



### WELCOME!



#### **UNAM**

The National Autonomous University of Mexico (UNAM) is a prestigious academic, cultural, and research institution of national and international standing. Its main campus, University City, declared a World Heritage Site by UNESCO, is a space where architecture, art, and the nature of the ecological reserve coexist in harmony. UNAM houses museums, libraries, gardens, sports facilities, and murals by artists such as Diego Rivera and Juan O'Gorman. Visiting it is an inspiring experience that celebrates its cultural richness and allows you to experience firsthand the motto that inspires it: "Through my race the spirit will speak."

Semiramis Zaldivar Granada | Program Chair



#### **CDMX**

**Mexico City** is a land that combines centuries of history with a wide cultural diversity. As the country's capital, its architecture reflects the richness of different eras and traditions, ranging from the pre-Hispanic remains of the Templo Mayor to colonial buildings like the Metropolitan Cathedral and modern constructions. Its museums, such as the National Museum of Anthropology, its cultural centers, such as the Palace of Fine Arts, and public spaces, characterized by their vitality and dynamism, showcase the city's historical and artistic richness, making it an ideal place to visit.

Semiramis Zaldivar Granada | Program Chair

### **KEYNOTES**



#### **ERIK HUESCA MORALES**

#### **Foundation for Knowledge and Digital Culture**

Erik Huesca Morales is a physicist from UNAM and doctor in artificial intelligence from UC Berkeley. He is dedicated to advancing knowledge and the convergence of digital technology and education for institutions worldwide. As former president of the Mexican Academy of Informatics, he led projects introducing and consolidating the internet in Mexico and other Latin American countries. He is currently president of the Foundation for Knowledge and Digital Culture, partner at ATM Consultores, and serves on advisory councils for the Federal Telecommunications Institute.



**ERIC HAMILTON** 

#### **Pepperdine University**

Eric Hamilton is the Davidson Endowed Professor of Education and Technology at Pepperdine University, directing the Asset-Based Learning Environments project funded by NSF and the Spencer Foundation. He is active in quantitative ethnography research and works on depolarizing political discourse. Dr. Hamilton has served as Sr. Manager for Emerging Issues in Curriculum at UNESCO's International Bureau of Education, completed Fulbright research in Namibia, and held visiting professorships in Japan, Finland, and the UK.



#### DAVID WILLIAMSON SHAFFER

#### **University of Wisconsin-Madison**

David Williamson Shaffer is the Sears Bascom Professor of Learning Analytics and Vilas Distinguished Achievement Professor of Learning Sciences at UW-Madison, and Data Philosopher at the Wisconsin Center for Education Research. With M.S. and Ph.D. degrees from MIT, he has worked as a teacher, curriculum developer, and game designer. His research merges statistical and qualitative methods to model complex human activity. He has authored over 250 publications, including How Computer Games Help Children Learn and Quantitative Ethnography.

## MORNING WORKSHOPS

#### **1A: INTRODUCTION TO EPISTEMIC NETWORK ANALYSIS (ENA)**

Facilitators: Beatriz Galarza Tohen, Yuanru Tan, Brendan Eagan

This workshop introduces the participants to the basics of the Epistemic Network Analysis (ENA). The goal of the workshop is to learn how to use the ENA web tool independently, and how to develop and interpret ENA graphs. The workshop consists of three parts: 1) theory, 2) step-by-step tutorial, and 3) group work. The topics of the first part are the differences between social network analysis and ENA, and data coding challenges. In the second part, the participants are introduced to the ENA web tool. Lastly, the participants put their newly acquired skills into practice in the group work exercises.

#### **1B: INTRODUCTION TO TRANSMODAL ANALYSIS (TMA)**

Facilitators: Yeyu Wang, Andrew Ruis, Cody Marquart

During this workshop, participants will learn about the conceptual and methodological underpinnings of TMA, develop TMA models using their own multimodal data, and participate in a facilitated discussion of the affordances of TMA and opportunities for further methodological development. Participants, regardless of analytical skill level and epistemological stance toward multimodal learning analytics, will be able to participate in all aspects of the workshop.

## 1C: INTRODUCTION TO TEACHING QUANTITATIVE ETHNOGRAPHY (QE)

**Facilitators:** Ayano Ohsaki, Amalia Daché, Stephanie Rivera-Kumar, David Williamson Shaffer, Marguerite Williamson, Amanda Barany

This workshop serves as an introduction to education in Quantitative Ethnography (QE) and is hosted by Teaching (with) QE, a Special Interest Group of the International Society for Quantitative Ethnography (ISQE). This year, we focus on educational programs for undergraduate and graduate students in higher education institutions. In the first half of the workshop, experienced presenters will discuss approaches, challenges, and best practices in QE instruction. In the second half, participants will engage in collaborative syllabus development in small groups alongside the presenters. The workshop is designed for researchers and practitioners interested in QE education, individuals considering implementing QE in their teaching, and learners seeking to deepen their understanding of the field. If you are interested in brainstorming how to use QE in your formal and informal teaching, learning, or research, join us!

## AFTERNOON WORKSHOPS

#### 2A: ADVANCED EPISTEMIC NETWORK ANALYSIS USING rENA

Facilitators: Yeyu Wang, Zachari Swiecki

In this workshop, we will introduce participants to advanced features of epistemic network analysis (ENA) available in the rENA package for R, as well as a brief introduction and demo on Ordered Network Analysis (ONA) using the ona R package. Our emphasis will be on how to implement the features, as well as how to determine whether they should be used. The workshop will culminate with an rENA analysis using ENA outputs in a subsequent technique, such as regression. Familiarity with ENA theory, the webtool, and rENA is preferred; however, we will provide brief overviews of each. We will also provide an R script for participants to use as a reference during and after the workshop.

#### 2B: INTRODUCTION TO (AUTOMATED) CODING IN QE

Facilitators: Andrew Ruis, Morten Misfeldt, Yuanru Tan, Cody Marquart

This workshop will introduce methods for valid and reliable coding of text data using QE appraoches. During the workshop, participants will work individually and in teams to step through the process of creating codes. In this interactive workshop, participants will learn how to (1) combine qualitative and quantitative perspectives for text analysis, (2) create codebooks for code validation and publication, (3) discuss epistemological issues related to automated coding in QE context

## 2C: ADVANCED EPISTEMIC NETWORK ANALYSIS (ENA) INTERPRETATIONS

Facilitators: David Williamson Shaffer, Amanda Barany

The goal of this workshop is to introduce participants to the advanced functions of epistemic network analysis available in the online web tool, including the features of weighted models, projection, masking, and trajectories. Using a worked example, we will illustrate ways to implement these features and discuss how to determine when they should be applied. The workshop concludes with an in-depth discussion of the mathematical processes behind epistemic networks, including the creation of adjacency matrices, matrix accumulation, spherical normalization, dimensional reduction, and positioning network nodes.

### **EVENT SCHEDULE**

#### **OCTOBER**

12 SUNDAY 01:00 PM - 04:00 PM Doctoral Consortium Session 1

Room: Don Gabrial 1 & 2, Krystal Grand Suites

Insurgentes

13 MONDAY 08:00 AM - 09:00 AM Morning Coffee

Room: Sala Exposiciones, Torre de Ingeniería,

**UNAM** 

09:00 AM - 12:00 PM Workshop 1A: Introduction to Epistemic

**Network Analysis (ENA)** 

Room: Sur III, Torre de Ingeniería, UNAM

09:00 AM - 12:00 PM Workshop 1B: Introduction to Transmodal

Analysis (TMA)

Room: Sur IV, Torre de Ingeniería, UNAM

09:00 AM - 12:00 PM Workshop 1C: Introduction to Teaching

**Quantitative Ethnography (QE)** 

Room: Norte IV, Torre de Ingeniería, UNAM

12:00 PM - 01:00 PM Lunch

Room: Sala Exposiciones, Torre de Ingeniería,

**UNAM** 

01:00 PM - 04:00 PM Workshop 2A: Advanced Epistemic Network

**Analysis using rENA** 

Room: Sur III, Torre de Ingeniería, UNAM

01:00 PM - 04:00 PM Workshop 2B: Introduction to (Automated)

Coding in QE

Room: Sur IV, Torre de Ingeniería, UNAM

01:00 PM - 04:00 PM Workshop 2C: Advanced Epistemic Network

**Analysis (ENA) Interpretations** 

Room: Norte IV, Torre de Ingeniería, UNAM

06:00 PM - 08:00 PM Welcome Drinks

Room: Terraza Reforma 1, Krystal Grand Suites

Insurgentes

## **14** TUESDAY

08:00 AM - 09:00 AM Morning Coffee

Room: Sala Exposiciones, Torre de Ingeniería,

**UNAM** 

09:00 AM - 09:30 AM Opening Ceremonies

Room: Auditorio, Torre de Ingeniería, UNAM

09:30 AM - 10:30 AM Keynote: David Williamson Shaffer

Room: Auditorio, Torre de Ingeniería, UNAM

**10:30 AM - 11:00 AM** Coffee Break

Room: Sala Exposiciones, Torre de Ingeniería,

**UNAM** 

11:00 AM - 12:00 PM Paper Session 1a: Methods, Coding, Fairness

Room: Sur III, Torre de Ingeniería, UNAM

Moderator: Ayano Ohsaki

The Iterative Relationship between Automated and Hand Coding within a Quantitative

Ethnography (QE) Framework: Methodological

Integration and Practical Insights

Authors: Adaurennaya Onyewuenyi, Brendan Eagan, Danielle Espino, Michelle Bandiera and Alexander Tan

Subgroup Fairness in Multilingual Text Classification

Authors: Andrew Ruis, Zhiqiang Cai and David Williamson Shaffer

Of Humans and Machines: Evaluating the Efficacy of GPT-4 in Coding Discourse Data

Authors: Omer Zahid, Jen-Hsiang Pan, Golnaz Arastoopour Irgens, Atefeh Behboudi and Alicia Lane

# **14** TUESDAY

11:00 AM - 12:00 PM

#### **Paper Session 1b: Multimodality**

Room: Sur IV, Torre de Ingeniería, UNAM Moderator: Yeyu Wang

Modeling Multimodal Interactions Using Epistemic Network Analysis

**Authors: Hanall Sung** 

Guide on the Side or Sage on the Stage?: Exploring the Relationship between Teachers' Spatial and Verbal Discursive Strategies

Authors: Daniel J. Noh

Analyzing Brain Activity and User Experience Across Input Modalities using Quantitative Ethnography

Authors: Shayla Sharmin, Behdokht Kiafar and Roghayeh Leila Barmaki

11:00 AM - 12:00 PM

## Paper Session 1c: QE Social Consciousness & Awareness

Room: Norte III, Torre de Ingeniería, UNAM Moderator: Ruth Vitsemmo Akumbu

Education Policy Alignment between Low and Middle-Income Caribbean Countries and the United Nations

Authors: Jade Pratt

ENA: A tool for narrating the history of Asturian enterprises in Mexico

Authors: Maria Josefa Santos and Yvon Angulo Reyes

An ENA-Informed Approach to Integrating Diverse Expert knowledge in Cognitive Work Analysis

**Authors:** Celeste Francis Esteves

11:00 AM - 12:00 PM

## **14** TUESDAY

Room: Norte IV, Torre de Ingeniería, UNAM Moderator: Jessica Rivera Modeling and Measuring Sociocritical Al Literacies with Epistemic Network Analysis Authors: Golnaz Arastoopour Irgens, Atefeh Behboudi and Alicia Lane Still Under the Hammer and Sickle: Race, Repression, and Violations of Academic Freedom in Cuban Universities Authors: Amalia Dache, Jennifer Mesa and Danielle Espino A Quantitative Ethnography on Leadership Values and Principles of Asian American Women Senior Leaders in Higher Education Authors: Catherine Zhang, Julie Wollman and Xiaotong Jenna Lu 12:00 PM - 01:00 PM Lunch Room: Sala Exposiciones, Torre de Ingeniería, UNAM 01:00 PM - 02:00 PM **Special Interest Group Discussions** Room: Sur III, Torre de Ingeniería, UNAM 02:00 PM - 02:30 PM **Coffee Break** Room: Sala Exposiciones, Torre de Ingeniería, UNAM 02:30 PM - 04:00 PM **Keynote: Eric Hamilton** Room: Auditorio, Torre de Ingeniería, UNAM 04:00 PM - 05:00 PM Research Agenda Development (RAD) Room: Sur III, Torre de Ingeniería, UNAM Conference Dinner: San Ángel Inn 07:00 PM - 10:00 PM Diego Rivera 50, San Ángel Inn, Álvaro Obregón, 01060 Ciudad de México, CDMX

Paper Session 1d: Education & Race

## 15 WEDNESDAY

08:00 AM - 09:00 AM Morning Coffee

Room: Sala Exposiciones, Torre de Ingeniería,

**UNAM** 

09:00 AM - 10:30 AM Panel

Room: Auditorio, Torre de Ingeniería, UNAM

Moderator: Amanda Barany

Panelist: Adaurennaya Onyewuenyi, Danielle Espino, Jonathon Sun, Dr. Héctor Benítez & Brendan Eagan

**10:30 AM - 11:00 AM Coffee Break** 

Room: Sala Exposiciones, Torre de Ingeniería,

UNAM

11:00 AM - 12:00 PM Paper Session 2a: Education & Learning

Room: Sur III, Torre de Ingeniería, UNAM

Moderator: Morten Misfeldt

Demand-Resources in Doctoral Education: Mapping Pathways to Dropout Intention and

Careers in Further Research

Authors: Jae Han, Shane Iveson and Zach Swiecki

Conceptualizing and Coding Physics Identity & Community Cultural Wealth: A Quantitative Ethnography of Bridge-Program Interviews

Authors: Geraldine Cochran, Stella Nelson and

Sabrina Henige

## 15 WEDNESDAY

11:00 AM - 12:00 PM

#### **Paper Session 2b: Methods**

Room: Sur IV, Torre de Ingeniería, UNAM Moderator: Rodrigo Cardoso

Embracing Mess: Reflection on how we engage with OE

Authors: Danielle Espino and Ada Onyewuenyi

Expanding the Quantitative Ethnography Toolkit with Transition Network Analysis: Exploring Methodological Synergies and Boundaries

Authors: Kamila Misiejuk, Rogers Kaliisa, Sonsoles López-Pernas and Mohammed Sagr

On the Importance of Numerical and Visual Alignment: Comparing Transition Probability Matrices Visually Using Ordered Semantic Coregistration Layout and Modified Dot Layout

Authors: Yuanru Tan, Yizhou Fan and David Williamson Shaffer

11:00 AM - 12:00 PM

#### Paper Session 2c: Methods, Coding

Room: Norte III, Torre de Ingeniería, UNAM Moderator: Ward Peeters

ChatGPT-Assisted Codebook Design for Learning Analytics Datasets in Multiple Languages: A Case Study

Authors: Ayaz Karimov, Mirka Saarela, Xiner Liu, Zhanlan Wei, Andres Felipe Zambrano, Amanda Barany, Ryan Baker, Jaclyn Ocumpaugh, Sabina Mammadova and Tommi Kärkkäinen

Exploring Differences Between Hybrid GPT-Human and Human-Created Qualitative Codebooks in an Educational Game

Authors: Xiner Liu, Zhanlan Wei, Amanda Barany, Jaclyn Ocumpaugh, Ryan S. Baker, Andres Felipe Zambrano, Yiqiu Zhou and Camille Giordano

## 15 WEDNESDAY

11:00 AM - 12:00 PM Paper Session 2d: Land

Room: Norte IV, Torre de Ingeniería, UNAM

Moderator: Amalia Dache

Qualitative Assessment of the Perception of the Impacts of Protected Agriculture Through Epistemic Network Analysis

Authors: Juan Manuel Vargas-Canales, Rebeca de Gortari-Rabiela and Daniela López-Carmona

Analysis of an Activity Based on the Six Design Principles of a Model-Eliciting Activity

Authors: Veronica Vargas-Alejo, Guadalupe Carmona, Luis Montero-Moguel and Brendan Eagan

Land Emotions: An Initial Analysis of Ethics and Emotive landscapes On A Community Walk

Authors: Meixi, Yeyu Wang, Muhammad Ashiq, Maral Khanjani, Maria Schwedhelm and Giselle Carretto

12:00 PM - 01:00 PM Lunch

Room: Sala Exposiciones, Torre de Ingeniería,

UNAM

01:00 PM - 02:00 PM Paper Session 3a: Politics

Room: Sur III, Torre de Ingeniería, UNAM

Moderator: Andrew Ruis

Etnografía digital: tecnologías y métodos para estudiar la opinión pública en redes sociales

Authors: Lucero E. Herrera Carrillo

A Multi-Motivational Approach to Understanding Polarized Discourse

Authors: Liane Weintraub, Jianxing Yu, Marguerite

Williamson and Fric Hamilton

The Dynamics of Empathy: A Quantitative Ethnography of Student Discursive Moves in Social Studies Discussions

Authors: Ariana Zetlin and Joseph I. Eisman

## 15 WEDNESDAY

01:00 PM - 02:00 PM

**Paper Session 3b: Augmented Reality** 

Room: Sur IV, Torre de Ingeniería, UNAM Moderator: Hanall Sung

A Quantitative Ethnographic Analysis of Caregiver Competencies and Engagement in Augmented Reality Geriatric Simulation

Authors: Behdokht Kiafar, Salam Daher, Asif Ahmmed and Roghayeh Leila Barmaki

Task Negotiation in Socially Shared Regulation of Learning: Ordered Network Analysis of Collaborative Groups in a Global STEM Learning Community

Authors: Seung Lee, Danielle Espino and Eric Hamilton

Not All Who Wander Are Lost: Trailblazing Trajectories in a Minecraft-Based Learning Environment

Authors: Xiner Liu, Yiqiu Zhou, Jaclyn Ocumpaugh, Amanda Barany, Andres Felipe Zambrano, Zhanlan Wei, Ryan S. Baker and Camille Giordano

01:00 PM - 02:00 PM

Paper Session 3c: Methods, Coding

Room: Norte III, Torre de Ingeniería, UNAM Moderator: Yuanru Tan

Computer-Assisted Code Generation Using Combination of generative artificial intelligence, Stepwise Coding, and Topic Modeling

Authors: Ayano Ohsaki and Daisuke Kaneko

Reliable Confidence Intervals for Cohen's Kappa in Al-Assisted Coding of Rare Behaviors

Authors: Zhiqiang Cai and David Williamson Shaffer

Exploring Role-Based Knowledge Co-Construction in Social Annotation with Epistemic Network Analysis

Authors: Yuwei Liang, Zhanlan Wei, Xiner Liu, Xinran Zhu, Yu Gao and Bodong Chen

## 15 WEDNESDAY

01:00 PM - 02:00 PM Paper Session 3d: Global Collaboration Room: Norte IV, Torre de Ingeniería, UNAM Moderator: Danielle Espino The Ties That Build: Unpacking STEM Identity in Global Collaborative Settings Authors: Ruth Akumbu, Eric Hamilton, Ana Paula Giacomassi Luciano and Danielle Espino Between Structure and Understanding: Analyzing Knowledge Co-Construction of Al Understanding Authors: Xiang Li, Zhichun Liu and Yuanru Tan Cultural Identity in Global STEM Education Through the Integration of Cultural Elements Authors: Ruth Akumbu and Eric Hamilton 02:00 PM - 03:00 PM **Coffee Break** Room: Sala Exposiciones, Torre de Ingeniería, **UNAM Beta Version Showcase** 03:00 PM - 04:30 PM Room: Auditorio, Torre de Ingeniería, UNAM 04:30 PM - 05:00 PM **Coffee Break** Room: Sala Exposiciones, Torre de Ingeniería, UNAM **Poster Session** 05:00 PM - 07:00 PM Room: Norte I & II, Torre de Ingeniería, UNAM

# **16** THURSDAY

08:00 AM - 09:00 AM Morning Coffee

Room: Sala Exposiciones, Torre de Ingeniería, UNAM

09:00 AM - 10:00 PM

Paper Session 4a: Methods

Room: Sur III, Torre de Ingeniería, UNAM Moderator: Golnaz Arastoopour Irgens

More Than Words: Evidencing Qualitative Findings Through Multimodal Narratives

Authors: Yixin Cheng and Zachari Swiecki

Nothing Left Untouched: Design Case Extending Code-Wise ENA to Model Effect of Memo-Medium on Coding

Authors: Mariah A. Knowles and Amanda Barany

09:00 AM - 10:00 PM

Paper Session 4b: Game Based

Room: Sur IV, Torre de Ingeniería, UNAM

Moderator: Toshio Mochizuki

Let Me Explain: Linking Situational Interest to Student Response in Interviews

Authors: Zhanlan Wei, Amanda Barany, Jaclyn Ocumpaugh, Xiner Liu, Andres Felipe Zambrano, Ryan S. Baker and Camille Giordanoi

Modeling Player Progression in an Educational Game Using Ordered Networks

Authors: Xiner Liu, Jennifer Scianna, Shari J. Metcalf, Zhanlan Wei, Ryan S. Baker, Amanda Barany, Luke Swanson and David Gagnon

Better to be Confused or Frustrated than Bored: Analyzing Affect Dynamics Across Player Archetypes

Authors: Andres Felipe Zambrano, Jaclyn Ocumpaugh, Ryan S. Baker and Jessica Vandenberg

# **16** THURSDAY

09:00 AM - 10:00 PM Paper Session 4c: Theory Room: Norte III, Torre de Ingeniería, UNAM Moderator: Karin Frey Educators' Al Journey: Developing Al Competencies in a Professional Development Program Authors: Jiayu Cheng, Yu Gao, Xiner Liu, Amanda Barany and Bodong Chen Research Leadership in the Context of Quantitative Ethnographic Work Authors: Brendan Eagan and Andrew Ruis Critical Quantitative Ethnography (CritQE): A Pathway Toward Convergence Research and Equity Authors: Nichole Garcia, Ada Onyewuenyi and David Williamson Shaffer 10:00 AM - 10:30 AM **Coffee Break** Room: Sala Exposiciones, Torre de Ingeniería, UNAM **Open Board Meeting & Community Feedback** 10:30 AM - 11:30 AM Room: Auditorio, Torre de Ingeniería, UNAM 11:30 AM - 12:00 PM **Closing Ceremony** Room: Auditorio, Torre de Ingeniería, UNAM 12:00 PM - 01:00 PM Lunch Room: Sala Exposiciones, Torre de Ingeniería, UNAM 01:00 PM - 04:00 PM **Doctoral Consortium Session 2** Room: Room: Norte I & II, Torre de Ingeniería, UNAM

### PROGRAM COMMITTEE

#### PROGRAM CHAIR

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#### **KEYNOTE SPEAKERS**

- Erik Huesca Morales Foundation for Knowledge and Digital Culture
- **Eric Hamilton** Pepperdine University
- David Williamson Shaffer University of Wisconsin-Madison

#### **DOCTORAL CONSORTIUM**

- Mario Sánchez Aguilar Instituto Politécnico Nacional
- Morten Misfeldt University of Copenhagen





