

Thomas Davidson BA, MEng

PhD Student / Candidate | Max Planck Institute for Software Systems 2019 - 2022

PhD Student | Emory University 2023 -

Contact details

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Scholarly Works

Spotify Warped - How Music Listening can Reshape Personal Informatics through Casual Users, Passive Data, and Episodic Reflection - CHI 2026

APRIL 2026 - **THOMAS DAVIDSON**, ETHAN LEE, EMILY WALL

Crowd-sourced online study which used mix methods analysis to examine and contrast the information desires of casual users and quantified selfers, investigate how well existing QS frameworks can describe casual users' needs, and explore barriers that exist for users to access and meaningfully engage with their personal data. The work establishes the kinds of insights users want to learn about their behaviour through the lens of music listening history, extracts an information space to describe these insights and describes how passively collected data and episodic overviews are changing personal informatics.

Confirmation Bias: The Double-Edged Sword of Data Facts in Visual Data Communication - CHI 2025

SEPTEMBER 2024 - SHIYAO LI, **THOMAS DAVIDSON**, CINDY XIONG BEARFIELD, EMILY WALL

A project investigating the impact of data-facts on confirmation bias. Through a series of controlled pilot studies and crowd-sourced experiments we explored the biasing effect of data facts and visual embellishment, finding that style, content, and alignment with pre-existing beliefs can significantly impact confirmation bias.

Qualitative Interview Study of Distributed Tracing Visualisation - TVCG 2023 (Presented at IEEE VIS 2023)

FEBRUARY 2023 - **THOMAS DAVIDSON**, EMILY WALL, JONATHAN MACE

Interview study with 6 professionals from industry to derive a set of guidelines for designing and implementing visualisations in distributed tracing. Using qualitative interview techniques and open coding I extracted use cases and challenges over three rounds of interviews and developed the first characterisation of this problem space.

See it to Believe it? The Role of Visualisation in Systems Research - Symposium on Cloud Computing 2022

NOVEMBER 2022 - **THOMAS DAVIDSON**, JONATHAN MACE

A survey paper of over 1,200 papers published in the last 5 years at top tier systems conferences that illustrated a significant minority of systems work presents tools requiring human-facing visualisation. Designed and implemented a survey which showed that the majority of these publications under present their user-facing components and proposed a checklist for future authors to follow.

The Odd One Out: Energy is not like Other Metrics - HotCarbon 2022

JULY 2022 - VAASTAV ANAND, ZHIQIANG XIE, MATHEUS STOLET, ROBERTA DE VITI, **THOMAS DAVIDSON**, REYHANEH KARIMPOUR, SAFYA ALZAYAT, JONATHAN MACE

A position paper discussing the difficulties of recording and analysing energy consumption statistics in a distributed environment.

Digital Relationships - Science Gallery Youth Symposium 2021

JULY 2021 - **THOMAS DAVIDSON**

An interactive data visualisation project that allowed users to generate explorative and informative visualisations based on their own Facebook messaging data. The website (<https://tjd45.github.io/Digital-Relationships/>) and visualisations were mainly developed using d3.js and the work was selected and subsequently presented as an interactive workshop at the Science Gallery's Youth Symposium in 2021.

Aggregate-Driven Trace Visualisations for Performance Debugging - ArXiv

OCTOBER 2020 - VAASTAV ANAND, MATHEUS STOLET, **THOMAS DAVIDSON**, IVAN BESCHASTNIKH, TAMARA MUNZNER, JONATHAN MACE

An approach for visualising aggregate behaviour of a system whilst investigating individual distributed traces. Developed novel visualisation approaches to facilitate aggregate context being displayed in a focused view.

Research Presentations

Spotify Warped - How Music Listening can Reshape Personal Informatics through Casual Users, Passive Data, and Episodic Reflection - CHI 2026

APRIL 2026 - **THOMAS DAVIDSON**, ETHAN LEE, EMILY WALL

Will be presented and published at CHI 2026.

<https://programs.sigchi.org/chi/2026/program/content/222383>

Qualitative Interview Study of Distributed Tracing Visualisation - TVCG 2023

(Presented at IEEE VIS 2023)

FEBRUARY 2023 - **THOMAS DAVIDSON**, EMILY WALL, JONATHAN MACE

DOI - <https://ieeexplore.ieee.org/document/10034850>

Presentation - <https://youtu.be/VswMm2SEvWs?si=v-Pc5-NcEL8QXOF7>

See it to Believe it? The Role of Visualisation in Systems Research - Symposium on Cloud Computing 2022

NOVEMBER 2022 - **THOMAS DAVIDSON**, JONATHAN MACE

DOI - <https://dl.acm.org/doi/10.1145/3542929.3563488>

Presentation - <https://acmsocc.org/2022/assets/slides/126.pdf>

University and Professional Involvement

Teaching

EMORY, INFORMATION VISUALIZATION - SPRING SEMESTER 2025 - **TA**

EMORY, DESIGN STUDIO IN HCI - FALL SEMESTER 2024 - **TA**

EMORY, INFORMATION VISUALIZATION - FALL SEMESTER 2023 - **TA**

UNIVERSITY OF SAARLAND, DISTRIBUTED SYSTEMS - SUMMER SEMESTER 2021 - **TA**

Reviewing

CHI 2025 - OCTOBER 2024 - **2 FULL PAPERS**

VIS 2024 BELIV - MARCH 2024 - **2 WORKSHOP PAPERS**

Other

ATL SCIENCE FESTIVAL - MARCH 2025 - HELPED RUN DATA POETICS WORKSHOP - [HTTPS://ATLANTASCIENCEFESTIVAL.ORG/EVENTS-2025/1163-DATA-POETICS/](https://atlantasciencefestival.org/events-2025/1163-data-poetics/)