# THOMAS MCANDREW

### **CONTACT** website https://compuncertlab.org/ email mcandrew@lehigh.edu **APPOINTMENTS** Bethlehem, PA Lehigh University 2025 -Associate Professor Assistant Professor 2020 - 2025 **EDUCATION** University of Massachusetts at Amherst 2018 - 2020 Postdoctoral Fellow, Department of Biostatistics Advisor: Nicholas G. Reich University of Vermont 2013 - 2017 Ph.D. Mathematical Sciences Advisor: Christopher M. Danforth Coadvisors: James P. Bagrow and Peter S. Dodds Georgetown University 2009 - 2010 M.S. Biostatistics University of Scranton 2005 - 2009 B.S. Biomathematics Minors: Biochemistry, Theology INDUSTRY EXPERIENCE Cardiovascular Research Foundation New York, NY Associate Director of Biostatistics 2016 - 2018 Senior Biostatistician 2016 - 2016 Biostatistician 2012 - 2013 New York, NY Albert Einstein College of Medicine Biostatistician 2011 - 2012 LANGUAGES Spoken/Written English python, R, SAS, LaTex, SQL, javascript, php, matlab, bash/shell, slurm, Make Computer

Role	Title	Funding Agency	Amount	Time span
PI	IHBEM: Enhancing Influenza Forecasting Through an Integrated Platform for User-Generated Temporal Predictions	NSF	1M	09/2024- 08/2028
PI	DECISIONCAST: A Tailored Platform for Accurate, Consensus-Driven Public Health Forecasts	Lehigh University	250k (Submitted)	09/2024 - 07/2026
SP	PIPP II: Theme 4: Predictice Intelligence for Limiting Outbreak Threats (PILOT)	NSF	625k/18M (Under review)	09/2024- 06/2031
PI	Development of Forecasts and/or Scenario Projections for Influenza to Inform Public Health Decision Making	CDC/CSTE	125k	09/2023- 07/2024
PI	Horizon-dense forecasts by aggregating statistical, mechanistic, and human judgment forecasts	CDC/CSTE	125k	11/2022- 07/2023
COPI	Catastrophe Modeling: a center for infrastructure resilience against disasters, preparedness against epidemics, and increased insurance of social equity	Lehigh University	600k	09/2022-
PI	Amplifying awareness and community engagement with infectious disease forecast visualizations	Lehigh University	3k	07/06/2022- 07/06/2023
SP	PIPP Phase I: Dynamics of Pandemic Spread and Prevention in Indigenous Communities	NSF	0.26mo per yr/1M	09/2022- 07/2023
PI	Human judgment guided ensemble probabilistic prediction of influenza to support public health decision making	CDC/CSTE	150k	11/2021- 07/2022
PI	Probabilistic Forecasting of COVID-19 for CDC	Lehigh University	2k	01/2022- 05/2022
PI	Aggregating computational models and human judgment for more accurate forecasts of the US COVID-19 outbreak	MIDAS (NIGMS)	100k	10/2020- 06/2021
ΡΙ	Influenza Forecasting CDC Center of Excellence at University of Massachusetts at Amherst	University of Mas- sachusets	90k	09/2021- 08/2022
COPI	Testing ANSOS for Efficacy in Multi-Tribal Urban Communities	American Cancer Society	0.1mo per yr/1.8M	07/2021- 06/2026
COPI	Research Futures: Community Building Building a Lehigh Environment and Health Inequities Research Community to Study Covid-19 and Exacerbated Impacts of Air Pollution and Social Inequities on Public Health	Lehigh University	25k	05/2021- 06/2022

### 1. Total award amount as PI \$1,620,000

Role	Title	Amount	Time span
COPI	Enhancing Outbreak Forecasting in Long-Term Care Facilities Through Integration of Wastewater Surveillance and Built Environment Microbiome Data	200k	2025-2027

#### 1. Total Gift amount \$200,000

### AWARDS / PROFESSORSHIPS

Class of 1961 Professorship

2025 - 2027

Recognizes faculty members who have achieved the rank of associate professor and have shown distinction in teaching, research, and service

#### Frank Hook Professorship

2023 - 2025

Awarded to Lehigh's most outstanding junior scholar-teachers who also foster personal interaction and mentoring relationships with students

#### SUMMARY OF RESEARCH IMPACT

Number of Citations	6891
Number of total publications	122
Mathematics/Statistics	24
Cardiology	86
Genetics	07
Obstetrics/Gynecology	04
Oncology	01
h-Index	42
i10-index	90

#### Mathematics & Statistics

- [Mth1] **Thomas McAndrew**, Andrew A Lover, Garrik Hoyt, and Maimuna S Majumder. When data disappear: public health pays as US policy strays. *The Lancet Digital Health*, 2025.
- [Mth2] Sarabeth M Mathis, Alexander E Webber, Tomás M León, Erin L Murray, Monica Sun, Lauren A White, Logan C Brooks, Alden Green, Addison J Hu, Roni Rosenfeld, et al. Evaluation of FluSight influenza forecasting in the 2021–22 and 2022–23 seasons with a new target laboratory-confirmed influenza hospitalizations. *Nature communications*, 15(1):6289, 2024.
- [Mth3] **Thomas McAndrew**, Rochelle L Frounfelker, and Lorenzo Servitje. The Watermelon Meow Meow Outbreak: Enhancing Public Health Education Through Real-World Experience, Statistical Programming, and Infectious Disease Modeling. *PRIMUS*, 34(4):351–375, 2024. Manuscript link.
- [Mth4] **Thomas McAndrew**, Graham C Gibson, David Braun, Abhishek Srivastava, and Kate Brown. Chimeric Forecasting: An experiment to leverage human judgment to improve forecasts of infectious disease using simulated surveillance data. *Epidemics*, 47:100756, 2024.
- [Mth5] **Thomas McAndrew**, Mark Lechmanik, Erin Hulland, Shaun Truelove, Mark Ilodigwe, and Maimuna Majumder. Chimeric Forecasting: Blending Human Judgment and Computational Methods for Improved, Real-time Forecasts of Influenza Hospitalizations. arXiv preprint arXiv:2410.07236, 2024. Manuscript link.

- [Mth6] **Thomas McAndrew**, Mark Lechmanik, ErinN Hulland, Shaun Truelove, Mark Ilodigwe, and Maimuna Majumder. Chimeric Forecasting: Blending Human Judgment and Computational Methods for Improved, Real-time Forecasts of Influenza Hospitalizations. arXiv preprint arXiv:2410.07236, 2024.
- [Mth7] **Thomas McAndrew**, Maimuna S Majumder, Andrew A Lover, Srini Venkatramanan, Paolo Bocchini, Tamay Besiroglu, Allison Codi, Gaia Dempsey, Sam Abbott, Sylvain Chevalier, et al. Assessing Human Judgment Forecasts in the Rapid Spread of the Mpox Outbreak: Insights and Challenges for Pandemic Preparedness. arXiv preprint arXiv:2404.14686, 2024. Manuscript link.
- [Mth8] Nutcha Wattanachit, Evan L Ray, **Thomas C McAndrew**, and Nicholas G Reich. Comparison of combination methods to create calibrated ensemble forecasts for seasonal influenza in the US. *Statistics in Medicine*, 42(26):4696–4712, 2023. Manuscript link.
- [Mth9] Ningxi Wei, Xinze Zhou, Wei-Min Huang, and **Thomas McAndrew**. A Cluster-Aggregate-Pool (CAP) Ensemble Algorithm for Improved Forecast Performance of influenza-like illness. arXiv preprint arXiv:2401.00076, 2023. Manuscript link.
- [Mth10] **Thomas McAndrew**, Maimuna S Majumder, Andrew A Lover, Srini Venkatramanan, Paolo Bocchini, Tamay Besiroglu, Allison Codi, David Braun, Gaia Dempsey, Sam Abbott, et al. Early human judgment forecasts of human monkeypox, May 2022. *The Lancet Digital Health*, 4(8):e569–e571, July 2022. Manuscript link.
- [Mth11] David Braun, Daniel Ingram, David Ingram, Bilal Khan, Jessecae Marsh, and Thomas McAndrew. Crowdsourced Perceptions of Human Behavior to Improve Computational Forecasts of US National Incident Cases of COVID-19: Survey Study. *JMIR Public Health and Surveillance*, 8(12):e39336, 2022. Manuscript link.
- [Mth12] Allison Codi, Damon Luk, David Braun, Juan Cambeiro, Tamay Besiroglu, Eva Chen, Luis Enrique Urtubey de Cesaris, Paolo Bocchini, and **Thomas McAndrew**. Aggregating Human Judgment Probabilistic Predictions of Coronavirus Disease 2019 Transmission, Burden, and Preventive Measures. Open Forum Infectious Diseases, 9(8), 07 2022. Manuscript link.
- [Mth13] **Thomas McAndrew**, Juan Cambeiro, and Tamay Besiroglu. Aggregating probabilistic predictions of the safety, efficacy, and timing of a COVID-19 vaccine. *Vaccine*, 2022. Manuscript link.
- [Mth14] **Thomas Charles McAndrew** and Nicholas G Reich. An expert judgment model to predict early stages of the COVID-19 outbreak in the United States. *PLOS Computational Biology (To be published)*, 2022. Manuscript link.
- [Mth15] **Thomas McAndrew**, Allison Codi, Juan Cambeiro, Tamay Besiroglu, David Braun, Eva Chen, Luis Enrique Urtubey de Cesaris, and Damon Luk. Chimeric forecasting: combining probabilistic predictions from computational models and human judgment. *BMC Infectious Disease*, 2022. Manuscript link.
- [Mth16] **Thomas McAndrew** and Nicholas G Reich. Adaptively stacking ensembles for influenza forecasting. *Statistics in Medicine*, Oct 2021. Manuscript link.
- [Mth17] Kelsey Linnell, Michael Arnold, Thayer Alshaabi, **Thomas McAndrew**, Jeanie Lim, Peter Sheridan Dodds, and Christopher M Danforth. The Sleep Loss Insult of Spring Daylight Savings in the US Is Observable in Twitter Activity. Apr 2021. Manuscript link.
- [Mth18] **Thomas McAndrew**, Nutcha Wattanachit, Graham C Gibson, and Nicholas G Reich. Aggregating predictions from experts: A review of statistical methods, experiments, and applications. Wiley Interdisciplinary Reviews: Computational Statistics, 13(2):e1514, 2021. Manuscript link.

- [Mth19] Andrew A Lover and **Thomas McAndrew**. Sentinel event surveillance to estimate total SARS-CoV-2 infections, United States. *medRxiv*, 2020. Manuscript link.
- [Mth20] **Thomas McAndrew**, Bjorn Redfors, Aaron Crowley, Yiran Zhang, Shmuel Chen, Mordechai Golomb, Maria C Alu, Dominic P Francese, Ori Ben-Yehuda, Akiko Maehara, et al. How Cox models react to a study-specific confounder in a patient-level pooled dataset: random effects better cope with an imbalanced covariate across trials unless baseline hazards differ. *Journal of Applied Statistics*, pages 1–14, Jan 2019. Manuscript link.
- [Mth21] **Thomas McAndrew**, Bjorn Redfors, Yiran Zhang, Aaron Crowley, Shmuel Chen, Gregg Stone, and Paul Jenkins. Crossing points in survival analysis sensitively depend on system conditions. arXiv preprint arXiv:1805.02835, 2018. Manuscript link.
- [Mth22] **Thomas C McAndrew**, Elizaveta A Guseva, and James P Bagrow. Reply & Supply: Efficient crowdsourcing when workers do more than answer questions. *PloS one*, 12(8):e0182662, 2017. Manuscript link.
- [Mth23] Andrey Y Lokhov, Nathan Lemons, **Thomas C McAndrew**, Aric Hagberg, and Scott Backhaus. Detection of cyber-physical faults and intrusions from physical correlations. In *Data Mining Workshops (ICDMW)*, 2016 IEEE 16th International Conference on, pages 303–310. IEEE, 2016. Manuscript link.
- [Mth24] **Thomas C McAndrew**, Joshua C Bongard, Christopher M Danforth, Peter Sheridan Dodds, Paul DH Hines, and James P Bagrow. What we write about when we write about causality: Features of causal statements across large-scale social discourse. In *Advances in Social Networks Analysis and Mining (ASONAM)*, 2016 IEEE/ACM International Conference on, pages 519–524. IEEE, 2016. Manuscript link.
- [Mth25] **Thomas C McAndrew**, Christopher M Danforth, and James P Bagrow. Robustness of spatial micronetworks. *Physical Review E*, 91(4):042813, 2015. Manuscript link.

# Cardiology

- [Card1] M Jacobs, M Ezekowitz, R Nagarakanti, J Eikelboom, O Khan, J Reiss, H Liu, McAndrew, T, D Francese, J Arce, M Brueckmann, S Connolly, and S Yusuf. Body mass index from the RE-LY trial: further evidence of the obesity paradox. European Heart Journal, 43, 10 2022. ehac544.629.
- [Card2] Serdar Farhan, Björn Redfors, Akiko Maehara, **Thomas McAndrew**, Ori Ben-Yehuda, Bernard De Bruyne, Roxana Mehran, Birgit Vogel, Gennaro Giustino, Patrick W Serruys, et al. Relationship between insulin resistance, coronary plaque, and clinical outcomes in patients with acute coronary syndromes: an analysis from the PROSPECT study. *Cardiovascular Diabetology*, 20(1):1–10, 2021.
- [Card3] Maayan Konigstein, Ori Ben-Yehuda, Björn Redfors, Gary S Mintz, Mahesh V Madhavan, Mordechai Golomb, Thomas McAndrew, Zixuan Zhang, David E Kandzari, James B Hermiller, et al. Impact of Coronary Artery Tortuosity on Outcomes Following Stenting: A Pooled Analysis From 6 Trials. JACC: Cardiovascular Interventions, 2021.
- [Card4] Nirat Beohar, Shmuel Chen, Nicholas J Lembo, Adrian P Banning, Patrick W Serruys, Martin B Leon, Marie-Claude Morice, Philippe Genereux, David E Kandzari, Arie Pieter Kappetein, Joseph F Sabik, Ovidiu Dressler, **Thomas McAndrew**, Zixuan Zhang, and Gregg W Stone. Impact of lesion preparation strategies on outcomes of left main PCI: The EXCEL trial. *Catheterization and Cardiovascular Interventions*, 2020.
- [Card5] Behnood Bikdeli, **Thomas McAndrew**, Aaron Crowley, Shmuel Chen, Ghazaleh Mehdipoor, Bjorn Redfors, Yangbo Liu, Zixuan Zhang, Mengdan Liu, Yiran Zhang, et al. Individual pa-

- tient data pooled analysis of randomized trials of bivalirudin versus heparin in acute myocardial infarction: rationale and methodology. *Thrombosis and haemostasis*, 120(2):348–361, 2020.
- [Card6] Gennaro Giustino, Patrick W Serruys, Joseph F Sabik III, Roxana Mehran, Akiko Maehara, John D Puskas, Charles A Simonton, Nicholas J Lembo, David E Kandzari, Marie-Claude Morice, David P. Taggert, Anthony H. Gershlick, Michael Ragosta, Irving L Kron, Yangbo Liu, Zixuan Zhang, Thomas McAndrew, Ovidiu Dressler, Philippe Genereux, Ori Ben-Yehuda, Stuart J. Pocock, Arie Pieter Kappetein, and Gregg W. Stone. Mortality after repeat revascularization following PCI or CABG for left main disease: the EXCEL trial. Cardiovascular Interventions, 13(3):375–387, 2020.
- [Card7] Mitchell W Krucoff, Philip Urban, Jean-François Tanguay, **Thomas McAndrew**, Yiran Zhang, Sunil V Rao, Marie-Claude Morice, Matthew J Price, David J Cohen, Mohamed Abdel-Wahab, et al. Global approach to high bleeding risk patients with polymer-free drug-coated coronary stents: the LF II study. *Circulation: Cardiovascular Interventions*, 13(4):e008603, 2020.
- [Card8] Mahesh V Madhavan, Ajay J Kirtane, Björn Redfors, Philippe Généreux, Ori Ben-Yehuda, Tullio Palmerini, Umberto Benedetto, Giuseppe Biondi-Zoccai, Pieter C Smits, Clemens von Birgelen, Roxana Mehran, McAndrew. Thomas, Patrick W. Serruys, Martin B. Leon, Stuart J. Pocock, and Gregg W. Stone. Stent-related adverse events> 1 year after percutaneous coronary intervention. Journal of the American College of Cardiology, 75(6):590-604, 2020.
- [Card9] Geraldine Ong, Philippe Pibarot, Bjorn Redfors, Neil J Weissman, Wael A Jaber, Raj R Makkar, Stamatios Lerakis, Deepika Gopal, Omar Khalique, Susheel K Kodali, Vinod H. Thourani, Saif Anwaruddin, Thomas McAndrew, Yiran Zhang, Maria C. Alu, Pamela S. DOuglas, and Rebecca T. Hahn. Diastolic function and clinical outcomes after transcatheter aortic valve replacement: PARTNER 2 SAPIEN 3 registry. Journal of the American College of Cardiology, 76(25):2940–2951, 2020.
- [Card10] Björn Redfors, John Gregson, Aaron Crowley, **Thomas McAndrew**, Ori Ben-Yehuda, Gregg W Stone, and Stuart J Pocock. The win ratio approach for composite endpoints: practical guidance based on previous experience. *European Heart Journal*, 41(46):4391–4399, 2020.
- [Card11] **Thomas McAndrew** and Bjorn Redfors. Re-Thinking the Role of Statistics in Informing Heart Team Decisions: A Consensus Distribution Approach, 2020.
- [Card12] Suzanne V Arnold, Yiran Zhang, Suzanne J Baron, **Thomas C McAndrew**, Maria C Alu, Susheel K Kodali, Samir Kapadia, Vinod H Thourani, D Craig Miller, Michael J Mack, et al. Impact of short-term complications on mortality and quality of life after transcatheter aortic valve replacement. *JACC: Cardiovascular Interventions*, 12(4):362–369, 2019.
- [Card13] Ori Ben-Yehuda, Shmuel Chen, Björn Redfors, **Thomas McAndrew**, Aaron Crowley, Ioanna Kosmidou, David E Kandzari, John D Puskas, Marie-Claude Morice, David P Taggart, et al. Impact of large periprocedural myocardial infarction on mortality after percutaneous coronary intervention and coronary artery bypass grafting for left main disease: an analysis from the EXCEL trial. *European heart journal*, 40(24):1930–1941, 2019.
- [Card14] Behnood Bikdeli, **Thomas McAndrew**, Aaron Crowley, Shmuel Chen, Ghazaleh Mehdipoor, Yangbo Liu, Zixuan Zhang, Mengdan Liu, Yiran Zhang, Björn Redfors, et al. Development of an Individual Patient Database of Participants from Randomized Trials of Periprocedural Anticoagulation with Bivalirudin versus Heparin in Percutaneous Coronary Intervention: Rationale and Methodological Considerations. *Arteriosclerosis, Thrombosis, and Vascular Biology*, 39:A279–A279, 2019.
- [Card15] Yanping Cheng, Pawel Gasior, Kamal Ramzipoor, Chang Lee, Jenn C McGregor, Gerard B Conditt, **Thomas McAndrew**, Grzegorz L Kaluza, and Juan F Granada. In vitro mechanical behavior and in vivo healing response of a novel thin-strut ultrahigh molecular weight poly-l-lactic

- acid sirolimus-eluting bioresorbable coronary scaffold in normal swine. *International journal of cardiology*, 286:21–28, 2019.
- [Card16] Serge Doucet, E Marc Jolicœur, Patrick W Serruys, Michael Ragosta III, Irving L Kron, Werner Scholtz, Jochen Börgermann, Yiran Zhang, **Thomas McAndrew**, Joseph F Sabik III, et al. Outcomes of left main revascularization in patients with acute coronary syndromes and stable ischemic heart disease: Analysis from the EXCEL trial. *American heart journal*, 214:9–17, 2019.
- [Card17] Serdar Farhan, Björn Redfors, Akiko Maehara, **Thomas McAndrew**, Ori Ben-Yehuda, Bernard De Bruyne, Roxana Mehran, Gennaro Giustino, Ajay J Kirtane, Patrick W Serruys, et al. Impact of pre-diabetes on coronary plaque composition and clinical outcome in patients with acute coronary syndromes: an analysis from the PROSPECT study. *JACC: Cardiovascular Imaging*, 12(4):733–741, 2019.
- [Card18] William F Fearon, Stephan Achenbach, Thomas Engstrom, Abid Assali, Richard Shlofmitz, Allen Jeremias, Stephane Fournier, Ajay J Kirtane, Ran Kornowski, Gabriel Greenberg, Rami Jubeh, Daniel M. Kolansky, **Thomas McAndrew**, Ovidiu Dressler, Akiko Maehara, Mitsuaki Matsumura, Martin B. Leon, and Bernard De Bruyne. Accuracy of fractional flow reserve derived from coronary angiography. *Circulation*, 139(4):477–484, 2019.
- [Card19] Matthew T Finn, Björn Redfors, Dimitri Karmpaliotis, Ajay J Kirtane, Philip Green, **Thomas McAndrew**, Mengdan Liu, Michael B Cloney, Bernhard Witzenbichler, Giora Weisz, et al. Adverse events in patients with high platelet reactivity following successful chronic total occlusion PCI: The Assessment of Dual AntiPlatelet Therapy with Drug-Eluting Stents (ADAPT-DES) study. *American heart journal*, 211:68–76, 2019.
- [Card20] Ariel Furer, Shmuel Chen, Bjorn Redfors, Sammy Elmariah, Philippe Pibarot, Howard C Herrmann, Rebecca T Hahn, Susheel Kodali, Vinod H Thourani, Pamela S Douglas, Maria C. Alu, William F. Fearon, Chris Passeri, Jonathan S. andrey Malaisrie, Aaron Crowley, Thomas McAndrew, Philippe Genereux, Ori Ben-Yehuda, Martin B. Leon, and Daniel Burkhoff. Effect of Baseline Left Ventricular Ejection Fraction on 2-Year Outcomes After Transcatheter Aortic Valve Replacement: Analysis of the PARTNER 2 Trials. Circulation: Heart Failure, 12(8):e005809, 2019.
- [Card21] Zachary M Gertz, Philippe Pibarot, Pamela S Douglas, Sammy Elmariah, Maria C Alu, Thomas McAndrew, Yiran Zhang, Robert W Hodson, Rebecca T Hahn, Neil J Weissman, et al. Implications of Left Ventricular Geometry in Low-Flow Aortic Stenosis: A PARTNER 2 Trial Subanalysis. JACC. Cardiovascular imaging, 12(2):367, 2019.
- [Card22] Xin Huang, Björn Redfors, Shmuel Chen, Bernard J Gersh, Roxana Mehran, Yiran Zhang, **Thomas McAndrew**, Ori Ben-Yehuda, Gary S Mintz, and Gregg W Stone. Predictors of mortality in patients with non-anterior ST-segment elevation myocardial infarction: Analysis from the HORIZONS-AMI trial. *Catheterization and Cardiovascular Interventions*, 2019.
- [Card23] Yuhei Kobayashi, Carlos Collet, Stephan Achenbach, Thomas Engstrom, Abid Assali, Richard Shlofmitz, Allen Jeremias, Stephane Fournier, Ajay Kirtane, Ran Kornowski, Gabriel Greenberg, Rami Jubeh, Daniel Kolansky, **Thomas McAndrew**, Ovidiu Dressler, Akiko Maehara, Mitsuaki Matsumura, Martin Leon, Bernard De Bruyne, and William Fearon. Diagnostic Performance of Angiography-based Fractional Flow Reserve in Subgroups: report from the FAST-FFR study. *Journal of the American College of Cardiology*, 73(9 Supplement 1):1167, 2019.
- [Card24] Maayan Konigstein, Mahesh V Madhavan, Ori Ben-Yehuda, Hussein M Rahim, Iva Srdanovic, Fotis Gkargkoulas, Ghazaleh Mehdipoor, Evan Shlofmitz, Akiko Maehara, Björn Redfors, Ankita K. Gore, Thomas McAndrew, Gregg W. Stone, and Ziad A. Ali. Incidence and predictors of target lesion failure in patients undergoing contemporary DES implantation—Individual patient data pooled analysis from 6 randomized controlled trials. American heart journal, 213:105–111, 2019.

- [Card25] Poghni A Peri-Okonny, Yangbo Liu, S Chris Malaisrie, Chetan P Huded, Samir Kapadia, Vinod H Thourani, Susheel K Kodali, John Webb, Thomas C McAndrew, Martin B Leon, et al. Association of Statin Use and Mortality After Transcatheter Aortic Valve Replacement. Journal of the American Heart Association, 8(8):e011529, 2019.
- [Card26] Michael J Rinaldi, Frank X Gohs, Ajay J Kirtane, Bruce R Brodie, Thomas D Stuckey, Björn Redfors, **Thomas McAndrew**, Bernhard Witzenbichler, Giora Weisz, Franz-Josef Neumann, et al. Impact of point-of-care platelet function testing among patients with and without acute coronary syndromes undergoing percutaneous coronary intervention with drug-eluting stents (from the ADAPT-DES Study). *The American journal of cardiology*, 123(4):549–557, 2019.
- [Card27] Nirat Beohar, Shmuel Chen, Nicholas Lembo, Adrian Banning, Patrick WJC Serruys, Martin B Leon, Marie Morice, Philippe Genereux, David Kandzari, A Kappetein, Joseph F. Sabik, Ovidiu Dressler, Thomas McAndrew, and Gregg Stone. Impact Of Lesion Preparation Strategies On Outcomes Of Left Main Pci: The EXCEL Trial. Journal of the American College of Cardiology, 71(11):A1000, 2018.
- [Card28] Sorin J Brener, Ajay J Kirtane, Michael J Rinaldi, Thomas D Stuckey, Bernhard Witzenbichler, Giora Weisz, Franz-Josef Neumann, D Christopher Metzger, Timothy D Henry, David A Cox, Peter L. Duffy, Ernest L. Mazzaferri Jr, Paul A. Gurbel, Bruce R. Brodie, Roxana Mehran, **Thomas McAndrew**, and Gregg W. Stone. Prediction of ischemic and bleeding events using the dual antiplatelet therapy score in an unrestricted percutaneous coronary intervention population: analysis from the ADAPT-DES registry. *Circulation: Cardiovascular Interventions*, 11(10):e006853, 2018.
- [Card29] Chandan M Devireddy, Vasilis Babaliaros, Robert A Guyton, James Stewart, Yangbo Liu, Raj Makkar, Michael J Mack, Brian Whisenant, Stephen Ramee, Paul Teirstein, Thomas McAndrew, Aaron Crowley, Susheel K. Kodali, Suzanne Baron, David Cohen, Martin B. Leon, and Vinod H. Thourani. Routine Early Discharge After Transcatheter Aortic Valve Replacement: A Propensity Score Analysis From The PARTNER 2 Sapien 3 Study. Journal of the American College of Cardiology, 71(11):A1220, 2018.
- [Card30] Ariel Furer, Shmuel Chen, Bjorn Redfors, Sammy Elmariah, Philippe Pibarot, Howard Herrmann, Rebecca T Hahn, Susheel K Kodali, Vinod H Thourani, William Fearon, Jonathan Passeri, S. Chris Malaisrie, **Thomas McAndrew**, Philippe Genereux, Ori Ben-Yehuda, Martin B. Leon, and Daniel Burkhoff. Reduced Baseline Ejection Fraction Is Associated With Increased Cardio-vascular Mortality After Transcatheter Aortic Valve Replacement: Results From The PARTNER II Trials. Journal of the American College of Cardiology, 71(11):A1347, 2018.
- [Card31] Leonid Garber, Thomas C McAndrew, Eugene S Chung, Branislav Stancak, Jesper H Svendsen, Joao Monteiro, Trent M Fischer, Fred Kueffer, Thomas Ryan, Jeroen Bax, et al. Predictors of Left Ventricular Remodeling After Myocardial Infarction in Patients With a Patent Infarct Related Coronary Artery After Percutaneous Coronary Intervention (from the Post-Myocardial Infarction Remodeling Prevention Therapy [PRomPT] Trial). The American journal of cardiology, 121(11):1293–1298, 2018.
- [Card32] Gennaro Giustino, Roxana Mehran, Patrick W Serruys, Joseph F Sabik, Milan Milojevic, Charles A Simonton, John D Puskas, David E Kandzari, Marie-Claude Morice, David P Taggart, Anthony H. Gershlick, Philippe Genereux, Zixuan Zhang, **Thomas McAndrew**, Bjorn Redfors, Michael Ragosta III, Irving L. Kron, Ovidiu Dressler, and Gregg W. Stone. Left Main Revascularization With PCI or CABG in Patients With Chronic Kidney Disease: EXCEL Trial. Journal of the American College of Cardiology, 72(7):754–765, 2018.
- [Card33] Gennaro Giustino, Björn Redfors, Ajay J Kirtane, Roxana Mehran, George D Dangas, Bernhard Witzenbichler, Franz-Josef Neumann, Giora Weisz, Philippe Généreux, Akiko Maehara, **Thomas McAndrew**, Serdar Farhan, Michael J. Rinaldi, D. Christopher Metzger, Timothy D. Henry,

- David A. Cox, Peter L. Duffy, Ernest L. Mazzaferri Jr., Bruce R. Brodie, Thomas D. Stuckey, Paul Gurbel, Ori Ben-Yehuda, and Gregg W. Stone. Platelet Reactivity and Risk of Ischemic Stroke After Coronary Drug-Eluting Stent Implantation: From the ADAPT-DES Study. *JACC: Cardiovascular Interventions*, page 3680, 2018.
- [Card34] Rebecca T Hahn, Philippe Pibarot, Jonathon Leipsic, Philipp Blanke, Pamela S Douglas, Neil J Weissman, Samir Kapadia, Vinod H Thourani, Howard C Herrmann, Tamim Nazif, Thomas McAndrew, John G. Webb, Martin B. Leon, and Susheel Kodali. The effect of post-dilatation on outcomes in the PARTNER 2 SAPIEN 3 registry. JACC: Cardiovascular Interventions, 11(17):1710–1718, 2018.
- [Card35] Maayan Konigstein, Hussein Rahim, Thomas McAndrew, Evan Shlofmitz, Ori Ben-Yehuda, Gregg Stone, and Ziad Ali. Incidence And Predictors Of Contemporary DES Failure: Individual-Patient Data Pooled Analysis From 11 Randomized Controlled Trials. *Journal of the American College of Cardiology*, 71(11):A1019, 2018.
- [Card36] Ioanna Kosmidou, Shmuel Chen, A Pieter Kappetein, Patrick W Serruys, Bernard J Gersh, John D Puskas, David E Kandzari, David P Taggart, Marie-Claude Morice, Paweł E Buszman, Andrzej Bochenek, Erick Schampaert, Pierre Page, Joseph F. Sabik III, Bjorn McAndrew, Thomas Redfors, Ori Ben-Yehuda, and Gregg W. Stone. New-Onset Atrial Fibrillation After PCI or CABG for Left Main Disease: The EXCEL Trial. Journal of the American College of Cardiology, 71(7):739-748, 2018.
- [Card37] Akiko Maehara, Gary S Mintz, Bernhard Witzenbichler, Giora Weisz, Franz-Josef Neumann, Michael J Rinaldi, D Christopher Metzger, Timothy D Henry, David A Cox, Peter L Duffy, Bruce R. Brodie, Thomas D. Stuckey, Ernest L. Mazzaferri Jr, **Thomas** textbfMcAndrew, Philippe Genereux, Roxana Mehran, Ajay J. Kirtane, and Gregg W. Stone. Relationship between intravascular ultrasound guidance and clinical outcomes after drug-eluting stents: two-year follow-up of the ADAPT-DES study. *Circulation: Cardiovascular Interventions*, 11(11):e006243, 2018.
- [Card38] S Chris Malaisrie, Robert W Hodson, **Thomas C McAndrew**, Charles Davidson, Jeffrey Swanson, Rebecca T Hahn, Philippe Pibarot, Wael A Jaber, Nishath Quader, Alan Zajarias, et al. Outcomes after Transcatheter and Surgical Aortic Valve Replacement in Intermediate Risk Patients with Preoperative Mitral Regurgitation: Analysis of PARTNER II Randomized Cohort. Structural Heart, 2(4):336–343, 2018.
- [Card39] Björn Redfors, Philippe Généreux, Bernhard Witzenbichler, Ajay J Kirtane, Thomas McAndrew, Giora Weisz, Thomas D Stuckey, Timothy D Henry, Akiko Maehara, Roxana Mehran, et al. Bleeding Severity After Percutaneous Coronary Intervention. Circulation: Cardiovascular Interventions, 11(3):e005542, 2018.
- [Card40] Björn Redfors, Philippe Généreux, Bernhard Witzenbichler, Akiko Maehara, Giora Weisz, **Thomas McAndrew**, Roxana Mehran, Ajay J Kirtane, and Gregg W Stone. Percutaneous coronary intervention of lesions with in-stent restenosis: A report from the ADAPT-DES study. *American heart journal*, 197:142–149, 2018.
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- [Card42] Xiaofang Zeng, A Michael Lincoff, Stefanie Schulz-Schüpke, Philippe Gabriel Steg, Yedid Elbez, Roxana Mehran, Gregg W Stone, **Thomas McAndrew**, Jianhui Lin, Xindan Zhang, et al. Efficacy and safety of bivalirudin in coronary artery disease patients with mild to moderate chronic kidney disease: Meta-analysis. *Journal of cardiology*, 71(5):494–504, 2018.

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- [Card45] Konstanze Ertelt, Sorin J Brener, Roxana Mehran, Ori Ben-Yehuda, Thomas McAndrew, and Gregg W Stone. Comparison of Outcomes and Prognosis of Patients With Versus Without Newly Diagnosed Diabetes Mellitus After Primary Percutaneous Coronary Intervention for ST-Elevation Myocardial Infarction (the HORIZONS-AMI Study). The American Journal of Cardiology, 119(12):1917–1923, 2017.
- [Card46] Matthew Finn, Michael Cloney, Dimitrios Karmpaliotis, Ajay Kirtane, Philip Green, **Thomas McAndrew**, Claire Litherland, Bjorn Redfors, Witzenbichler Bernhard, Giora Weisz, et al. Is Platelet Reactivity Associated With Ischemic Events Following Successful Chronic Total Occlusion Percutaneous Coronary Intervention. *Journal of the American College of Cardiology*, 11(69):1314, 2017.
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- [Card50] Ioanna Kosmidou, Björn Redfors, Rushad Dordi, José M Dizon, Thomas McAndrew, Roxana Mehran, Ori Ben-Yehuda, Gary S Mintz, and Gregg W Stone. Incidence, Predictors, and Outcomes of High-Grade Atrioventricular Block in Patients With ST-Segment Elevation Myocardial Infarction Undergoing Primary Percutaneous Coronary Intervention (from the HORIZONS-AMI Trial). The American Journal of Cardiology, 119(9):1295–1301, 2017.
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- [Card53] Mahesh V Madhavan, Mathew S Maurer, Wael A Jaber, Philippe Pibarot, Pamela S Douglas, Raj R Makkar, Vinod H Thourani, Stam Lerakis, Howard C Herrmann, Nimesh D Desai, Thomas McAndrew, et al. The Myocardial Contraction Fraction Predicts Adverse Events after Transcatheter Aortic Valve Replacement: P2-16. Journal of the American Society of Echocardiography, 30(6):B68–B69, 2017.
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- [Card55] B Redfors, A Maehara, B Witzenbichler, G Weisz, TD Stuckey, TD Henry, T McAndrew, R Mehran, AJ Kirtane, GW Stone, et al. Outcomes After Successful Percutaneous Coronary Intervention of Calcified Lesions Using Rotational Atherectomy, Cutting Balloon Angioplasty, or Balloon-Only Angioplasty Before Drug-Eluting Stent Implantation. The Journal of invasive cardiology, 2017.
- [Card56] Bjorn Redfors, Philippe Genereux, Ajay Kirtane, Bernhard Witzenbichler, Akiko Maehara, Giora Weisz, Thomas McAndrew, Roxana Mehran, and Gregg Stone. Platelet Reactivity And Outcomes After PCI Of Lesions With And Without In-Stent Restenosis: The ADAPT-DES Study. Journal of the American College of Cardiology, 11(69):1023, 2017.
- [Card57] Björn Redfors, Philippe Généreux, Bernhard Witzenbichler, Thomas McAndrew, Jamie Diamond, Xin Huang, Akiko Maehara, Giora Weisz, Roxana Mehran, Ajay J Kirtane, et al. Percutaneous Coronary Intervention of Saphenous Vein Graft. Circulation: Cardiovascular Interventions, 10(5):e004953, 2017.
- [Card58] Björn Redfors, Brendan M Watson, **Thomas McAndrew**, Emilie Palisaitis, Dominic P Francese, Mehdi Razavi, Jordan Safirstein, Roxana Mehran, Ajay J Kirtane, and Philippe Généreux. Mortality, Length of Stay, and Cost Implications of Procedural Bleeding After Percutaneous Interventions Using Large-Bore Catheters. *JAMA cardiology*, 2017.
- [Card59] Myong Hwa Yamamoto, Kennosuke Yamashita, Mitsuaki Matsumura, Akiko Fujino, Masaru Ishida, Seitarou Ebara, Toshitaka Okabe, Shigeo Saito, Koichi Hoshimoto, Kisaki Amemiya, **Thomas McAndrew**, et al. Serial 3-Vessel Optical Coherence Tomography and Intravascular Ultrasound Analysis of Changing Morphologies Associated With Lesion Progression in Patients With Stable Angina PectorisCLINICAL PERSPECTIVE. *Circulation: Cardiovascular Imaging*, 10(9):e006347, 2017.
- [Card60] Marco Barbanti, John G Webb, Rebecca T Hahn, Ted Feldman, Robert H Boone, Craig R Smith, Susheel Kodali, Alan Zajarias, Christopher R Thompson, Philip Green, ..., **Thomas McAndrew**, et al. Impact of preoperative moderate/severe mitral regurgitation on 2-year outcome after transcatheter and surgical aortic valve replacement: insight from the PARTNER (Placement of AoRTic Transcatheter Valve) Trial Cohort A. *Circulation*, pages CIRCULATIONAHA–113, 2013.
- [Card61] Sorin J Brener, Roxana Mehran, Jose Dizon, Tom McAndrew, and Helen Parise. Complementary Predictive Value Of Myocardial Blush Grade And St-Segment Resolution After Primary Pci: An Analysis From Horizons-Ami. Journal of the American College of Cardiology, 61(10):E1854, 2013.

- [Card62] Vasim Farooq, Yvonne Vergouwe, Philippe Généreux, Christos V Bourantas, Tullio Palmerini, Adriano Caixeta, Hector M Garcìa-Garcìa, Roberto Diletti, Marie-angèle Morel, Thomas C McAndrew, et al. Prediction of 1-year mortality in patients with acute coronary syndromes undergoing percutaneous coronary intervention: validation of the logistic clinical SYNTAX (Synergy Between Percutaneous Coronary Interventions With Taxus and Cardiac Surgery) score. JACC: Cardiovascular Interventions, 6(7):737–745, 2013.
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- [Card65] Philip Green, David J Cohen, Philippe Généreux, **Tom McAndrew**, Suzanne V Arnold, Maria Alu, Nirat Beohar, Charanjit S Rihal, Michael J Mack, Samir Kapadia, et al. Relation between six-minute walk test performance and outcomes after transcatheter aortic valve implantation (from the PARTNER trial). *The American journal of cardiology*, 112(5):700–706, 2013.
- [Card66] Philip Green, Ajay Kirtane, Philippe Genereux, **Tom McAndrew**, Irene Hueter, Maria Alu, Suzanne Arnold, Nirat Beohar, Charanjit Rihal, Michael Mack, et al. The Impact of six-minute walk test performance on outcomes after transcatheter aortic valve replacement: insights from the PARTNER trial. *Journal of the American College of Cardiology*, 61(10):E1971, 2013.
- [Card67] Rebecca T Hahn, Pamela S Douglas, Philippe Pibarot, **Tom Mcandrew**, William Stewart, Neil Weissman, Mathew Williams, Susheel Kodali, and Martin Leon. Moderated Poster Differences in Baseline Echo Parameters in Patients with Varying Severity of Paravalvular Regurgitation Following Transcatheter Valve Replacement. *Journal of the American Society of Echocardiography*, 26(6):B7–B8, 2013.
- [Card68] Rebecca T Hahn, Philippe Pibarot, Susheel Kodali, John Webb, Josep Rodes-Cabau, Howard C Herrmann, Mathew Williams, Raj Makkar, Wilson Y Szeto, Michael Main, ..., **Thomas McAndrew**, et al. Post-dilatation and Procedural Outcomes in the PARTNER I Trial, 2013.
- [Card69] Nobuaki Kobayashi, Akiko Maehara, Dominic Allocco, Bernard Witzenbichler, Stephen G Ellis, Mark A Turco, John A Ormiston, Giulio Guagliumi, Songtao Jiang, Tom McAndrew, et al. Stenting During STEMI Is Associated With Less Neointimal Hyperplasia: A Pooled IVUS Analysis From The HORIZONS-AMI And Taxus IV, V, And ATLAS Trials. Journal of the American College of Cardiology, 61(10):E1856, 2013.
- [Card70] S Kodali, R Hahn, M Williams, V Thourani, EM Tuzcu, L Svensson, P Douglas, M Alu, T Mcandrew, and M Leon. Impact of paravalvular leak following transcatheter aortic valve replacement on one-year mortality: analysis of the combined PARTNER cohorts. European Heart Journal, 34(suppl\_1):2584, 2013.
- [Card71] Susheel K Kodali, Mathew Williams, Karin Humphries, David Cohen, Vuyisile Nkomo, Neil Weissman, Vinod Thourani, Lars Svensson, E Murat Tuzcu, **Thomas C McAndrew**, et al. Sex-Specific Differences In Late Mortality After Transcatheter AVR In The PARTNER Trial. *Journal of the American College of Cardiology*, 61(10):E1864, 2013.
- [Card72] Brian R Lindman, William Stewart, Philippe Pibarot, Rebecca T Hahn, Neil J Weissman, **Thomas C McAndrew**, Wilson Y Szeto, Raj Makkar, D Craig Miller, Vasilis Babaliaros,

- et al. Regression of Severe Left Ventricular Hypertrophy After Transcatheter Valve Replacement for Aortic Stenosis: Impact on Clinical Outcomes in PARTNER Cohort A, 2013.
- [Card73] Philippe Pibarot, Rebecca T Hahn, Neil J Weissman, William J Stewart, Brian R Lindman, Lars G Svensson, Howard C Herrmann, Michael J Mack, Scott Lim, Vinod H Thourani, Thomas McAndrew, et al. Moderated Poster: Predictors of Impact of Prosthesis-patient Mismatch following Transcatheter Aortic Valve Replacement-A Partner Trial Cohort A Analysis. Journal of the American Society of Echocardiography, 26(6):B9, 2013.
- [Card74] Jochen Wöhrle, Bruce Brodie, Bernhard Witzenbichler, Dariusz Dudek, Ran Kornowski, Chris Metzger, Cindy Grines, **Thomas C McAndrew**, Helen Parise, Ziad Sergie, et al. Impact of bivalirudin and paclitaxel-eluting stents on outcomes in patients undergoing primary percutaneous coronary intervention of the left anterior descending artery. *The American journal of cardiology*, 112(6):753–760, 2013.

### Genetics

- [Gen1] Marina Frimer, Chang Sun, **Thomas McAndrew**, Benjamin C Smith, Zigui Chen, Gary L Goldberg, Ana C Rodriguez, and Robert D Burk. HPV16 CpG methylation patterns determined by next-gen bisulfite sequencing and association with cervix precancer/cancer, 2015.
- [Gen2] Marina Frimer, June Y Hou, **Thomas C McAndrew**, Gary L Goldberg, and Shohreh Shahabi. The clinical relevance of rising CA-125 levels within the normal range in patients with uterine papillary serous cancer. *Reproductive Sciences*, 20(4):449–455, 2013.
- [Gen3] Jeny P Ghartey, Colleen Carpenter, Philip Gialanella, Charlotte Rising, **Thomas C McAndrew**, Mohak Mhatre, Jessica Tugetman, Mark H Einstein, Cynthia Chazotte, and Betsy C Herold. Association of bactericidal activity of genital tract secretions with Escherichia coli colonization in pregnancy. *American Journal of Obstetrics and Gynecology*, 207(4):297–e1, 2012.
- [Gen4] June Y Hou, David Smotkin, Robert Grossberg, Mark Suhrland, Rebecca Levine, Harriet O Smith, Abdissa Negassa, **Thomas C McAndrew**, and Mark H Einstein. High prevalence of high grade anal intraepithelial neoplasia in HIV-infected women screened for anal cancer. *JAIDS Journal of Acquired Immune Deficiency Syndromes*, 60(2):169–172, 2012.
- [Gen5] Rebecca Pellett Madan, Colleen Carpenter, Tina Fiedler, Sabah Kalyoussef, **Thomas C McAndrew**, Shankar Viswanathan, Mimi Kim, Marla J Keller, David N Fredricks, and Betsy C Herold. Altered biomarkers of mucosal immunity and reduced vaginal Lactobacillus concentrations in sexually active female adolescents. *PloS one*, 7(7):e40415, 2012.
- [Gen6] Mohak Mhatre, **Thomas McAndrew**, Colleen Carpenter, Robert D Burk, Mark H Einstein, and Betsy C Herold. Cervical intraepithelial neoplasia is associated with genital tract mucosal inflammation. Sexually transmitted diseases, 39(8):591, 2012.
- [Gen7] Benjamin C Smith, Thomas McAndrew, Zigui Chen, Ariana Harari, David M Barris, Shankar Viswanathan, Ana Cecilia Rodriguez, Phillip Castle, Rolando Herrero, Mark Schiffman, et al. The cervical microbiome over 7 years and a comparison of methodologies for its characterization. PloS one, 7(7):e40425, 2012.

# Obstetrics & Gynecology

[ObGyn1] Mary L Rosser, **Thomas C McAndrew**, and Allison J Brusati. Obstetricians/Gynecologists And Heart Health: Untapped Allies In The Fight On Cardiovascular Disease. *Journal of the American College of Cardiology*, 61(10):E1458, 2013.

- [ObGyn2] D Woods, S Isani, **T McAndrew**, N Nevadunsky, J Hou, G Goldberg, and D Kuo. Comparison of the environmental impact of commonly used surgical approaches to hysterectomy. *Gynecologic Oncology*, 130(1):e143, 2013.
- [ObGyn3] R Callery, S Kumar, **T McAndrew**, M Simmons, S Isani, M Einstein, and M Abadi. Quality assurance initiative to improve the performance of cytology and HPV testing for predicting clinically relevant disease in peri-and postmenopausal women with ASCUS. *Gynecologic Oncology*, 125:S52–S53, 2012.
- [ObGyn4] J Gebb, M Rosner, **TC McAndrew**, FH Einstein, and P Dar. P16. 03: 3-dimensional power Doppler (3DPD) "biopsy" of the Utero-Placental Circulation Space (UPCS). *Ultrasound in Obstetrics & Gynecology*, 40(S1):230–230, 2012.

# Oncology

[Onc1] MJ Pishvaian, R Slack, A Witkiewicz, AR He, JJ Hwang, A Hankin, K Dorsch-Vogel, D Kuda, T McAndrew, LM Weiner, et al. A phase II study of the PARP inhibitor ABT-888 plus temozolomide in patients with heavily pretreated, metastatic colorectal cancer. *Journal of Clinical Oncology*, 29(15\_suppl):3502-3502, 2011.

#### INTERNSHIPS, FELLOWSHIPS, AND TRAINING

IGERT Research fellow	2013 - 2016
University of Vermont	$Burlington,\ VT$
Intern	2015
Center for Nonlinear Sciences	Los Alamos, NM
Student	2014
Santa Fe Institute Complex Systems Summer School	Santa Fe, NM
Intern	2010
Office of the Comptroller of the Currency	$Washington\ D.C.$
Research Assistant	2009 - 2010

Washington D.C.

#### **EDITORIAL ACTIVITIES**

#### Statistical Editor

- Statistical Editor
  - Journal of the American College of Cardiology Asia (2020-2021)
  - Structural Heart Coronary Artery Disease
  - Kidney International Reports

Lombardi Comprehensive Cancer Center

#### • Reviewer

- Lancet
- Journal of the American College of Cardiology Interventions
- Journal of Interventional Cardiology

- PLoS One
- IEEE Transactions on Power Systems
- Journal of Energy Engineering

#### DATA SAFETY AND MONITORING BOARD EXPERIENCE

I have served and continute to serve on data safety and monitoring board meetings for over ten years as either the independent statistican who reports on current, ongoing clincial trials or as a voting member of the DSMB. Please find below past and ongoing experience serving as a DSMB member.

- Disrupt CAD III; Shockwave; 2018-2020
- Disrupt CAD IV; Shockwave; 2019-2020
- PROGRESSS; Edwards; 2021-ongoing
- Eurpoean Expansion Trial 4631; Ancora Heart; 2019-ongoing
- Stemi-DTU; Abiomed; 2020-ongoing
- Protect IV; Abiomed; 2021-ongoing

#### CONFERENCE ORGANIZER

### Statistical Communication: Infectious diseases

2023

Lehigh University

Bethlehem, PA

#### Confirmed speakers and panelists

- Andrew Lover, University of Massachusetts at Amherst
- Brenna Curley, Moravian University
- Paolo Bocchini, Lehigh University
- Lorenzo Servitje, Lehigh University
- Rochelle Frounfelker, Lehigh University

#### Participatory Modeling & Outbreak Science Symposium

Lehigh University

Bethlehem, PA

2024

#### Confirmed speakers and panelists

- Shaun Truelove, Johns Hopkins University
- David Synnamon, Allentown Health Bureau
- Alex Benjamin, Lehigh Valley Health Network
- Jarrod Kile, Lehigh Valley Health Network

#### INVITED TALKS, DISCUSSANT, AND PRESENTATIONS

Chimeric forecasting: con	bining probabilistic predictions from computational models and
human judgment	2022

COVID-19 Consortium Colloquium Speaker Series (CCC) at University of Texas, Austin Virtual Mathematics and Computer Science Colloquium Moravian University

Adaptive and chimeric ensemble forecasting of infectious agents

2021

Mathematics Seminar

University of Scranton

Supporting public health decisions during the COVID-19 pandemic with forecasting and modeling using consensus predictions 2021

College of Health Research Roundtable (Lehigh Univ)

Virtual

Course Moment (BIOS130)

2021

The Humanities Lab (Lehigh Univ)

Virtual

**Probability Panel** 

2021

The Humanities Lab (Lehigh Univ)

Virtual

Metaforecasting the US COVID-19 outbreak

2021

MIDAS Webinar: COVID-19 Urgent Grant Program Awards (Aggregating computational models and human judgment for more accurate forecasts of the US COVID-19 outbreak) 2020

Modeling of Infectious Disease Agents Study (MIDAS)

Virtual

A consensus of probabilistic predictions by experts and trained forecasters of the timing and efficacy of a SARS-CoV-2 vaccine 2020

Society for Risk Analysis

Virtual

An expert and trained forecaster consensus model of vaccine and therapeutic solutions to 2020 COVID-19

MetaculusVirtual

Understanding COVID-19 through computational models and expert judgment 2020 Virtual

Lehigh University

An expert judgment model to predict early stages of the US COVID-19 outbreak 2020 Modeling of Infectious Disease Agents Study (MIDAS) Virtual

Adaptively Stacked Ensembles for Influenza Forecasting with Incomple	te Data	2019
Epidemics Statistics and Datascience Symposium (SDSS) Modeling of Infectious Disease Agent Study (MIDAS) Network	Sean	ston, SC ttle, WA sda, MD
New England Statistical Symposium (NESS)	Hartf	ford, CT
Clinical trial design in context Transcatheter Therapeutics	San Die	2018 ego, <i>CA</i>
EXCEL Trial substudies Transcatheter Therapeutics	San Die	2018 ego, <i>CA</i>
Assimilated LVEF: Combining human intuition with Machine measurements for sharper estimates of		2212
left ventricular ejection fraction American Society of Echocardiography	Nashvi	2018 Elle, TN
Spotlight on Interpreting evidence: The p-value and beyond Transcatheter Therapeutics	Denv	2017 ver, CO
Clinical trial design, statistics, and interpretation Transcatheter Therapeutics	Washigt	2016 on, DC
Robust microgrids University of Vermont	Burlingt	2016 on, VT
Anomaly detection from physical correlations Center for Nonlinear Sciences	$Los\ Alam$	2016 os, NM
What we write about when we write about causality Advances in Social Networks Analysis and Mining (ASONAM)	San Francis	2016 sco, CA
Robustness of Spatial Micronetworks Complenet	Λ	2015 NY, NY
Structural and Functional Robustness in Networks $Santa\ Fe\ Institute$	Santa .	2014 Fe, NM

# Outbreak science and Public health forecasting II Lehigh University Bethlehem, PA • Spring 2025 **Data Exploration in Python** Lehigh University Bethlehem, PA • Spring 2025 Outbreak science and Public health forecasting Lehigh University Bethlehem, PA • Spring 2023 Population Health Data Science I Lehigh University Bethlehem, PA • Spring 2022 • Spring 2021 • Fall 2020 Population Health Data Science II Lehigh University Bethlehem, PA • Fall 2022 • Fall 2021 Statistical Literacy Lehigh University Bethlehem, PA • Fall 2022 Topics in Applied Regression Mount Holyoke College Hadley, MA

• Fall 2019

### Fundamentals of Calculus II

University of Vermont

Burlington, VT

• Summer 2016

# MEDIA, OPINION PIECES, AND EDITORIALS

#### Infectious disease forecasting opinions

- CNN
  - Australia's having an intense flu season, and it could be a signal of what's to come in the US
- Lehigh Valley News
  - COVID still hit the Lehigh Valley hard in 2022, data shows

#### Aggregating computational and human judgment forecasts

- Forbes
  - Computer Forecasts, Expert Judgment, And 'Chimeric Forecasting' Of Infectious Diseases

#### • Lehigh News

- Public-Health Prognosticators: Forecasting Public Health Events
- Forecast: 125,000 fewer U.S. COVID Deaths if Half the Population Initiates Vaccination by March 1
- Forecast: the Impacts of Vaccines and Variants on the U.S. COVID Trajectory

#### Expert judgment forecasting of the early US COVID-19 outbreak

#### • Science Magazine

- Surveys of infectious disease experts aim to predict COVID-19's toll

#### • Five Thirty Eight

- Infectious Disease Experts Don't Know How Bad The Coronavirus Is Going To Get, Either
- Experts Say The Coronavirus Outlook Has Worsened, But The Trajectory Is Still Unclear
- Best-Case And Worst-Case Coronavirus Forecasts Are Very Far Apart
- Experts Think We're Flattening The Coronavirus Curve, But Hospitalizations Haven't Peaked Yet
- Experts Think The U.S. COVID-19 Death Toll Will Hit 50,000 By The End Of April
- Infectious-Disease Experts Expect A Surge In Georgia's COVID-19 Cases
- Infectious-Disease Experts Think Texas Will See An Increase In Cases

### • Rolling Stone

- Here's How More Than 20 Infectious-Disease Experts See Coronavirus Playing Out in the U.S.

#### • The Economist

- The hard choices covid policymakers face

#### Vox

- Predictions are hard, especially about the coronavirus

#### RESEARCH STUDENTS AND EXPERIENCES

Name	Degree	College	Project (s)	Time period	After the lab
Matthew Lech- manik	MS Data Science	RCEAS	Scelable Human judgment forecasts of influenza peaks	09/2023	In progress
Garrik Hoyt	PhD Compputer Science	RCEAS	Integrating social-signals into mechanistic models to improve performance	05/2024	In progress
Jixuan Ren	MS Statistics	CAS	Influenza forecasting in Pennsylvania	Fall 2023	Applying for PhD
Ruiqian Su	MS Statistics	CAS	Combine, Aggregate, Pool ensemble forecasting of influenza	Fall 2023	Applying for PhD

Abhishek Srivastava	MS Data Science	CAS	2022-2023 influenza forecasting	Spring 2023	Senior Data Scientist at SOPHiA Genetics
Wenxuan Ye	MS Computer Science	CAS	A rigorous test-bed for evaluating ensemble forecasts of the trajectory of a pathogen / Human judgement prediction of confirmed influenza hospitlization	Fall 2021- Fall 2022	Pursuing PhD
Xinze Zhou	MS Mathematics	CAS	A Combine-Aggregate- Pool (CAP) approach to ensemble forecasts of seasonal influenza-like illness / human judgement prediction of confirmed influenza hospitlization	Fall 2021- Spring 2022	Johns Hopkins University for PhD
Ningxi Wei	PhD Statistics	CAS	A Combine-Aggregate- Pool (CAP) approach to ensemble forecasts of seasonal influenza-like illness	Fall 2021-	In progress
Parth Devan Ghandi	MS Industrial Systems Engineering	RCEAS	Probabilistic Forecasting of COVID-19 for CDC	Spring 2022	Systems Analyst at Hello Fresh
Jun Yu	PhD Computer Science	CAS	A rigorous test-bed for evaluating ensemble forecasts of the trajectory of a pathogen	Summer 2022	In progress
Allison Codi	BS IDEAS	CAS	Aggregating human judgment probabilistic predictions of COVID-19 transmission, burden, and preventative measures	Fall 2020- Spring 2022	MSPH with focus on Biostatistics at Emory University
Damon Luk	BS Electrical Engineering	CAS	Chimeric forecasting: combining probabilistic predictions from computational models and human judgment	Fall 2020- Spring 2022	MS in Applied Data Science at Penn State University
Abraham Berlin	BS Computer Science	CAS	A rigorous test-bed for evaluating ensemble forecasts of the trajectory of a pathogen	Summer 2021- Spring 2023	Lehigh University MS in Computer Science
Matthew Piriya	BS Computer Science and Business (CSB)	CAS & COB	Probabilistic Forecasting of COVID-19 for CDC	Spring 2022- Spring 2023	Google
Abigail Bryer	BS in Population Health	СОН	Undecided	Fall 2022-	In progress

Emily La- casse	BS in Population Health	СОН	Human judgement probabilistic predictions generated by students of a University scale spread of COVID-19	Summer 2021 -Spring 2023	Lehigh University mS in Population Health
Kate Brown	BS in Population Health	СОН	Computational forecasts of Lehigh University incident cases of COVID-19	Fall 2021 -	In progress
Charlene Bohrer	BS in Population Health	СОН	Human judgement probabilistic predictions generated by students of a University scale spread of COVID-19	Fall 2021-	In progress
Kareem Hargrove	BS in Population Health	СОН	Social Determinents of Health Data Index	Fall 2022-	In progress
Kate Weiss	BS in Population Health	СОН	Social Determinents of Health Data Index	Fall 2022-	In progress
Neha Paras	BS in Population Health	СОН	Undecided	Fall 2022-	In progress
Helen Keetley	BS in Population Health	СОН	Influenza forecasting for the state of PA	Fall 2022-	In progress
Max Lee	BS in Population Health	СОН	MTSE: Mathematical Modeling and Syndromic Surveillance of COVID-19 in Pennsylvania	Summer 2021	In progress
Hangyi Li	BS in Mathematics	CAS	MTSE: Mathematical Modeling and Syndromic Surveillance of COVID-19 in Pennsylvania	Summer 2021	In progress
Tariq Faisal Hayat Al-Serhan	BS in Computer Engineering	CAS	MTSE: Mathematical Modeling and Syndromic Surveillance of COVID-19 in Pennsylvania	Summer 2020	Graduated with M.Eng in Technical Entrepreneurship
Nic Al- tenderfer	BS in Mechanical Engineering	RCEAS	MTSE: Mathematical Modeling and Syndromic Surveillance of COVID-19 in Pennsylvania	Summer 2020	In progress
Andrew Donnachie	BS in Statistics	CAS	MTSE: Mathematical Modeling and Syndromic Surveillance of COVID-19 in Pennsylvania	Summer 2020	Senior Data Analyst at Spherix Global Insights
Jailene Garcia	BS in Bioengineering	RCEAS	MTSE: Mathematical Modeling and Syndromic Surveillance of COVID-19 in Pennsylvania	Summer 2020	In progress
Alex Kline	BS in IDEAS	CAS	MTSE: Mathematical Modeling and Syndromic Surveillance of COVID-19 in Pennsylvania	Summer 2020	Software Engineer at Palantir Technologies

Kenny Lin	BS in Computer Science	CAS	MTSE: Mathematical Modeling and Syndromic Surveillance of COVID-19 in Pennsylvania	Summer 2020	Software Engineer at Lockheed Martin Space
Eunice Liu	BS in Mathematics	CAS	MTSE: Mathematical Modeling and Syndromic Surveillance of COVID-19 in Pennsylvania	Summer 2020	MS in Healthcare Policy and Research in the Biostatistics & Data Science track at Weill Cornell Graduate School of Medical Sciences
Martin Magazzolo	BS in Chemical Engineering	RCEAS	MTSE: Mathematical Modeling and Syndromic Surveillance of COVID-19 in Pennsylvania	Summer 2020	Technical Solutions Engineer at Epic
Michael Nelson	MS in Financial Engineering	COB	MTSE: Mathematical Modeling and Syndromic Surveillance of COVID-19 in Pennsylvania	Summer 2020	Trading Analyst at Swish Analytics
Poplar Yang	BS in Bioengineering	RCEAS	MTSE: Mathematical Modeling and Syndromic Surveillance of COVID-19 in Pennsylvania	Summer 2020	MS student at Johns Hopkins Center for Bioengineering Innovation and Design (CBID)

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UTREACH AND SERVICE				
Appointed to Center for Creative Inquiry Faculty Advisory Committee  Lehigh University COH	2022 Bethlehem, PA			
Appointed as COH representative to RCEAS  Lehigh University COH	2022 Bethlehem, PA			
Appointed to HST Management Committee  Lehigh University COH	2022 Bethlehem, PA			
Appointed to Faculty search committee for Health Data Visualization $Lehigh\ University\ COH$	2021 Bethlehem, PA			
Appointed to Faculty search committee for Artificial Intelligence Lehigh University $COH$	2021 Bethlehem, PA			

Appointed to Faculty search committee for mHealth, telehealth, and hapt $Lehigh\ University\ COH$	Bethlehem, PA
Appointed to Faculty search committee for Professor of Practice in Data $Lehigh\ University\ CAS$	Science 2021 Bethlehem, PA
Appointed to Faculty search committee for Asst. Prof of Mathematics Lehigh University CAS: Math Dept	2021 Bethlehem, PA
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	e 2021 Bethlehem, PA
Appointed to Faculty search committee for Biostatistican Lehigh University COH	2021 Bethlehem, PA
Appointed to COH Brainstorming: Vision and Identity  Lehigh University	2021 Bethlehem, PA
Appointed to College of Health Planning Committee Lehigh University COH	2020 Bethlehem, PA
Family Week: Decision-making, Crowd-think, and COVID-19 Lehigh University	2020 Bethlehem, PA
Ooblexity: Non-newtonian fluid dynamics $Nanodays$	$2015 \\ Burlington, \ VT$
Percolation on spatial networks Radiobean School lunch series	2015 Burlington, VT