Nicholas DeVogel

Biostatistics PhD Student

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Education

- **Medical College of Wisconsin** — Milwaukee, WI
  Biostatistics PhD — *2014 - present*
  - Dissertation Title: Population Structure and Familial Relationships Adjustment in Statistical Models. Advisor: Dr. Tao Wang
  - Research interests: Statistical genetics, clinical trials
  - 3.99 GPA
- **University of Wisconsin - Madison** — Madison, WI
  Honors Statistics and Mathematics — *2010 - 2014*
  - 3.50 GPA, 3.74 statistics GPA

Employment

- **ORISE Fellow** — Food and Drug Administration
  Mentor: Ed Bein — *June 2018 - August 2018*
  - A ssessment of covariate adjustment methods for binary outcomes in clinical trials
- **Research Assistant** — Medical College of Wisconsin
  PI: Dr. Narayan Yoganandan — *August 2016 - present*
  - Work on applying various survival methods for impact biomechanical experiments
  - Adapt current methods to fit limiations of data (small sample size)
  - Methods and results from and applicable to automotive industry, NASA, FAA, among others
- **Biostatistical Consultant** — Medical College of Wisconsin
  Manager: Dr. Aniko Szabo — *January 2015 - September 2015, May 2016 - August 2016*
  - Work on various projects brought to the Biostatistics Consulting Service
  - Broad groups of methods applied to several unique projects
- **Teaching Assistant** — Medical College of Wisconsin
  Course Directors: Ruta Brazauskas | Raphael Fraser, Soyoung Kim — *January 2016 - May 2016*
  - *Biostatistics II*: Continuation of introductory biostatistical methods for Public and Community Health graduate students, among others. Including office hours, grading, and some lecture
  - *Introduction to Biostatistics*: Use of descriptive and analytical statistics in research studies for online Masters of Public Health Students. Including office hours, grading, and feedback to students' questions online

Technical Skills

- `R`. 4+ years. Including markdown, Shiny web apps and presentations, package development, Rcpp, blogdown
- `SAS`. 4 years. Including IML, macros
- LaTeX. 4+ years. Including presentations, posters

- C, C++: 1 year working in connection with Rcpp
- Java, Python: Beginner understanding
- Various Office tools. Word, PowerPoint, Excel, Access

Publications and Presentations

In the below, pure statistical methodology (not collaborative) works are denoted by →

Journal Articles

- *DeVogel, Nicholas*, N. Yoganandan, A. Banerjee, and F. A. Pintar. Hierarchical Process Using Brier Score Metrics for Lower Leg Injury Risk Curves in Vertical Impact. Journal of the Royal Army Medical Corps, January 31, 2019. https://doi.org/10.1136/jramc-2018-001124.
- Yoganandan, Narayan, Anjishnu Banerjee, *Nicholas DeVogel*, Frank A. Pintar, and Jamie L. Baisden. A Novel Competing Risk Analysis Model to Determine the Role of Cervical Lordosis in Bony and Ligamentous Injuries. World Neurosurgery 119 (November 2018): e962-67.
- Banerjee, Anjishnu, *Nicholas DeVogel*, Frank A. Pintar, and Narayan Yoganandan. Novel Learning Framework (Knockoff Technique) to Evaluate Metric Ranking Algorithms to Describe Human Response to Injury. Traffic Injury Prevention 19, no. sup2 (2018): S121-26. https://doi.org/10.1080/15389588.2018.1519805.
- *DeVogel, Nicholas*, Anjishnu Banerjee, and Narayan Yoganandan. Application of Resampling Techniques to Improve the Quality of Survival Analysis Risk Curves for Human Frontal Bone Fracture. Clinical Biomechanics (Bristol, Avon), April 21, 2018. https://doi.org/10.1016/j.clinbiomech.2018.04.013.
- Yoganandan, Narayan, Jason Moore, Frank A. Pintar, Anjishnu Banerjee, *Nicholas DeVogel*, and JiangYue Zhang. Role of Disc Area and Trabecular Bone Density on Lumbar Spinal Column Fracture Risk Curves under Vertical Impact. Journal of Biomechanics 72 (27 2018): 90-98. https://doi.org/10.1016/j.jbiomech.2018.02.030.
- *DeVogel, Nicholas*, Narayan Yoganandan, Frank A. Pintar, and Anjishnu Banerjee. Evaluation of Predictive Performance of Injury Risk Curves. 54th Annual Rocky Mountain Bioengineering Symposium, April 2017.
- Yoganandan, Narayan, Sajal Chirvi, Liming Voo, *Nicholas DeVogel*, Frank A. Pintar, and Anjishnu Banerjee. Foot-Ankle Complex Injury Risk Curves Using Calcaneus Bone Mineral Density Data. Journal of the Mechanical Behavior of Biomedical Materials 72 (2017): 246-51. https://doi.org/10.1016/j.jmbbm.2017.05.010.

Conference presentations or papers, first-authored or presented by Nicholas

- *DeVogel*, Nicholas, Anjishnu Banerjee, and Narayan Yoganandan. Injury Risk Curves Using a Novel (Bayesian) Technique to Describe Human Tolerance in Impact Biomechanics. Summer Biomechanics, Bioengineering and Biotransport Conference (Abstract accepted), June 2019.
- *DeVogel, Nicholas*, Narayan Yoganandan, Frank A. Pintar, and Anjishnu Banerjee. A Novel Analytical Tool to Assess Spine Injury Risk in Impact Biomechanics. 15th Annual Injury Biomechanics Symposium (Abstract Accepted), May 2019.

→ *DeVogel, Nicholas*, and Tao Wang. Comparison of Hypothesis Testing Methods on Random Genetic Effects in Family Data. Eastern North American Region Conference. March 2019.

- *DeVogel, Nicholas*, Anjishnu Banerjee, Frank A. Pintar, and Narayan Yoganandan. Ranking of Biomechanical Metrics to Describe Human Response to Impact-Induced Damage. November 9, 2018, V003T04A064. https://doi.org/10.1115/IMECE2018-88007.

→ *DeVogel, Nicholas*, and Ed Bein. Assessment of Covariate Adjustment Methods for Binary Outcomes in Clinical Trials. FDA ORISE Conference, August 2018.

→ *DeVogel, Nicholas*, and Tao Wang. Assessment of population sub-structure in genetic association studies. Population, Evolutionary and Quantitative Genetics Conference, May 2018.

→ Szabo, Aniko, and *Nicholas DeVogel*. Partial Observability with Exchangeable Binary Outcomes. BiostatMCW 2017, September 2017.

Other collaborative conference presentations or papers

- Shabani, Razmjoo, *Nicholas DeVogel*, Narayan Yoganandan, and Jamie L. Baisden. Normative Study of the Intervertebral Disk Measurement in Young Healthy Adults. Spine and Peripheral Nerves Annual Meeting, March 2018.
- Shabani, Razmjoo, *Nicholas DeVogel*, Narayan Yoganandan, and Jamie L. Baisden. Normative Study of the Intervertebral Disk Measurement in Young Healthy Adults. Spine and Peripheral Nerves Annual Meeting, March 2018.
- Baig, Saqib, Shahryar Ahmad, *Nicholas DeVogel*, Aniko Szabo, Krishna Thandra, Jawad Hussain, and Ezza Khan. Risk Factors for the Development of Acute Respiratory Distress Syndrome (ARDS) in Patients with Pneumonia, a Nationwide Retrospective Study Using the Nationwide Inpatient Sample (NIS) Database from Year 2002-2012. A53. RESPIRATORY FAILURE: RISK FACTORS AND OUTCOMES IN ARDS, American Thoracic Society International Conference Abstracts, May 1, 2016, A1826-A1826. https://doi.org/10.1164/ajrccm-conference.2016.193.1_MeetingAbstracts.A1826.
- Baig, Saqib, Ezza Khan, Aniko Szabo, and *Nicholas DeVogel*. Outcomes of Methicillin Resistant Staphylococcus Aureus (MRSA) Pneumonia in Adult Patients (>18 Years). CHEST 148, no. 4 (October 1, 2015): 127A. https://doi.org/10.1378/chest.2274855.
- Khan, Ezza, Saqib Baig, Aniko Szabo, and *Nicholas DeVogel*. Outcomes of Methicillin Sensitive Staphylococcus Aureus (MSSA) Pneumonia in Adult Patients (>18 Years). CHEST 148, no. 4 (October 1, 2015): 126A. https://doi.org/10.1378/chest.2277202.

Awards

- Student Travel Award. Medical College of Wisconsin Graduate School. March 2019
- Student Travel Award. 62nd Annual Association for the Advancement of Automotive Medicine Conference. November 2018.
- 2nd Place Student Written Paper Award. 54th Annual Rocky Mountain Bioengineering Symposium. April 2017.