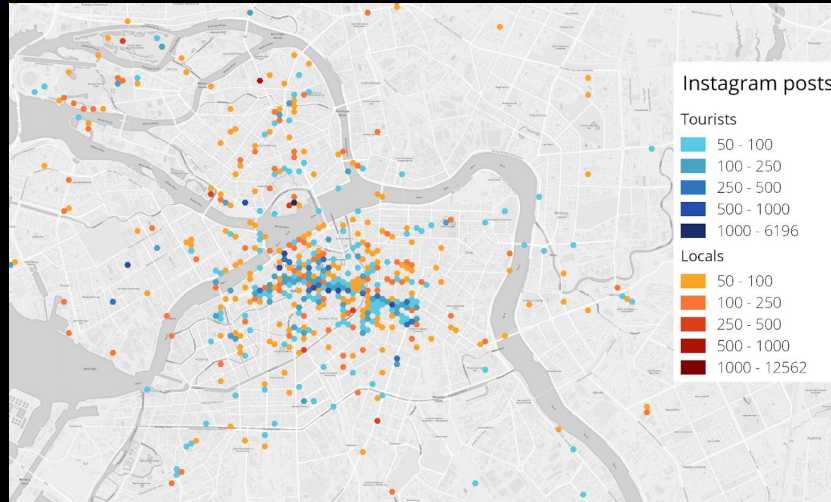


Image source: Mukhina, K. D., Rakitin, S. V., & Visheratin, A. A. (2017). Detection of tourists attraction points using Instagram profiles. Procedia computer science, 108, 2378-2382. <https://doi.org/10.1016/j.procs.2017.05.131>

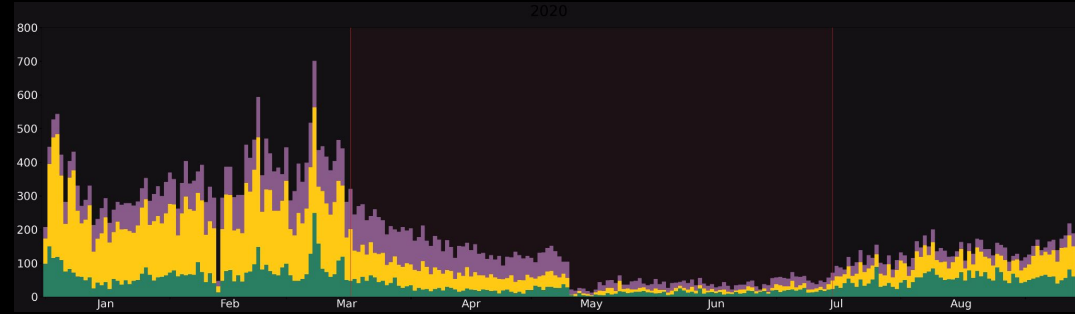


Image source: Mukhina et al 2021. Destination image of museums through social media lens. 7th International Conference on Computational Social Science

**DMA**  
DALLAS MUSEUM OF ART

Number of Instagram's posts

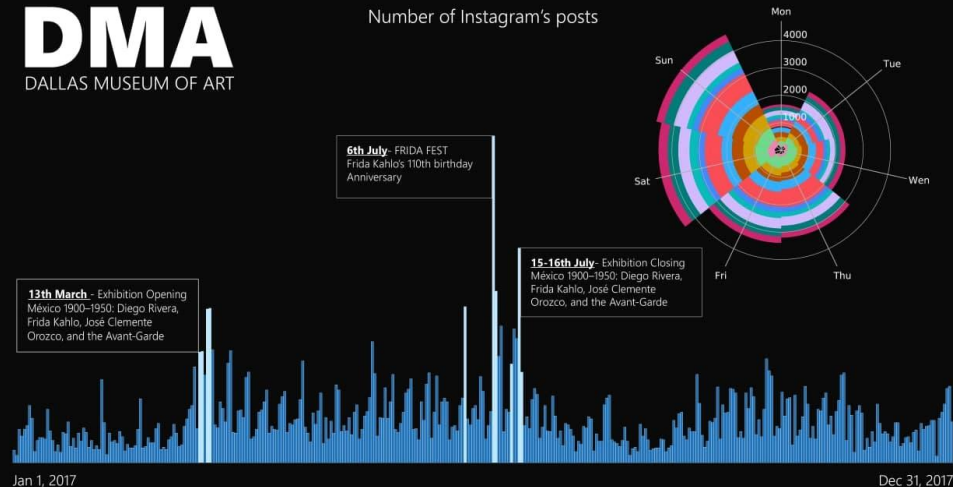


Image by Mukhina and Asadchy. Unpublished results.

# Tillmann Ohm

Junior Research Fellow

*School of Digital Technologies, Tallinn University*

Tillmann combines vector embeddings, machine learning and network science to develop tools for algorithmic curation and exploration of curatorial possibility spaces of digital collections.



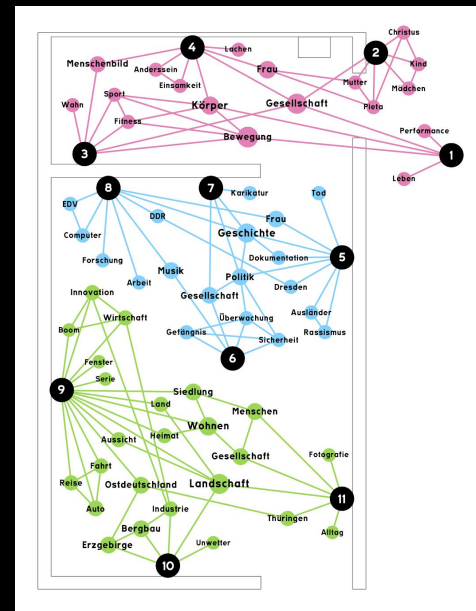
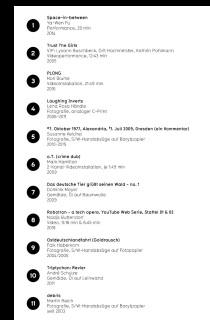
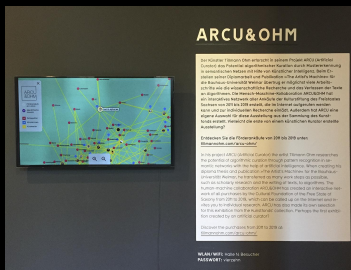


# Tillmann Ohm

Junior Research Fellow  
School of Digital Technologies, Tallinn  
University

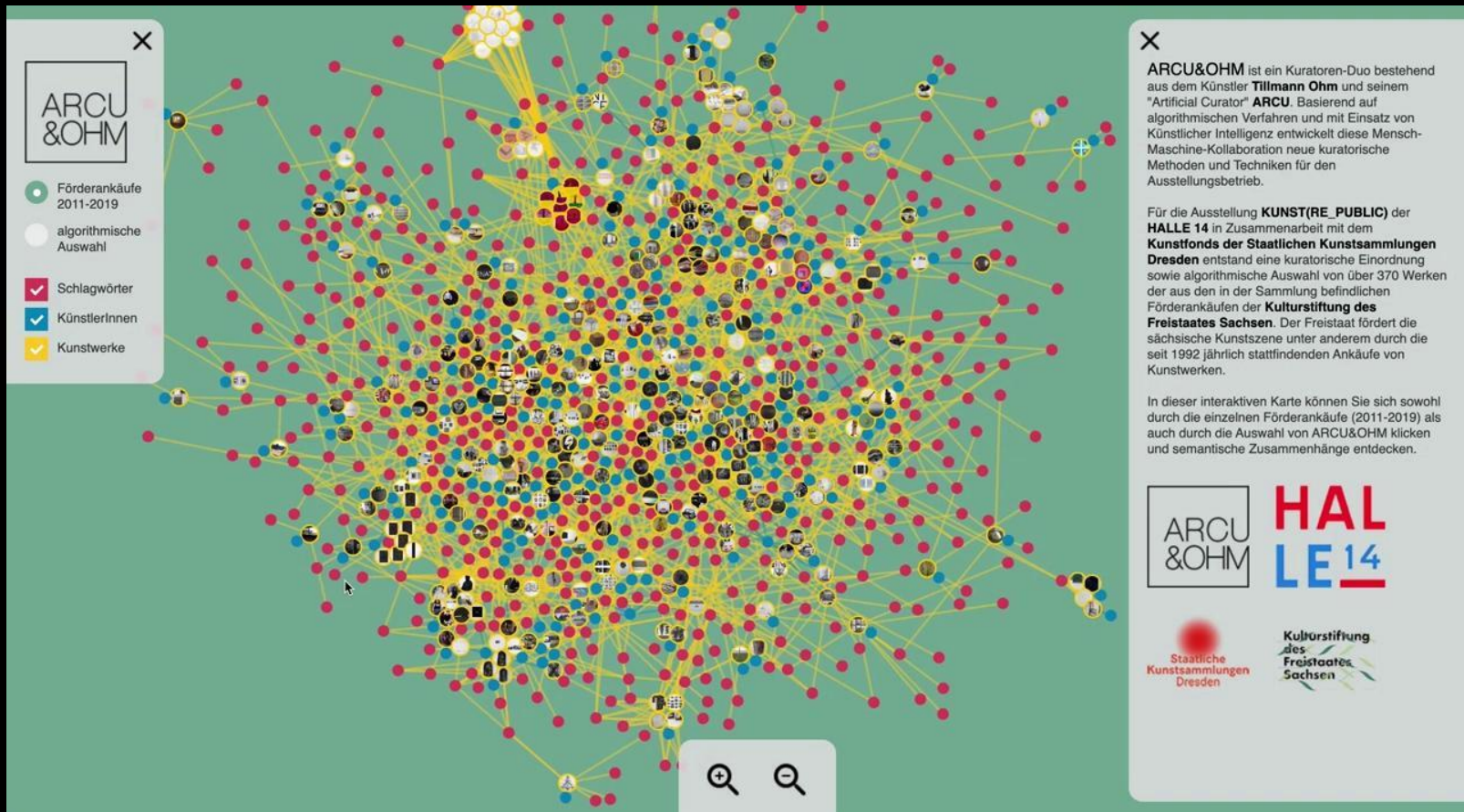


Combining vector embeddings,  
machine learning and network science  
to develop tools for algorithmic curation  
and exploration of curatorial possibility  
spaces of digital collections



# Algorithmically Curated Art Exhibition

ARCU&OHM @ KUNST(re\_public),  
HALLE 14 Center for Contemporary Art  
June-August 2020 in Leipzig, Germany



Interactive Web Application, ARCU&OHM @ KUNST(re\_public), <https://tillmannohm.com/arcu-ohm>



# Dr. Mila Oiva

Senior Research Fellow

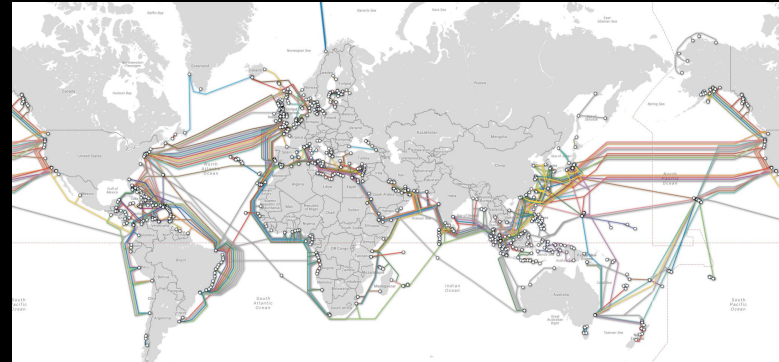
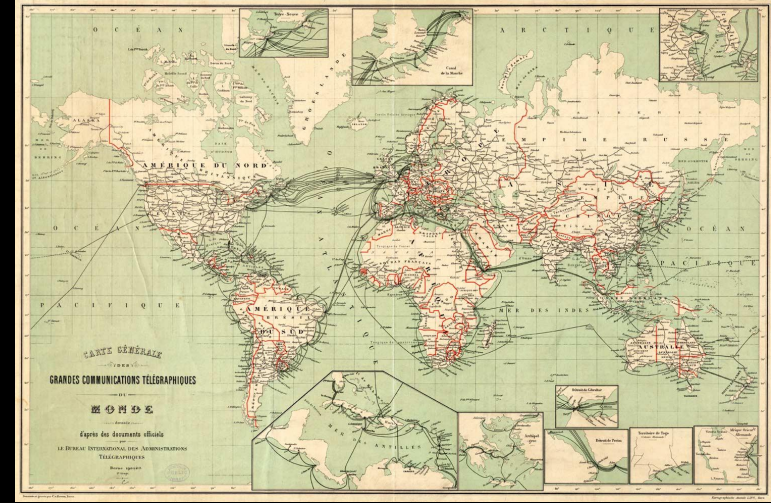
*School of Humanities, Tallinn University*

Mila is a cultural historian enthusiastic about transnational patterns in the circulation of knowledge, understandings, and disinformation in different temporal and technological settings.



# Transnational Circulation of Knowledge

Research focus: transnational circulation of knowledge - case studies  
1850-2010s & communication technologies from telegram to the  
world wide web



# Pseudohistory

- Circulation of “fake medieval history” in the Russian language www
- 1,5 million pages
- BLAST, hyperlink networks

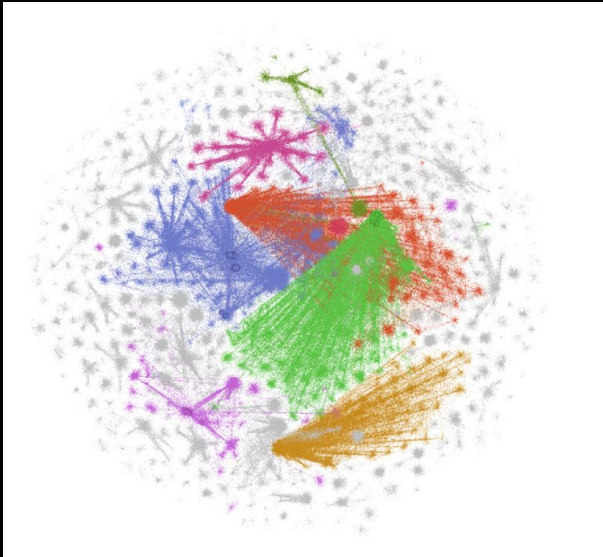
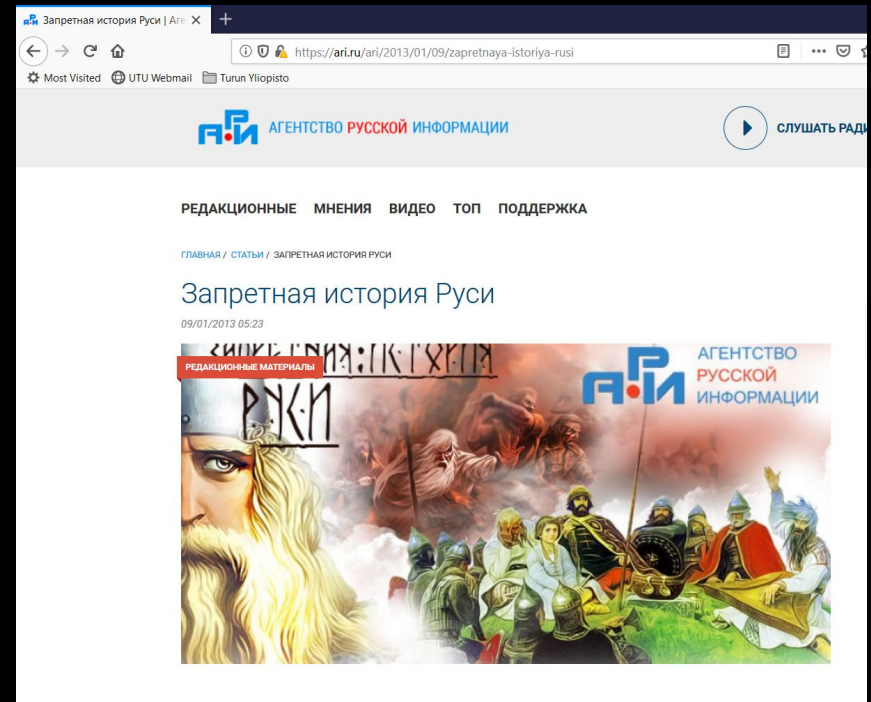


Image by Mila  
Oiva and Anna  
Ristilä.  
Unpublished.



# Mar Canet Solà

Junior Research Fellow

*Baltic Film, Media and Arts School, Tallinn University*

Mar explores new methods and interfaces for navigating the latent spaces of the AI models with artistic research.

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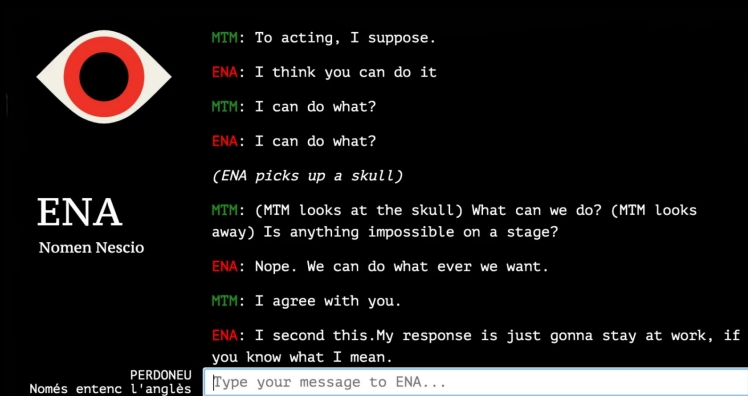




# Latent space – a wonderland to discover

## RQs:

- How could we expressively navigate the latent space?
- Can we imagine and understand the structure, dynamics, and evolution of latent spaces of cultural meaning, ideally without reducing their multi-dimensionality?
- What real-time interactive methods could serve to navigate and explore the latent space? Which interactive art applications do support meaningful navigation methods in the latent space?



# Dr. Vejune Zemaityte

Senior Research Fellow

*Baltic Film, Media and Arts School, Tallinn University*

Vejune uses data analysis and visualisation to study creative industries, focusing on cultural and gender diversity in global cinema. Her research is data-driven, interdisciplinary and industry-facing, often performed in collaboration with external partners.

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[twitter.com/VejuneZem](https://twitter.com/VejuneZem)



# Dr. Vejune Zemaityte

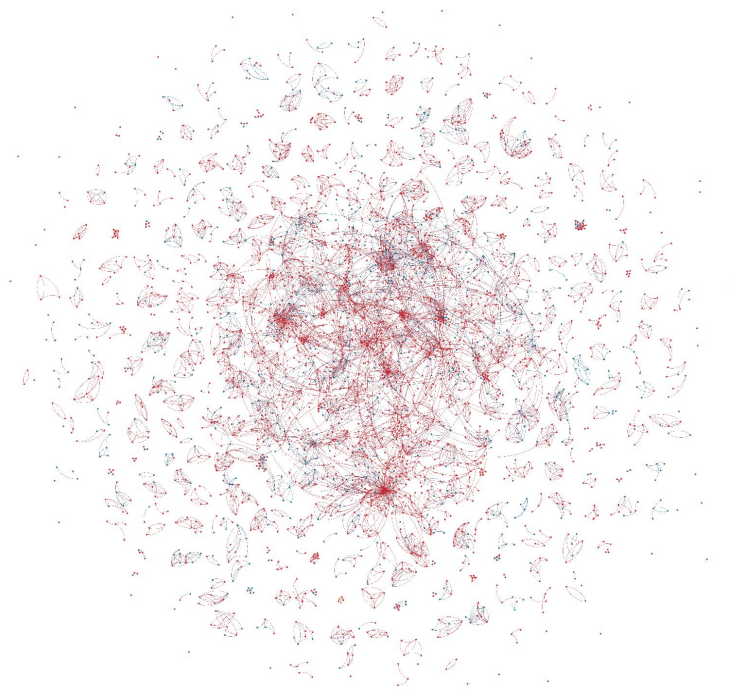
## Focus areas:

- film industry
- gender
- circulation
- cultural labour
- accessibility
- collaboration networks
- diversity
- public value
- cultural tastes
- industry-facing research

## Research questions:

- How are contemporary films circulated across time and space?
- What are some alternative ways to characterise international film performance beyond box office success?
- How accessible is gender/culturally diverse film content across different geographies?
- How can the power structures of gender inequality in film production be understood (and dismantled) through social network analysis?
- How could Web 3.0 technologies change the way that the value is created and perceived in the film industry?

*Image source:* Verhoeven D, Musial K, Palmer S, Taylor S, Abidi S, Zemaityte V, et al. 2020 Controlling for openness in the male-dominated collaborative networks of the global film industry. *PLoS ONE* 15(6): e0234460.



German feature drama production (2006–15) network colour coded by gender. Red nodes are men, blue nodes are women. Edge direction from the source (producer) node to the target (other creatives) node.



# Hanna Jemmer

Junior Research Fellow

*Baltic Film, Media and Arts School, Tallinn University*

Hanna studies how data driven innovation can contribute to competitiveness of legacy media organisations.



# Legacy media's data related competitiveness

RQs: How is data collected, used by legacy media companies? How could it be used for innovation purposes?

Theme 1 - Personal data and open data use in business models

Theme 2 - Personal data and open data use for content

Theme 3 - Policy and Economic frameworks

# Dr. Maximilian Schich

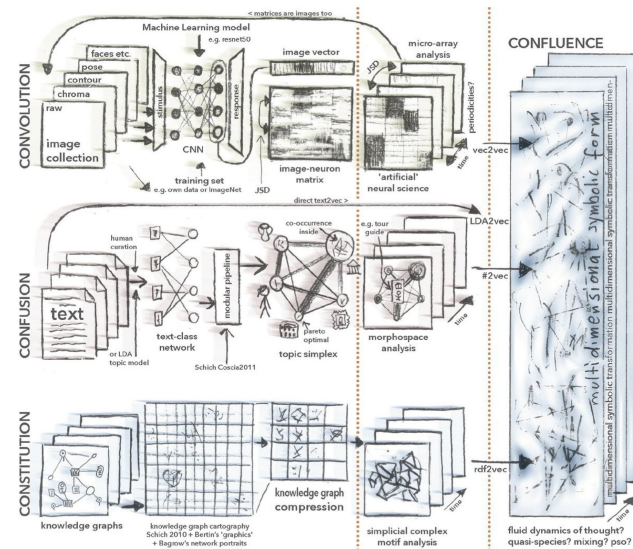
ERA Chair & Professor for Cultural Data Analytics  
*Baltic Film, Media and Arts School, Tallinn University*

Max is a multidisciplinary scientist who collaborates towards a systematic understanding of art and culture, using critical and creative aesthetics, qualitative inquiry, quantitative measurement, and computation.

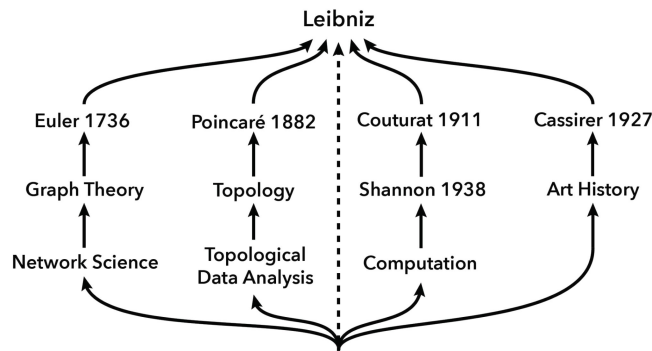


Cultural Semiotics	0	1	1	0	0	0	0	2	0	5	0
Archaeology	0	1	4	0	0	0	0	1	0	1	0
Iconography	0	2	5	0	0	0	0	0	0	0	0
Art History	4	3	5	0	1	0	1	1	0	1	3
Art	5	5	4	0	0	0	0	0	0	1	5
Aesthetics	2	4	5	4	1	0	1	1	0	1	4
Art Education	2	3	4	0	0	0	0	0	0	1	5
Curation	4	4	3	0	0	0	1	0	0	0	0
Generative Art	4	4	1	3	1	0	0	0	0	0	0
Computational Aesthetics	4	3	3	3	0	0	3	0	0	0	0
Film Studies	0	2	1	0	0	0	2	2	0	0	0
Cinema Studies	0	2	1	0	0	0	5	3	0	0	0
Media Studies	2	2	2	5	1	1	4	3	3	2	0
Critical Media Studies	2	3	1	4	0	0	3	3	3	1	0
Cultural Studies	2	2	3	3	0	2	1	4	1	2	0
Creative Industry Studies	1	3	1	0	0	0	5	3	0	0	0
Economics	0	2	2	0	0	0	4	2	3	1	0
Computational Linguistics	0	2	1	0	0	5	0	2	0	1	0
Linguistics	0	0	1	0	0	5	0	2	0	2	0
History	0	0	3	0	0	0	1	5	0	1	0
Literature	0	1	0	0	0	0	2	1	3	2	0
Political Science	0	2	1	1	0	0	0	2	4	2	0
Social Science	1	1	2	3	0	1	5	3	3	2	0
Computational Social Science	1	2	4	3	3	3	5	3	1	1	0
Experimental Psychology/Social Science	0	0	1	3	0	3	3	0	0	2	0
Cognitive & Neural Science	0	0	3	2	0	1	0	0	0	2	0
Biology	0	0	3	0	0	0	0	0	0	1	0
Physics	0	0	2	3	3	0	0	0	0	0	0
Linear Algebra	0	0	2	4	3	3	2	0	0	0	0
Information Architecture	2	3	4	4	0	0	3	4	0	0	0
Network Analysis/Science	0	3	4	3	2	1	2	2	0	1	0
Computer Science	5	4	2	5	5	4	0	0	0	0	0
Data Science	3	1	4	1	5	5	3	1	0	1	0
Data Visualization	5	4	4	4	5	5	4	1	1	1	0
Human-Computer Interaction	4	4	3	5	0	0	0	0	0	1	0
Engineering	3	3	1	5	2	0	0	0	0	0	0
Design	0	4	4	5	0	0	2	0	0	0	3

Initial Disciplinary overlap of the CUDAN team, Fall 2020



"Denkraum" vision for CUDAN: © Maximilian Schich, 2019



A Systematic Science of Art and Culture

Maximilian Schich: Cultural Analysis Situs. (2019)



## OPEN POSITIONS

# Research Fellow in Cultural Data Analytics

Tallinn University seeks to hire two **Research Fellows in Cultural Data Analytics**, particularly in (1) Audiovisual Machine Learning, and (2) Cultural Dynamics, to work on ambitious, high-impact research at the CUDAN ERA Chair (chair holder Prof. Dr. Maximilian Schich). Start of the employment contract: 01.07.- 01.09.2021, duration of the contract is up to 31.12.2023.

Deadline of submitting the application documents is 31st May, 2021.



