MIKHAIL NEKRASOV
https://michaelnekrasov.com

12737 Via Terceto, San Diego CA, 92130 ● (858) 754-9676 ● mikrasov@gmail.com ● US Citizen

EDUCATION

University of California, Santa Barbara	Ph.D. Computer Science	2020
	M.S. Computer Science	2018
University of California, San Diego	B.S. Computer Science (*cum laude*)	2011

PUBLICATIONS

Nekrasov M, et. al. "Impact of 802.15.4 Radio Antenna Orientation on UAS Aerial Data Collection". ICCCN. 2020. (In preparation)

Paul U, Alexander E, Nekrasov M, Adrash V, Belding E. "#Outage: Detecting Power and Communication Outages from Social Networks". WWW. 2020.

Nekrasov M, et al. "Evaluating LTE Coverage and Quality from an Unmanned Aircraft System ." IEEE MASS. 2019.

Adarsh V, Nekrasov M, Belding E. "Packet-level Congestion Estimation in LTE Networks using Passive Measurements." IMC. 2019.

Nekrasov M, et al. "Optimizing 802.15. 4 Outdoor IoT Sensor Networks for Aerial Data Collection". MDPI Sensors. 2019.

Nekrasov, M, et al. "Performance Analysis of Aerial Data Collection from Outdoor IoT Sensor Networks using 2.4GHz 802.15.4." ACM DroNet 2019.

Nekrasov, M, et al. "Anonymity and Reputation on Social Media in an Age of Global Internet Dependence." JISA. 2018.

Nekrasov, M, et al. "SecurePost: Verified Group-Anonymity on Social Media." USENIX FOCI, 2017.

Nekrasov, M, Parks, L., and Belding, E. "Limits to internet freedoms: Being heard in an increasingly authoritarian world." ACM LIMITS, 2017.

Nekrasov, M., et al. "Android at Bandon Bay: Low-Cost Environmental Monitoring and Event Detection Using Smartphones." GSWC. 2013.

Fountain, T., Sameer, T., Shin, P. Nekrasov, M. "The Open Source DataTurbine Initiative: Empowering the Scientific Community with Streaming Data Middleware." Bulletin of the Ecological Society of America. 2012.

Jaroensutasinee, M., Jaroensutasinee, K., Bainbridge, S., Fountain, T., Chumkiew, S., Noonsang, P. Kuhapon, U. Vannarat, S. Poyai, S. Nekrasov, M. "Sensor Networks Applications for Reefs at Racha Island, Thailand." ICRS. 2012.

Jaroensutasinee, K., Jaroensutasinee, M., Bainbridge, S., Fountain, T., Holbrook, S., Nekrasov, M. "CREON – Integrating Disparate Sources of Remote Coral Reef Sensor Data." ICRS. 2012.

Jaroensutasinee, M., Jaroensutasinee, K., Fountain, T., Nekrasov, M. et al. "Coral Sensor Network at Racha Island, Thailand." EIM. 2011.

Lu, S. Perry, M. Nekrasov, et al.. (2011). "Automatic analysis of Camera Image Data: an Example of Honey Bee (Apis cerana) Images from Shanping Wireless Sensor Network." Taiwan Journal of Forest Science. 6 (26); 305-311. 2011.

SKILLS

Programming:	Python; Java; C; C++; HTML 5; CSS 3; JavaScript; JQuery; NodeJS; XML; SQL; PHP; Assembly Languages (SPARC); Pandas, NumPy; SciPy;
Technologies:	Android Development; Django; TCP/IP Stack; 802.11; 802.15.4; OpenCV; Embedded devices; Cloud Computing (AWS); JSON; AJAX; REST; D3; Twitter Bootstrap; Microcontrollers; Data Processing; API Development; Node JS; React; Gatsby; Apache Servers;
Tools:	Linux/Windows; PyCharm, IntelliJ, Eclipse; Adobe Photoshop/Lightroom; LaTeX; Microsoft Office; UAS Pilot (Part 107); DataTurbine;
Social:	Teaching, Teamwork, Communicating Between Disciplines, Multi-national Collaborations, Engage with technology stakeholders, Grant Writing

Academic experience including leadership, research, outreach, policy development, and administrative roles. Interdisciplinary and cross-sectoral collaborations with various departments at UCSD, UCSB, and LTER member sites as well as with international organizations in Australia, Mongolia, Taiwan, Thailand, Turkey, and Zambia. ***Engagements and positions include:***

UNIVERSITY of CALIFORNIA, SANTA BARBARA

Dissertation on 'Robust, Resilient Networked Communication' Computer Science Department *(9/13–03/2020):* Under advisor Professor Elizabeth Belding. Designed applied solutions for locating and communicating with affected individuals during environmental disasters using unmanned aerial drones. – *20-40hrs per week.*

Research Assistant on SecurePost Project, MOMENT Lab, Computer Science Department *(9/13–6/17):* Collaborated with interdisciplinary team of 10 PhD students, 5 faculty, and over 15 international community partner organizations to design and implement technologies for managing real-world obstructions to freedom of speech in developing regions – *20hrs per week.*

Vice President, Student Senate & Member, Graduate Student Recruitment Committee, Computer Science Department *(9/15–6/16):* Member of graduate student forum for department committees, policies and events. – *3-6hrs per week.*

WALAILAK UNIVERSITY, THA SALA, NAKHON SI THAMMARAT PROVINCE, THAILAND

Developing technologies for monitoring and public awareness of ecological issues. Built long-term collaborations, and shared knowledge and tools with local ecologists.

Fulbright Scholar, Center of Excellence in Ecoinformatics *(1/13–9/13):* Led international research partnership to develop real-time flood detection for protecting aquaculture in the Gulf of Thailand– *40+hrs per week.*

NSF Funded Internship, Center of Excellence in Ecoinformatics *(9/10–12/10):* Deployed coral reef observatory at Racha Yai (island near Phuket) – *40+hrs per week.*

UNIVERSITY of CALIFORNIA, SAN DIEGO

Raising institutional awareness of importance in international experiences in STEM education. Building international contacts and collaborations. Mentoring others in forming and executing projects with interdisciplinary and international components.

Research Assistant, California Institute for Telecommunications and Information Technology [CALIT2] *(10/09–6/12):* Developed technologies for real-time data streaming and analysis as part of the Open Source Data Turbine Initiative – *20hrs per week.*

Pacific Rim Undergraduate Experiences [PRIME] Scholar, National Museum of Marine Biology and Aquarium, Taiwan *(6/09–9/09):* Automated coral spawning detection using computer vision coupled with coral fluorescence and– *40hrs per week.*

Fifteen years of experience as a paid consultant for web development, computer networks, and photography. Meet deadlines to produce concrete deliverables satisfy customers, which brought back and expanded business. Requires ability to effectively communicate complex technical problems and solutions with people with varying backgrounds and needs.

INDEPENDENT CONTRACTOR, MIKRASOV DESIGN *(6/03–present)*

Administered a private consulting business for occasional jobs including web development, small business computer network instillation and troubleshooting, and photography. Requires high level of flexibility, understanding client needs, communicating expectations, meeting deadlines, and communicating technical constraints and solutions in clear understandable language.

FRONT-END WEB DEVELOPER, MOBILETRAC *(2/09–11/12)*

Lead front-end web developer for MobileTrac, a startup specializing in vehicle history reports. Worked in a team with marketing, business, and back-end programmers to develop a commercial website selling instant vehicle history reports. Required meeting tight deadlines, coordinating with members who had varying perspectives and technical literacy. Duties included: programing as well graphical and interface design.

TEACHING EXPERIENCE	2012 to 2020

Extensive experience as both teaching assistant and instructor of recorded.

COMPUTER ETHICS: RESHAPING SOCIETY THROUGH TECHNOLOGY, UCSB - INSTRUCTOR *(Winter 2020)*

Designed and co-taught a high school enrichment course. This class provided an overview of active areas of computer science including: Big Data, Machine Learning, Networking, Security, and Human Computer Interaction. The class taught skills for understanding how the technologies work as well as philosophical skills for critically engaging with these technologies.

INTRODUCTION to COMPUTER COMMUNICATION NETWORKS, UCSB – TA *(Fall 2019)*

Covered the fundamentals of computer networks including the application, transport, network, & link layers.

TRANSLATION of PROGRAMMING LANGUAGES, UCSB – TA *(Spring 2018)*

The course covered how to construct parsers and compilers.

COMPUTER SCIENCE BOOTCAMP UCSB – TA *(Winter 2018)*

Intro course targeted to non computer scientists that covered a wide range of topics such as data encoding, image formats, python programming, audio encoding, graph traversal, and Huffman coding..

FOUNDATIONS of COMPUTER SCIENCE, UCSB – TA *(Fall 2012)*

The course introduced students to core mathematical concepts underpinning computer science such as logic, inductive proofs, recursion set theory, combinatorics.

MAJOR PROJECTS

Aerial IoT Data Collection, UCSB (2018-2020)
This work examines using Unmanned Aircraft Systems for aerial data collection from outdoor, rural, IoT sensor networks.

LTE Congestion Monitoring, UCSB (2018-2020)
Developed new methods of detecting LTE cellular network congestion through passive wireless monitoring without cooperation from mobile operators.

Tribal Internet Access, UCSB (2017-2020)
A new system for automated network assessment we want to be able to be able to rapidly plan new network deployments by utilizing open wireless spectrum. In the rural context a new deployment may consist of a permanent wireless backhaul linking remote communities.

Verifiable Group Anonymity, UCSB (2014-2017)
Online social networks are major hubs of communications. However, the ability to freely communicate on these platforms is increasingly restricted in countries across the globe. This work investigates and addresses issues surrounding free speech online.

Early Warning Flood Detection, UCSB & WALAILAK (2012-2013)
Built on open source technologies for real-time event detection of flooding in Bandon Bay, Thailand. Leverages the availability and versatility of mobile devices for effective low-cost monitoring of aquaculture.

Coral Sensor Networks, UCSD & WALALIAK (2009-2012)
Established a series of coral reef observatories that can easily share data between multiple sites around the Pacific Rim. It is envisioned to be a living laboratory for long-term studies of marine ecology and a testbed for evolving technologies for environmental and biological sensing, communications, and analysis.

Bee Counting, UCSD (2009-2010)
While working at UC San Diego, partnered with the Taiwan Forestry Research Institute on automated bee detection. This work extended capacity of camera imagery for applications in honey bee population monitoring.

SCHOLARSHIPS & AWARDS

DroNet 2019 Best Paper	2019	MobiSys 2013 Best Poster	2013	Fulbright Scholar	2012
NSF Graduate Fellowship Recipient	2012	UCSD Returnee of the Year	2010	UCSD Robins Scholarship	2010
Boeing Scholarship	2008	BAE Systems Scholarship	2009	UCSD I-Center Scholarship	2007