

## Christian Dameff MD MS

### EDUCATION

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- 2010 - 2014 University of Arizona College of Medicine; Phoenix, AZ  
Doctor of Medicine  
Thesis: 'A Standardized Template For Measuring and Reporting Telephone Cardiopulmonary Resuscitation'
- 2009 - 2010 University of Arizona; Tucson, AZ  
Master of Science in Physiology  
Thesis: 'Recurrent Ventricular Fibrillation in Coronary Occluded Swine During Cardiopulmonary Resuscitation.'
- 2005 - 2009 University of Arizona; Tucson, AZ  
Bachelor of Arts in Philosophy

### POST-DOCTORAL TRAINING

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- 2017 - 2019 University of California San Diego, CA  
Clinical Informatics Fellowship, Department of Emergency Medicine
- 2016 - 2017 Maricopa Medical Center (MMC), Phoenix, AZ  
Chief Resident, Department of Emergency Medicine
- 2014 - 2017 Maricopa Medical Center, Phoenix, AZ  
Residency, Department of Emergency Medicine

### ACADEMIC APPOINTMENTS

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- 2019 - Present University of California San Diego, CA  
Assistant Professor  
Department of Emergency Medicine  
Department of Biomedical Informatics  
Department of Computer Science & Engineering (Affiliate)

### PROFESSIONAL EXPERIENCE

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- 2019 - Present Medical Director of Cybersecurity - UCSD Health  
San Diego, CA
- 2017 - Present Attending Physician - UCSD Health  
Department of Emergency Medicine, San Diego CA
- 2009 - 2010 Research Specialist - Sarver Heart Center

Tucson, AZ

2007 - 2010      Emergency Medical Technician - St. Joseph's Hospital  
Tucson, AZ

### University Service

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2020 - Present      UCSD Health Medical Device Cybersecurity Committee - Co-Chair

2019 - Present      UCSD Cybersecurity Governance Committee - Member

2015 - 2017          MMC ED Core Measures Committee - Member

2015 - 2017          MMC ED Improvement Committee - Co-Chair

2015 - 2017          MMC ED Residency Class of 2017 - Class Representative

2015 - 2017          MMC Residency Council - Vice President

### AWARDS AND HONORS

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2019                  45 Under 45 Award  
Emergency Medicine Residency Association (EMRA)

2015                  Achievement In Resident Research and Scholarly Activity Award  
Maricopa Medical Center

2015                  Western SAEM SonoGames Champion  
Society of Academic Emergency Medicine (SAEM)

2013                  Emergency Medicine Basic Research Science Scholarship Award  
Emergency Medicine Residency Association (EMRA)

2013                  Medical Student Excellence in Emergency Medicine Award  
Society of Academic Emergency Medicine (SAEM)

2012                  Medical Student Professionalism and Service Award  
American College of Emergency Physicians (ACEP)

2007                  Student Scholarship in Cardiovascular Disease  
American Heart Association (AHA)

2006                  OCTF Champion: Computer Hacking Competition  
Defcon Computer Security Conference

2005                  Charles W. Seabury Scholarship  
University of Arizona

2005                  Eagle Scout  
Boy Scouts of America

## AFFILIATIONS AND MEMBERSHIPS

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2020 - Present	Association for Computing Machinery (ACM)
2017 - 2019	AMIA Clinical Informatics Fellows
2017 - Present	California ACEP
2017 - Present	Healthcare Information and Management Systems Society (HIMSS)
2016 - Present	American Medical Informatics Association (AMIA)
2011 - 2017	American Academy of Emergency Medicine (AAEM)
2011 - Present	American College of Emergency Physicians (ACEP)
2011 - Present	Emergency Medicine Residents' Association (EMRA)
2010 - 2017	American Heart Association (AHA)

## LEADERSHIP EXPERIENCE

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2017 - 2018	AMIA Clinical Informatics Fellows - Board of Directors
2015 - 2017	EMRA Board of Directors - Director of Technology
2011 - 2012	Emergency Medicine Interest Group - President
2011 - 2012	Critical Care Interest Group - Vice President
2011 - 2012	Telemedicine Interest Group - Vice President
2010 - 2012	REACT (Resuscitation, Education, and CPR Training) - Chair

## PUBLICATIONS

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### PEER REVIEWED

1. Cronin AO, Coyne CJ, Castillo EM, **Dameff C**. COVID-19 screening, testing and vaccination: Perceptions from emergency medicine residents and medical students. *Am J Emerg Med*. 2021 Mar 21:S0735-6757(21)00233-3. doi: 10.1016/j.ajem.2021.03.048. Epub ahead of print. PMID: 33810920; PMCID: PMC7981269.
2. Tresenriter M, Holdaway J, Killeen J, Chan T, **Dameff C**. The Implementation of an Emergency Medicine Telehealth System During a Pandemic. *J Emerg Med*. 2021 Apr;60(4):548-553. doi: 10.1016/j.jemermed.2020.11.026. Epub 2021 Jan 7. PMID: 33423835; PMCID: PMC7789960.
3. Maggio LA, **Dameff C**, Kanter SL, Woods B, Tully J. Cybersecurity Challenges and the Academic Health Center: An Interactive Tabletop Simulation for Executives. *Acad Med*. 2020 Nov 24. doi: 10.1097/ACM.0000000000003859. Epub ahead of print. PMID: 33239532.
4. Carlile, M, Hurt, B, Hsiao, A, Hogarth, M, Longhurst, CA, **Dameff, C**. Deployment of artificial intelligence for radiographic diagnosis of COVID-19 pneumonia in the emergency department. *JACEP Open*. 2020; 1– 6.
5. Cronin AO, Carlile MA, **Dameff C**, Coyne CJ, Castillo EM. Leveraging Remote Research Associates During a Pandemic. *West J Emerg Med*. 2020 Jul 21;21(5):1114-1117. doi: 10.5811/westjem.2020.6.48043. PMID: 32970563

6. Tully J, Selzer J, Phillips JP, O'Connor P, Dameff C. Healthcare Challenges in the Era of Cybersecurity. *Health Secur* 2020;18(3):228-231. doi:10.1089/hs.2019.0123
7. Tully J, Coravos A, Doerr M, **Dameff C**. Connected Medical Technology and Cybersecurity Informed Consent: A New Paradigm. *J Med Internet Res*. 2020;22(3):e17612. DOI: 10.2196/17612. PMID: 32224492.
8. Tully J, **Dameff C**, Longhurst CA. Wave of Wearables: Clinical Management of Patients and the Future of Connected Medicine. *Clin Lab Med*. 2020 Mar;40(1):69-82. doi: 10.1016/j.cll.2019.11.004. PMID: 32008641.
9. **Dameff C**, Farah J, Killeen J, Chan T. Cyber Disaster Medicine: A New Frontier for Emergency Medicine. *Ann Emerg Med*. 2020 Jan 17;. doi: 10.1016/j.annemergmed.2019.11.011. PubMed PMID: 31959537.
10. **Dameff C**, Pfeffer MA, Longhurst CA. Cybersecurity implications for hospital quality. *Health Serv Res*. 2019 Oct;54(5):969-970. doi: 10.1111/1475-6773.13202. PubMed PMID: 31506957.
11. Goebel M, **Dameff C**, Tully J. Hacking 9-1-1: Infrastructure Vulnerabilities and Attack Vectors. *J Med Internet Res*. 2019 Jul 9;21(7):e14383. doi: 10.2196/14383. PubMed PMID: 31290401.
12. **Dameff C**, Clay B, Longhurst CA. Challenges of Personal Health Records. *JAMA*. 2019 Jun 18;321(23):2369. doi: 10.1001/jama.2019.4808. PubMed PMID: 31211343.
13. **Dameff C**, Clay B, Longhurst CA. Personal Health Records: More Promising in the Smartphone Era? *JAMA*. 2019;321:339–340. doi:10.1001/jama.2018.20434
14. **Dameff CJ**, Selzer JA, Fisher J, Killeen JP, Tully JL. Clinical Cybersecurity Training Through Novel High-Fidelity Simulations. *J Emerg Med*. 2018 Dec 12. pii: S0736-4679(18)31055-2. doi: 10.1016/j.jemermed.2018.10.029.
15. J Tully, M Jarrett, S Savage, J Corman, **Dameff C**. Digital Defenses for Hacked Hearts: Why Software Patching Can Save Lives. *Journal of the American College of Cardiology*. 2018 July 3. <https://doi.org/10.1016/j.jacc.2018.03.540>
16. Fukushima H, Panczyk M, Hu C, **Dameff C**, Chikani V, Vadeboncoeur T, Spaite DW, Bobrow BJ. Description of Abnormal Breathing Is Associated With Improved Outcomes and Delayed Telephone Cardiopulmonary Resuscitation Instructions. *Journal American Heart Assoc*. 2017 Aug 29;6(9). PMID: 28851728
17. Fukushima H, Panczyk M, Spaite DW, Chikani V, **Dameff C**, Hu C, Birkenes TS, Myklebust H, Sutter J, Langlais B, Wu Z, Bobrow BJ. Barriers to telephone cardiopulmonary resuscitation in public and residential locations. *Resuscitation* 2016.07.241. PMID:27521469
18. BJ Bobrow, D Spaite, TF Vadenboncouer, C Hu, T Mullins, W Tormala, **C Dameff**, J Gallagher, G Smith, M Panczyk. Implementation of a regional telephone cardiopulmonary resuscitation program and outcomes after out-of-hospital cardiac arrest. *JAMA Cardiology*. doi: 10.1001/jamacardio.2016.0251. PMID: 27438108
19. Sutter J, Panczyk M, Spaite D, Ferrer J, Roosa J, **C Dameff**, Langlais B, Murphy R, Bobrow B. Telephone CPR instructions in emergency dispatch systems: Qualitative survey of 911 call centers. *Western Journal of Emergency Medicine*. 2015;16(5). doi: 10.5811/westjem.2015.6.26058. PMID: 26587099
20. C Crowe, BJ Bobrow, TF Vadeboncouer, **C Dameff**, U Stolz, A Silver, J Roosa, R Page, F LoVecchio, DW Spaite. Measuring and improving cardiopulmonary

- resuscitation quality inside the emergency department. *Resuscitation*. 2015 Aug; 93: 8-13. doi: 10.1016/j.resuscitation.2015.04.031. PMID: 25963706
21. J Tully, **C Dameff**, S Kaib, M Mofett. Recording medical students' encounters with standardized patients using Google Glass: Providing end-of-life clinical education. *Academic Medicine*. 2015; 90:314-316. doi: 10.1097/ACM.0000000000000620. PMID: 25551855
  22. D Hamman, WS Mortensen, C Hamman, A Smith, B Martino, **C Dameff**, J Tully, J Kim, A Torres. Experiences in adoption of teledermatology in Mohs micrographic surgery: using smartglasses for intraoperative Consultation and defect triage. *Surgical Intervention*. 2014 Dec; 21(6):653-654. PMID: 25389145
  23. T Wu, **C Dameff**, J Tully. Ultrasound-guided central venous access using Google Glass. *The Journal of Emergency Medicine*. 2014 Dec; 47(6):668-675. doi: 10.1016/j.jemermed.2014.07.045. PMID: 25281180
  24. CR Hamann, D Hamann, K Sager, **C Dameff**, J Tully, B Hamann. Allergy consultation via smart glasses: Case reports of real-time clinical decision support for suspected oral allergy. *Journal of Allergy and Therapy*. 2014; 5:186. doi: 10.4172/2155-6121.1000186
  25. **C Dameff**, T Vadeboncouer, J Tully, M Panczyk, A Dunham, R Murphy, U Stolz, V Chikani, D Spaite, B Bobrow. A standardized template for measuring and reporting telephone pre-arrival cardiopulmonary resuscitation instructions. *Resuscitation*. 2014 Jul; 85(7): 869-873. doi:10.1016/j.resuscitation.2014.02.023. PMID: 24614186
  26. T Wu, **C Dameff**, J Tully. Integrating Google Glass into simulation-based training: Experiences and future directions. *Journal of Biomedical Graphics and Computing*. 2014; 4(2): 49-54. doi: 10.5430/jbgc.v4n2p49
  27. J Indik, D Allen, M Gura, **C Dameff**, R Hilwig, K Kern. Utility of the Vf waveform to predict a return of spontaneous circulation and distinguish acute from post myocardial infarction in a swine model of Vf cardiac arrest. *Circulation: Arrhythmia and Electrophysiology*. 2011,4(3): 337-343. PMID: 21493961

#### NON PEER REVIEWED

1. J Pugh, **C Dameff**. What to Do When Cyber Attack Strikes the Emergency Department. *ACEP Now*, October 2017
2. **C Dameff**, J Tully. Code Cyber: Protecting Patients in the Age of Hackers. *Doximity OpMed*, August 2017
3. S Hussaini, **C Dameff**, J Tully. Water-related incidents in Maricopa County, AZ, 2010. Phoenix Arizona: Arizona Department of Health Services, Bureau of Public Health.
4. **C Dameff**. Medical Students Perspective: Anonymity No More. *AZ Medicine*. 2012; 1(23), 22.

#### PUBLISHED ABSTRACTS

1. **C Dameff**, J Tully, M Panczyk, V Kannan, T Vadeboncoeur, DW Spaite, BJ Bobrow: 9-1-1 caller descriptions of abnormal breathing during out-of-hospital cardiac arrest. *Prehospital Emergency Care*. 2016; 20(1):147.

2. B Bobrow, M Panczyk, U Stoltz, N Heagerty, **C Dameff**, J Tully, R Murphy, T Vadeboncoeur, D Spaite. The impact of guideline-based protocols and training on the provision of pre-arrival CPR instructions and patient outcomes at three 9-1-1 centers in Arizona. 2014. \*First place - National Association of EMS Officials. Cleveland, OH
3. B Bobrow, M Panczyk, U Stolz, N Heagerty, **C Dameff**, J Tully, R Murphy, T Vadenboncoeur, D Spaite. The impact of pre-arrival dispatch-assisted CPR on bystander CPR rates, time to starting CPR, and survival from out-of-hospital cardiac arrest. *Circulation*. 2013; 128:A81
4. **C Dameff**, J Tully, R Murphy, A Dunham, M Panczyk, U Stolz, J Tobin, M Karamooz, D Spaite, B Bobrow, G Ewy. The impact of the AHA guidelines on dispatch-assisted cardiopulmonary resuscitation. *Circulation*. 2012;126:A247
5. R Murphy, A Dunham, J Tully, **C Dameff**, M Panczyk, D Wasick, D Spaite, and B Bobrow. Primary reasons bystanders do not perform CPR when receiving dispatcher instructions. *Circulations*. 2012; 126:A274
6. J Tully, **C Dameff**, R Murphy, A Dunham, M Panczyk, U Stolz, J Tobin, B Kotsur, M Karamooz, D Spaite, and B Bobrow. A standardized template for measuring and reporting dispatch pre-arrival CPR. *Circulation*. 2012;126:A242

#### POSTER PRESENTATIONS

1. **C Dameff**, J Tully, M Panczyk, V Kannan, T Vadeboncoeur, DW Spaite, BJ Bobrow. 9-1-1 caller descriptions of abnormal breathing during out-of-hospital cardiac arrest. *Prehospital Emergency Care*. 2016;20(1):147
2. **C Dameff**, J Tully, M Panczyk, K Vannan, T Vadeboncoeur, DW Spaite, BJ Bobrow. 9-1-1 caller descriptions of gasping during out-of hospital cardiac arrest, Presented at American Heart: Resuscitation Conference, November 2015, Orlando, FL.
3. S Sridhar, A Klassen, **C Dameff**, J Tully. Experiences with Google Glass at the University of Arizona College of Medicine Phoenix. Presented at the Group on Regional Medical Campuses Spring Meeting, April 2014, Phoenix, AZ.
4. B Bobrow, M Panczyk, U Stolz, N Heagerty, **C Dameff**, J Tully, R Murphy, T Vadeboncoeur. The impact of pre-arrival dispatch-assisted CPR on bystander CPR rates, time to starting CPR, and survival from out-of-hospital cardiac arrest. Presented at the National Association of EMS Physicians Scientific Assembly, January 2014, Tucson, AZ.
5. B Bobrow, M Panczyk, U Stolz, N Heagerty, **C Dameff**, J Tully, R Murphy, T Vadeboncoeur, D Spaite. The impact of pre-arrival dispatch-assisted CPR on bystander CPR rates, time to starting CPR, and survival from out-of-hospital cardiac arrest. Presented at American Heart: Resuscitation Conference, November 2013, Dallas, TX.
6. J Tully, **C Dameff**, R Murphy, A Dunham, M Panczyk, U Stolz, J Tobin, B Kotsur, M Karamooz, D Spaite, B Bobrow. A standardized template for measuring and reporting dispatch pre-arrival CPR. Presented at American Heart: Resuscitation Conference, November 2012, Los Angeles, CA.

**INVITED ORAL PRESENTATIONS**

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- 2020 Defcon Computer Security Conference - Las Vegas, NV  
"How COVID19 Changed Our Understanding of Cyber Disaster  
Medicine"
- 2020 Defcon Computer Security Conference - Las Vegas, NV  
"D0 N0 H4RM: A Healthcare Security Conversation"
- 2020 University of California Cyber Security Summit - Berkeley, CA  
"Understanding the Threat: Malicious Software, Malicious Actors,  
and the Promise of Connected Medical Technology"
- 2020 Qatar Health 2020 - Doha Qatar  
"Cybersecurity for the Health System"
- 2020 Qatar Health 2020 - Doha Qatar  
"Optimizing Your Mass Casualty Event Response During a Cyber  
Attack"
- 2019 FDA Patient Advisory Education Committee - Washington DC  
"Cyber Informed Consent"
- 2019 Defcon Computer Security Conference - Las Vegas, NV  
"D0 N0 H4RM: A Healthcare Security Conversation"
- 2019 Defcon Computer Security Conference - Las Vegas, NV  
"Cyber Informed Patient Consent"
- 2019 Defcon Computer Security Conference - Las Vegas, NV  
"Using High Fidelity Cyber Security Clinical Simulations"
- 2019 Medtronic Global Cyber Security Conference - Minneapolis, MN  
Keynote "The Medical Device Cyber Security Last Mile Problem"
- 2019 FDA Medical Device Security Workshop - Washington DC  
"Preparedness and Response: WannaCry Again?"
- 2019 FDA Medical Device Security Workshop - Washington DC  
"Leveraging Innovation and Collaboration to Advance Cyber Safety"
- 2019 Archimedes Medical Device Security 101 - Orlando, FL  
"The Medical Device Security Last Mile Problem"
- 2018 HIMSS Healthcare Security Forum - Boston, MA  
"FDA Weighs in on Medical Device Security"
- 2018 HIMSS Healthcare Security Forum - Boston, MA  
"Dissecting the Anatomy of a Medical Device Attack"
- 2018 Blackhat Computer Security Conference - Las Vegas, NV  
"How Unsecure HL7 Messages Threaten Patient Lives"
- 2018 Blackhat Computer Security Conference - Las Vegas, NV  
"Burnout, Depression, and Suicide in the Hacker Community "

- 2018 Defcon Computer Security Conference - Las Vegas, NV  
"D0 N0 H4RM: A Healthcare Security Conversation"
- 2018 HIMSS Healthcare Security Forum - San Francisco, CA  
"Dissecting the Anatomy of a Medical Device Hack"
- 2018 AMIA Clinical Informatics Conference - Scottsdale, AZ  
"The Clinical Informatics Fellowship: A Fellow's Perspective"
- 2018 Blackburn Alumni Invited Speaker - Phoenix, AZ  
"Emergency Hospital Care During Cyber Security Disasters"
- 2018 AMIA Clinical Informatics Conference - Scottsdale, AZ  
"Modeling Emergency Stroke Care Impacts During Cyber Attacks"
- 2018 Thotcon - Chicago, CA  
"I Need a Hacker Consult, Stat."
- 2018 RSAC - San Francisco, CA  
"Hacking Healthcare: Where Bits and Bytes Meet Flesh & Blood"
- 2018 Appsec California - Los Angeles, CA  
Keynote "How Healthcare Cybersecurity Can Claim or Save Lives"
- 2018 Archimedes Medical Device Security 101 - Orlando, FL  
"Is Healthcare IOT Coming to Kill My Patients?"
- 2017 Security of Things USA - San Diego, CA  
"Healthcare IoT is Coming to Kill My Patients"
- 2017 Derbycon Computer Security Conference - Louisville, KY  
"Anatomy of a Medical Device Hack"
- 2017 Defcon Computer Security Conference - Las Vegas, NV  
"D0 N0 H4RM: A Healthcare Security Conversation"
- 2017 CyberMed Summit - Phoenix, AZ  
"Cyber Security & Patient Safety" Keynote
- 2016 B-Sides Las Vegas - Las Vegas, NV  
"State of Healthcare Cybersecurity"
- 2016 Defcon Computer Security Conference - Las Vegas, NV  
"Bioethics of Biohacking"
- 2016 Phoenix Comicon - Phoenix, AZ  
"Science-plosion!"
- 2015 Defcon Computer Security Conference - Las Vegas, NV  
"Biohacking: The anatomy of DIY implantable devices"
- 2015 Phoenix Comicon - Phoenix, AZ  
"Get me the Tricorder, STAT!"
- 2014 Defcon Computer Security Conference - Las Vegas, NV  
"Hacking 911: Adventures in Disruption, Destruction, and Death"
- 2014 University of Arizona College of Medicine Phoenix Lecture Series  
"Through the Looking (Google) Glass: The Future of Medical Education"



- 2013 ACCME Board of Directors Meeting - Chicago, IL  
“Through the Looking (Google) Glass: The Future of Medical Education”
- 2013 Phoenix Comicon - Phoenix, AZ  
“POW! Science! Gamma Rays, Mind Control, and the Truth Behind Your Favorite Superpowers”
- 2012 Defcon Computer Security Conference - Las Vegas, NV  
“Hacking Humanity: Human Augmentation and You”

## Podcasts

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- 2018 EMRAP - Emergency Medicine Cybersecurity  
<https://www.emrap.org/episode/thecollector/cybersecurity>

## OTHER PROJECTS

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- 2017 The CyberMed Summit: Cybersecurity and Medicine Conference  
Co-founder
- 2015 CPRWatcher: Apple watch real-time CPR feedback  
Founder
- 2013 SonoSupport: Clinical ultrasound reference guide  
Clinical consultant, currently available in the Apple App Store

## PERSONAL

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### *Languages*

American Sign Language - fluent

### *Interests*

Computer system and medical device cyber security

Camping/hiking

Classic Mopar Cars