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ERB 514

SCAN ME

🔍 Research Projects

Covid Dashboard: (CoWiz or COVID Wizard): Interactive Analysis and Visualization of Covid-19 Data using Multilayer Networks (or MLNs).

Graph and Multilayer Network Analysis: Developing efficient and scalable composition-based algorithms for substructure discovery, community, centrality, etc.

Graph Mining and Querying: Research work explores: i) Efficient algorithms for querying (not search) very large and complex graphs and ii) Scalability.

Video Situation Analysis: Data fusion research that extracts information from videos, models it, and applies mining and querying techniques with other data for inferring higher level knowledge.

📝 Papers/Thesis

ICDE 2021 Publication: CoWiz: Interactive Covid-19 Visualization Based on Multilayer Network Analysis, Demo paper.

ER 2020 Publication: EER → MLN: EER Approach to For modeling, Mapping, and Analyzing Complex Data as Multilayer Networks.

PhD Thesis on Multilayer Networks, *Abhishek Santra*, 2020

MS Thesis on Graph Query Processing using Map/Reduce, *Harshit Modi*, 2020

MS Thesis on Substructure Discovery in Multilayer Networks, *Anish Rai*, 2020

MS Thesis on Community Detection in Heterogeneous Multilayer Networks, *Kanthi Komar*, 2019

💰 Grants

NSF Grant (7/2020 to 6/2023), $996K Total: Collaborative Research: SHF: Medium: NetSplicer: Scalable Decoupling-Based Algorithms for Multilayer Network Analysis

UTA: Sharma Chakravarthy,

UNT: Sanjukta Bhowmick,

PSU: Kamesh Madduri

NSF REU Supplement $16K

📰 Latest News

OurCS@DFW 2021: Hajira Sheikh (UNT) and Soumya Manchikanti (UTA) participated in the Workshop on "[CoWiz++] Adding Animation and Real-Time Feed to COVID-19 Visualization Dashboard" offered by IT Lab in Feb 2021 as part of OurCS@DFW event and secured the **First Prize.**

ER 2022: Chakravarthy is a PC co-chair, to be held in India.

COMAD-CODS 2021: Chakravarthy and Santra gave a tutorial on "Big Data Analysis Using Multilayer Networks", on Jan 4, 2021.

BDA 2020: Sharma Chakravarthy Chaired a Panel on "Two Sides of a Pandemic: Vaccine and Vaccination - What Role Can Computer Scientists play for Covid19?". Dr. Abhishek Santra was a panelist.

🎓 Graduates

Abhishek Santra
PhD, Aug 2020

Kanthi Komar
MS, May 2019

Anish Rai
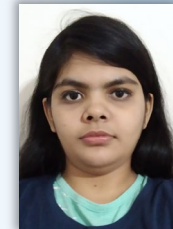MS, May 2020

Harshit Modi
MS, May 2020

👤 People

Dr. Sharma Chakravarthy

Enamul Karim (PhD)

Hafsa Billah (PhD)

Kiran Mukunda (MS)

Kunal Samant (BS)

Endrit Memeti (BS)