

## Ziad Albert Matni

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### ACADEMIC APPOINTMENTS

- 2022 – present Assistant Teaching Professor (LPSOE), Computer Science,  
University of California, Santa Barbara
- 2016 – 2022 Lecturer, Computer Science, University of California, Santa Barbara  
Lecturer, Communication, University of California, Santa Barbara
- 2011 – 2016 Part-Time Lecturer, Information and Computer Science,  
School of Communication & Information (SC&I), Rutgers University
- 2011 – 2014 Research fellow, SC&I, Rutgers University
- 1994 – 1995 Teaching assistant, Department of Electrical Engineering,  
University of Southern California

### EDUCATION

- Ph.D. 2018 Rutgers University, School of Communication and Information (SC&I),  
New Brunswick, NJ.  
Emphasis: Information Science.  
Dissertation Title: *The Influence of Network Structures and Information  
Seeking Uncertainty on Information Seeking Behavior.*  
Advisor: Dr. Chirag Shah.  
Online link to dissertation text: <http://bit.ly/2LZAHgT>
- M.S. 1996 University of Southern California, Los Angeles, CA  
Electrical Engineering, Emphasis: Communication Systems Design
- B.S. 1994 University of Southern California, Los Angeles, CA  
Electrical & Computer Engineering, *Cum Laude*
- B.A. 1994 St. Mary's College of California, Moraga, CA  
Liberal Arts (Physics minor), *Summa Cum Laude*

### RESEARCH INTERESTS

Information retrieval and information seeking behavior around communication technologies via online social networks, focusing on networked communities, social media and the use of Big Data. My dissertation examined people's behavior around information seeking in various scenarios and in the context of their social network structures. My research is computational in nature and often comprises of building electronic, programmable data collection tools and capturing subjects' behavior as they interact with these tools. My pedagogical research interests extend to understanding the most effective ways that students learn computational methods using information systems.

## JOURNAL ARTICLES

Appel, L., Dadlani, P., Dwyer, M., Hampton, K. N., Kitzie, V., **Matni, Z. A.**, Moore, P., & Teodoro, R. (2014). Testing the validity of social capital measures in the study of information and communication technologies. *Information, Communication & Society*, 1–19. doi:10.1080/1369118X.2014.884612

McInerney, C.R., & **Matni, Z.** (2013). Knowledge management and community and knowledge management and systems or processes: Introduction to the “Virtual Issue on Knowledge Management and Community” in the *Journal of the American Society of Information Science & Technology (JASIST)*, C.R. McInerney and Z. Matni (Eds.). [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1532-2890/homepage/knowledge\\_management.htm](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1532-2890/homepage/knowledge_management.htm)

## PUBLISHED PROCEEDINGS

Mirza, D., Conrad, P., Lloyd, C., **Matni, Z.**, Gatin, A. (2019). Undergraduate teaching assistants in computer science: A systematic literature review. Submitted to the *Fifteenth Annual ACM International Computing Education Research (ICER) conference*, Toronto, ON, Canada.

Choi, D., **Matni, Z.**, & Shah, C. (2016). What social media data should I use in my research?: A comparative analysis of Twitter, YouTube, Reddit, and the New York Times comments. Poster submitted to the *Association for Information Science & Technology (ASIST) Annual Meeting*, November 2016, Copenhagen, Denmark.

**Matni, Z.**, Sonne, J., & Choi, D. (2015). Society Key: Integrating social media data with governmental open data to encourage community wellbeing. *iConference 2015 (Social Media Expo)*. Newport Beach, CA.

Choi, D., **Matni, Z.**, & Shah, C. (2015). Switching sources: A study of people’s exploratory search. In *Proceedings of Association for Information Science & Technology (ASIST) Annual Meeting*. St. Louis, MO.

**Matni, Z.**, & Shah, C. (2014). For the love of information: Motivations and affective dynamics of surfing the Web for pleasure. In *Proceedings of Association for Information Science & Technology (ASIST) Annual Meeting*. Seattle, WA.

Schwartz, R., Naaman, M., & **Matni, Z.** (2013). Making sense of cities using social media: Requirements for hyper-local data aggregation tools. In *Proceedings, WCMC Workshop at ICWSM*, July, Boston, MA.

## BOOK CHAPTERS

**Matni, Z.**, and Stohl, C. (2017). Organizational networks and strategic communication in *The International Encyclopedia of Strategic Communication*, Wiley.

## CONFERENCE PRESENTATIONS

- Choi, D., **Matni, Z.**, & Shah, C. (2015). SOCRATES 2.0: Bridging the gap between researchers and social media data through natural language interactions. Poster and demo presented at the *Association for Information Science & Technology (ASIST) Annual Meeting*, November 2015, St. Louis, MO.
- Matni, Z.** (2015). Detecting measures for community wellbeing on social media. Paper presented at the *Social Media & Society Conference*, July, 2015, Toronto, Canada.
- Matni, Z.** (2015). Using social media data to measure and influence community wellbeing. Paper presented at the doctoral consortium at the *15th ACM/IEEE-CS Joint Conference on Digital Libraries (JCDL)*, June 2015, Knoxville, TN.
- Matni, Z.**, Choi, D., & Shah, C. (2014). A demonstration of SOCRATES: Streamlining the collection, analysis and exploration of social media data. Poster and demo presented at the *Association for Information Science & Technology (ASIST) Annual Meeting*, November 2014, Seattle, WA.
- Matni, Z.**, Doerfel, M., & Weber, M. (2014). Surviving disruption through resilient networks. Paper presented at the *SunBelt XXXIV Conference (INSNA)*, February 2014, St. Pete Beach, FL.
- Appel, L., Dadlani, P., Dwyer, M., Hampton, K., Kitzie, V., **Matni, Z.**, Moore, P., & Teodoro, R. (2014). Awareness of social capital during Hurricane Sandy. Paper presented at the *SunBelt XXXIV Conference (INSNA)*, February 2014, St. Pete Beach, FL.
- Hampton, K., Appel, L., Dadlani, P., Dwyer, M., Kitzie, K., **Matni, Z.**, Moore, P., & Teodoro, R. (2013). Apples to apples? The validity of scales used in the study of online social capital. Paper presented at the *National Communication Association Conference (NCA)*, November 2013, Washington, D.C.
- Appel, L., Dadlani, P., Dwyer, M., Hampton, K., Kitzie, K., **Matni, Z.**, Moore, P., & Teodoro, R. (2013). The validity of scales used in the study of online social capital. Paper presented at *The American Sociological Association (ASA)*, August 2013, New York City, NY.

## ACADEMIC AWARDS AND FUNDING

- Dissertation Support grant, School of Communication and Information, Rutgers University, 2017 (\$1000).
- Distinguished Achievement as a Part-Time Lecturer Award, School of Communication and Information, Rutgers University, 2016.
- Travel and conference funding from Rutgers SC&I to participate in and attend the Association for Information Science & Technology (ASIS&T), St. Louis, MO, 2015 (\$900).
- Travel and conference funding from Rutgers SC&I to participate in and attend the Social Media & Society Conference, Toronto, Canada, 2015 (\$700).
- Travel and conference funding from the Association for Computing Machinery (ACM) to participate in and attend the 15th ACM/IEEE-CS Joint Conference on Digital Libraries (JCDL) at their Doctoral Consortium, Knoxville, TN, 2015 (\$750).
- SC&I Scholarship Award, School of Communication & Information, Rutgers University, Spring 2015 (\$700).
- Social Media Expo Team Finalist Award from the iConference 2015, Newport Beach, CA (\$3,000).
- SC&I Academic Fellowship Award, School of Communication & Information, Rutgers University, 2011– 2014 (\$25,000 per year for 3 years with full tuition remission). This fellowship is awarded to only one person per incoming cohort at Rutgers SC&I.
- Outstanding Research Practicum Display Award, School of Communication and Information, Rutgers University, 2014.
- Travel and conference funding from Rutgers SC&I to participate in and attend the Association for Information Science & Technology (ASIS&T), Seattle, WA, 2014 (\$1000).
- Travel and conference funding from Rutgers SC&I to participate in and attend the SunBelt XXXIV Conference (INSNA), St. Pete Beach, FL, 2014 (\$700).
- Travel and conference funding from Rutgers SC&I to participate in and attend the Association for Information Science & Technology (ASIS&T), Montreal, Canada, 2013 (\$500).
- Outstanding Teaching Assistant Award, School of Electrical Engineering, USC, 1995.

### INVITED TECHNICAL PUBLICATIONS (Non-Peer Reviewed)

**Matni, Z.** (2021). Social Network Analysis, *Information Matters*, August 2021, <https://informationmatters.org/2021/08/social-network-analysis-part-1/> and <https://informationmatters.org/2021/08/social-network-analysis-part-2/>

**Matni, Z.** (2004). When good eyes go bad: Perfecting measurement for high-speed integrated circuits, *Test & Measurement World*, April 2004, <http://www.tmworld.com/eyes>

**Matni, Z.** (2002). Demonstrating a fiber optic link for 10 Gigabit-per-second data communications. White paper for Inphi Corporation, December 2002.

### INVITED WORKSHOPS AND PRESENTATIONS

**Matni, Z.** (2021). Teaching data science to social science students. Presented at the Data Science Summit at UCSB (Fall '21) on December 3<sup>rd</sup>, 2021. Santa Barbara, CA

**Matni, Z.** (2019). Big data uses in social media research. Presented at the Center for Information Technology & Society (CITS) Research Computing Skills Workshop. University of California, Santa Barbara, May 30, 2019. Santa Barbara, CA.

**Matni, Z.** (2019). Scraping and garnering data for the analysis of social media. Presented at the Center for Information Technology & Society (CITS) Research Computing Skills Workshop. University of California, Santa Barbara, April 20, 2019. Santa Barbara, CA.

**Matni, Z.** (2018). Recursive (fun)ctions. Presented at the Computer Science Department at the University of California, Santa Barbara, February 9, 2018. Santa Barbara, CA.

**Matni, Z.** (2016). Using big data to inform communication research. Presented at the Communication Department at the University of California, Santa Barbara, March 16, 2016. Santa Barbara, CA.

**Matni, Z. & Albertson, K.** (2014). A demonstration of the SOcial and CRowdsourced AcTivities Extraction System (SOCRATES) for use in scholarly social media research. Presented at the DIMACS Workshop on Building Communities for Transforming Social Media Research Through New Approaches for Collecting, Analyzing, and Exploring Social Media Data", Rutgers University, April 10-11, 2014. New Brunswick, NJ.

**Matni, Z.** (2013). Using Big Data in social media to make sense of cities. Presented at the University of Western Australia Business School, June 7, 2013. Perth, Western Australia.

**TEACHING (Creator/Instructor of Record)****University of California, Santa Barbara, Department of Communication**

COMM 88*	Communication Research Methods	2017 – present
COMM 169	Social Networks	2016 – present
COMM 160DS	Data Science Use in Communication Research	2020 – present
COMM 199RA	Independent Study	2017 – present

**University of California, Santa Barbara, Department of Computer Science**

CMPSC 8*	Introduction to Computer Science	2017 – present
CMPSC 16*	Solving Problems with Computers, I	2016 – present
CMPSC 32*	Object Oriented Design and Implementation	2022 – present
CMPSC 64	Computer Organization and Design Logic	2017 – present
CMPSC 111	Introduction to Computational Science	2019 – present
CMPSC 154	Computer Architecture	2020 – present
CMPSC 176A	Introduction to Computer Communication Networks	2021 – present
CMPSC 193	Internship in Industry	2018 – present

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**Rutgers University, School of Communication & Information**

ITI 201	Intro. to Computer Programming Concepts using Java	2015
ITI 331	Networking & Internet Technologies	2010 - 2016
MLIS 550	Information Technologies for Information Agencies	2010 - 2016
ITI 210	Management of Technological Organizations	2012
ITI 220	Retrieving & Evaluating Electronic Information	2011

**The College of New Jersey, School of Engineering**

ENG 212	Circuits Analysis	2011
ENG 214	Circuits Analysis Laboratory	2011
ELE 333	Electrical Engineering Laboratory I	2011

**Rutgers University, School of Engineering**

ECE 411	Electrical Energy Conversion	2010
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**University of Southern California, School of Engineering (Teaching Assistant)**

EE 220	Electronic Circuits	1994 – 1996
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**Various locations in California and New Jersey**

Private university-level tutoring in various subjects including Pre-Calculus, Calculus (for levels I, II, III), Chemistry, Physics (for levels I, II, III), Electrical Engineering, French.

\* indicates classes that are routinely very large size (120-300 students)

### **Teaching Accomplishments**

- Have taught approximately **5,140 students at UCSB** since Fall 2016, accounting for 9 courses taught every academic year (as well as a total of 5 summer session courses).
- Have taught over **6,380** students in my teaching career since 2011.
- Spend at minimum 10 hours per week with students outside of class to advise them on issues regarding their academics, the state of the technical industry, and general advice.

### **SERVICE**

#### **To the Department**

##### ***Teaching and Mentoring Students***

- Have written over **420** letters of recommendation to **127** UCSB students since Fall 2017.
- Taught **17** students on computational and programming methods for Communication research via COMM 199RA.
- Advised and mentored **10** students in Computer Science through their industry internships via CS 193.
- Created and presented workshops on Big Data methodologies and techniques for graduate students (targeted to students in the Social Sciences) via the Center for Information Technology and Society (CITS) in April/May 2019.
- Regularly offer a “Basic Linux Use” workshop at UCSB for Computer Science students while teaching CS 8 and CS 16.

##### ***Committees - UCSB***

- Member, Undergraduate Committee - Course Assessment Task Force (for CS 111/165A/165B and CS 8/9/16), Computer Science Department, UCSB, 2020 - present.
- Member, Undergraduate Committee, Communication Dept., UCSB, 2017 – present.
- Managing Editor, Communication Department Newsletter, UCSB 2019 – present.

##### ***Committees – Rutgers University***

- Panelist, School of Communication and Information (SC&I, Rutgers) doctoral program invitational, 2015, 2016.
- Panelist, SC&I, Advisory Council Meeting, 2015.
- Webmaster, Doctoral Student Association (DSA), SC&I, Rutgers University, 2014 – 2015.
- Panelist, SC&I doctoral program invitational, 2014.
- Panelist, DSA new student orientation, 2012 – 2014.
- Treasurer, Doctoral Student Association (DSA), SC&I, Rutgers University, 2012 – 2013.

### **To the University**

- Invited faculty member for the UCSB chapter of Women in Computer Science (WiCS) reception, 2021.
- Invited faculty judge for the UCSB SB Hacks, 2019, 2020, and 2021.
- Invited faculty mentor for the UCSB Regents Scholars reception, 2019, 2020, and 2021.
- Member, University Committee for Faculty Welfare (CFW), UCSB 2020 – 2021.

### **To the Discipline**

#### ***Editorship***

- Co-editor, “Virtual Issue on Knowledge Management and Community” for the Journal of the American Society of Information Science & Technology (JASIST), 2013.  
[http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1532-2890/homepage/knowledge\\_management.htm](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1532-2890/homepage/knowledge_management.htm)

#### ***Professional Affiliations and Conferences***

- Treasurer, New Jersey Chapter of the Association for Information Science and Technology (NJASIST), 2014 – 2016. Administer and manage all financial needs (approx. \$20,000 in assets) for the state-wide chapter of an international organization.
- Treasurer, Rutgers University Chapter of the Association for Information Science and Technology (RUASIST), 2014 – 2016.
- Co-organizer, "DIMACS Workshop on Building Communities for Transforming Social Media Research Through New Approaches for Collecting, Analyzing, and Exploring Social Media Data", Rutgers University, April 10-11, 2014.

### **PROFESSIONAL AFFILIATIONS**

- Member, ACM, 2013 – present.
- Member, IEEE, 1996 – present.
- Member, ASIS&T, 2013 – present.
- Member, Rutgers Information Seeking Lab (Dr. Chirag Shah, director), 2013 – 2016.
- Member, NetSCI Lab (Dr. Marya Doerfel and Dr. Matthew Weber, directors), 2013 – 2016.
- Member, Rutgers Social Media Information Lab (Dr. Mor Naaman, director), 2011 – 2013.



## **PROFESSIONAL AND TECHNICAL EXPERTISE**

### *RESEARCH METHODOLOGIES USED*

- Computational modeling
- Quantitative analysis, multivariate statistical analysis
- Big Data and Data Science methods, especially for use in the Social Sciences
- Social Network Analysis (SNA)
- Qualitative analysis, including interviews, content analysis, coding, surveys, etc...

### *TECHNICAL EXPERTISE*

- Advanced skills in programming/scripting languages: Python, C/C++, Java, MIPS assembly, UNIX csh/bash, MATLAB, Perl, PHP, HTML, CSS, and JavaScript.
- Hardware simulation languages: HSPICE (analog), Verilog, VHDL, pyRTL (digital).
- Social network analysis software: R Statnet, UCINet.
- Statistical analysis software: R, SPSS.
- Large data set mining techniques for Big Data: web-scraping, API programming.
- Crowdsourcing tools: Amazon Mechanical Turk.
- Relational database management systems: MySQL, Mongo DB.
- Amazon Web Services: Elastic Compute Cloud (EC2), Simple Storage Service (S3), Relational Database Service (RDS).
- Network server design and system administration: RAID servers, UNIX system administration.
- Computer network system design and management/administration.
- Human-Computer Interface (HCI) user-experience (UX) design.

### *OTHER PROFESSIONAL SKILLS / RELEVANT INFORMATION*

- Design and engineering of FPGA, System-on-Chip, and custom semiconductor integrated circuits.
- Design and engineering of electronic and optoelectronic systems, including both component and system designs.
- Marketing and management: Product and project management for complex systems.
- Fully fluent in English, French, and Arabic.
- U.S. citizen.

## INDUSTRY EMPLOYMENT HISTORY

### **Matni Consulting**

**2009 – 2010**

- Self-employed: Consulted with various investment banks on the state of the Semiconductor Industry.

### **LSI Corporation (previously Agere), Allentown, PA**

**2005 – 2009**

*Product Marketing Manager*

- Drove new product definition, product prioritization, competitive analysis, and communication across business unit for state-of-the-art digital data storage devices.

### **Red Sky Systems, South Plainfield, NJ**

**2005**

*Senior Hardware Engineer*

- Engineering lead on designs for an undersea optical fiber data communication system. Ensured reliability and manufacturability based on stringent commercial, industrial and military specifications.

### **Inphi Corporation, Westlake Village, CA**

**2002 – 2005**

*Applications Engineering Manager*

- Managed over 100 products for customer engineering and marketing support for state-of-the-art ultra-high-speed electronic communication devices.
- Drove client support via product presentations, white papers, design guides, trade journal articles, and ensured compliance with multiple industry standards.

### **Vitesse Semiconductor Corporation, Camarillo, CA**

**1996 – 2002**

*Design Engineer, Senior Applications Engineer*

- Designed multiple complete integrated circuits (IC) for high-speed communication systems in a Gallium Arsenide (HGAs-4) semiconductor fabrication process.