

# Alexander Kirpich Ph.D.

---

Urban Life Building  
140 Decatur Street SE, Suite 407  
Atlanta, GA 30303  
(404) 413-9317 (office)  
E-mail: akirpich at gsu dot edu  
Web: alexanderkirpich.com

## EDUCATION

### ***Doctor of Philosophy in Biostatistics***

August 2015

University of Florida, Gainesville, Florida, USA

Advisors: Dr. Ira M. Longini and Dr. Yang Yang

Dissertation: Dynamic Infectious Disease Modeling Challenges Influenced by Real Life Problems

### ***Master of Statistics***

May 2011

University of Florida, Gainesville, Florida, USA

Advisor: Dr. Hani Doss

Project: A Comparison of Ridge Regression and LASSO

### ***Specialist Degree in Mathematics***

June 2006

Belarusian State University, Minsk, Belarus

Advisor: Dr. Yakov V. Radyno

Thesis: Fields with Valuations

## REVIEWED PUBLICATIONS

37. **Kirpich A.**, Shishkin A, Lhewa P, Adeniyi EA, Norris M, Chowell G, Gankin Y, Skums P, Perez Tchernov A. Clustering-Based Methodology for Comparing Multi-Characteristic Epidemiological Dynamics with Application to COVID-19 Epidemiology in Europe. *Royal Society Open Science*, Accepted on August 6, 2025. Will be published soon.

36. Bleichrodt A., Phan A., Luo R., **Kirpich A.**, Chowell G. StatModPredict: A user-friendly R-Shiny interface for fitting and forecasting with statistical models. *PLOS ONE*, Accepted on July 30, 2025. Will be published soon. DOI: 10.1371/journal.pone.0329791

35. **Kirpich A.**, Nemira A., Adeniyi A.E., Shishkin A., Bunas A.S., Kolomiets N.D., Gankin Y., Glin-skaya I.N., Gasich E.L., Skums P. Phylodynamics Analysis of HIV Epidemic History in Belarus in 1987-2022. *Frontiers in Epidemiology* 2025 5, 1601976 DOI: 10.3389/fepid.2025.1601976

34. Alonge Z., Simpkins J., Spears C.A., **Kirpich A.**, Tood J. Shaikh N.I. College Students' Feasibility and Acceptability of a Culinary Medicine and Wellness Class and Food Security and Eating Behaviors at a Minority Serving Institution: A Pilot Study. *Nutrients* 2025 17 (14) DOI: 10.3390/nu17142336

33. Wagh K., **Kirpich A.**, Chowell G. The Future Diabetes Mortality: Challenges in Meeting the 2030 Sustainable Development Goal of Reducing Premature Mortality from Diabetes. *Journal of Clinical Medicine* 2025 14(10), 3364 DOI: 10.3390/jcm14103364
32. Shishkin A, Bleichrodt A, Luo R, Skums P, Chowell G, **Kirpich A.** Short-Term Predictions of the Trajectory of Mpox in East Asian Countries, 2022–2023: A Comparative Study of Forecasting Approaches. *Mathematics* 2024 12(23), 3669 DOI: 10.3390/math12233669
31. Nucci A.M., Bashaw H., **Kirpich A.**, Rudolph J. Growth in pediatric intestinal failure after weaning of parenteral nutrition by primary diagnosis and transplant status and during teduglutide therapy. *Nutr Clin Pract.* 2024 Sep 12. PMID: 39263924 DOI: 10.1002/ncp.11209
30. Bakhturidze G., Popova L., **Kirpich A.**, Berg C.J., Eriksen M.P. Smoke-free legislation impact on the hospitality sector in the Republic of Georgia. *Tob Control.* 2024 Aug 30. PMID: 39214693 DOI: 10.1136/tc-2023-058513
29. Bleichrodt A., Luo R., **Kirpich A.**, Chowell G. Evaluating the forecasting performance of ensemble sub-epidemic frameworks and other time series models for the 2022–2023 mpox epidemic. *Royal Society Open Science* 2024. DOI: 10.1098/rsos.240248 PMID: 39076375 PMCID: PMC11285753
28. Norris M.H., Zincke D., Daegling D.J., Krigbaum J., McGraw W.S., **Kirpich A.**, Hadfield T.L., Blackburn J.K.. Genomic and Phylogenetic Analysis of *Bacillus cereus* Biovar anthracis Isolated from Archival Bone Samples Reveals Earlier Natural History of the Pathogen. *Pathogens.* 2023 Aug 20;12(8):1065. PMID: 37624025 PMCID: PMC10457788 DOI: 10.3390/pathogens12081065
27. **Kirpich A.**, Shishkin A., Lhewa P., Yang, C., von Fricken M.E., Norris M.H., Weppelmann T.A. An Investigation of the Seasonal Relationships Between Meteorological Factors, Water Quality, and Sporadic Cases of Legionnaires' Disease in Washington, DC. *Epidemiology & Infection.* 2023 Jan;151:e88. PMID: 37183701 PMCID: PMC10265736 DOI: 0.1017/S0950268823000651
26. Shishkin A., Lhewa P., Yang C., Gankin Y., Chowell G., Norris M., Skums P., and **Kirpich A.** Excess mortality in Ukraine during the course of COVID-19 pandemic in 2020-2021. *Scientific Reports* 2023 Apr 27;13(1):6917. PMID: 37106001 PMCID: PMC10139669 DOI: 10.1038/s41598-023-33113-2
25. Norris M.H., Bluhm A.P., Metrailler M.C., Jiranantasak T., **Kirpich A.**, Hadfield T., Ponciano J.M., Blackburn J.K. Beyond the spore, the exosporium sugar anthrose impacts vegetative *Bacillus anthracis* gene regulation in cis and trans. *Scientific Reports* 2023 Mar 28;13(1):5060. PMID: 35361826 PMCID: PMC8970068 DOI: 10.1038/s41598-022-09345-z
24. Alexandrov, V., **Kirpich A.**, Kantidze, O., and Gankin, Y., A multi-reference poly-conformational method for in silico design, optimization, and repositioning of pharmaceutical compounds illustrated for selected SARS-CoV-2 ligands. *PeerJ* 2022 Nov 24;10:e14252. PMID: 36447514 PMCID: PMC9701500 DOI: 10.7717/peerj.14252

23. Alexandrov, V., Vilenchik, M., Kantidze, O., Tsutskiridze, N., Tsutskiridze, N., Kharchiliava, D., Lhewa, P., Shishkin, A., Gankin, Y.,\* **Kirpich A.\*** [\*Equal Contribution] The novel efficient multi-stage lead optimization pipeline experimentally validated for DYRK1B selective inhibitors. *Journal of Medicinal Chemistry*. 2022 Oct 14;65(20):13784-92. PMID: 36239428 PMCID: PMC9619999 DOI: 10.1021/acs.jmedchem.2c00988

22. Danilov, V.V., Litmanovich, D., Proutski, A., **Kirpich A.**, Nefaridze, D., Karpovsky, A., Gankin, Y. Automatic scoring of COVID-19 severity in X-ray imaging based on a novel deep learning workflow. *Scientific Reports* 2022 Jul 27;12(1):12791. PMID: 35896761 PMCID: PMC9326426 DOI: 10.1038/s41598-022-15013-z

21. **Kirpich A.**, Shishkin, A., Weppelmann, T.A., Perez Tchernov, A., Skums, P., and Gankin, Y. Excess mortality in Belarus during the COVID-19 pandemic as the case study of a country with limited non-pharmaceutical interventions and limited reporting. *Scientific Reports* 2022 Mar 31;12(1):5475. PMID: 35361826 PMCID: PMC8970068 DOI: 10.1038/s41598-022-09345-z

20. Tariq, A., Chakhaia, T., Dahal, S., Ewing, A., Hua, X., Ofori, S.K., Prince, O., Salindri, A., Adeniyi, A.E., Banda, J.M. and Skums, P., Luo, R., Lara-Díaz, L.Y., Bürger, R., Fung, I., C-H., Shim, E., **Kirpich A.**, Srivastava, A., Chowell, G. An investigation of spatial-temporal patterns and predictions of the COVID-19 pandemic in Colombia, 2020-2021. *PLOS Neglected Tropical Diseases* 2022 Mar 4;16(3):e0010228. PMID: 35245285 PMCID: PMC8926206 DOI: 10.1371/journal.pntd.0010228

19. Danilov V. V., Proutski A., Karpovsky A., **Kirpich A.**, Litmanovich D., Nefaridze D., Talalov O., Semyonov S., Koniukhovskii V., Shvartc V., Gankin Y., Indirect supervision applied to COVID-19 and pneumonia classification. *Informatics in Medicine Unlocked*. 2022 Jan 1;28:100835. PMID: 34977331 PMCID: PMC8712713 DOI: 10.1016/j.imu.2021.100835

18. Gankin, Y., Nemira, A.&, Koniukhovskii, V.&, Chowell, G., Weppelmann, T.A., Skums, P.\* and **Kirpich A.\***, Investigating the first stage of the COVID-19 pandemic in Ukraine using epidemiological and genomic data. [Equal Contribution] [Equal Contribution] *Infection, Genetics and Evolution*. 2021 Nov 1. PMID: 34592415 PMCID: PMC8474758 DOI: 10.1016/j.meegid.2021.105087

17. Gorse, G.J., Rattigan, S.M., **Kirpich, A.**, Simberkoff, M.S., Bessesen, M.T., Gibert, C., Nyquist, A.C., Price, C.S., Gaydos, C.A., Radonovich, L.J. and Perl, T.M., Influence of Pre-Season Antibodies against Influenza Virus on Risk of Influenza Infection among Health Care Personnel. *The Journal of Infectious Diseases* 2022 Mar 1;225(5):891-902. PMID: 34534319 DOI: 10.1093/infdis/jiab468

16. Nemira, A., Adeniyi, A.E., Gasich, E.L., Bulda, K.Y., Valentovich, L.N., Krasko, A.G., Glebova, O., **Kirpich A.\*** and Skums, P.\*, SARS-CoV-2 transmission dynamics in Belarus in 2020 revealed by genomic and incidence data analysis. [\*Equal Contribution] *Communications Medicine, Nature Publishing Group* 2021 Sep 16;1(1):31. PMID: 35602211 PMCID: PMC9053244 DOI: 10.1038/s43856-021-00031-1

15. Tariq, A., Banda, J.M., Skums, P., Dahal, S., Castillo-Garsow, C., Espinoza, B., Brizuela, N.G., Saenz, R.A., **Kirpich, A.**, Luo, R. and Srivastava, A., Gutierrez, H, Garcia Chan, N., Bento, A. I., Jimenez-Corona, M.-E., Chowell, G., Transmission dynamics and forecasts of the COVID-19 pandemic in Mexico, March-December 2020. *PIOS ONE* 2021 Jul 21;16(7):e0254826. PMID:

14. **Kirpich A.\***, Koniukhovskii, V.\*, Shvartc, V., Skums, P., Weppelmann, T.A., Imyaninov, E., Semyonov, S., Barsukov, K. and Gankin, Y., Development of an interactive, agent-based local stochastic model of COVID-19 transmission and evaluation of mitigation strategies illustrated for the state of Massachusetts, USA. [\*Equal Contribution] *PLOS ONE* 2021 Feb 17;16(2):e0247182. PMID: 33596247 PMCID: PMC7888623 DOI: 10.1371/journal.pone.0247182

13. Norris, M.H., **Kirpich, A.**, Bluhm, A.P., Zincke, D., Hadfield, T., Ponciano, J.M. and Blackburn, J.K., Convergent evolution of diverse *Bacillus anthracis* outbreak strains toward altered surface oligosaccharides that modulate anthrax pathogenesis. *PLOS Biology*, 2020 Dec 28;18(12):e3001052. PMID: 33370274 PMCID: PMC7793302 DOI: 10.1371/journal.pbio.3001052

12. Roosa K., Lee Y., Luo R., **Kirpich A.**, Rothenberg R., Hyman J.M., Yan P. and Chowell G., Short-term Forecasts of the COVID-19 Epidemic in Guangdong and Zhejiang, China: February 13–23, 2020. *Journal of Clinical Medicine*. 2020 Feb 22;9(2):596. PMID: 32098289 PMCID: PMC7073898 DOI: 10.3390/jcm9020596

11. Roosa, K., Lee Y., Luo R., **Kirpich, A.**, Rothenberg, R., Hyman, J.M., Yan, P. and Chowell, G., 2020. Real-time forecasts of the COVID-19 epidemic in China from February 5th to February 24th, 2020. *Infectious Disease Modelling*. 2020 Jan 1;5:256-63. PMID: 32110742 PMCID: PMC7033348 DOI: 10.1016/j.idm.2020.02.002

10. **Kirpich A.\***, Ragavan M.\*, Bankson J., McIntyre L.M., Merritt M.E. Kinetic Analysis of Hepatic Metabolism Using Hyperpolarized Dihydroxyacetone. [\*Equal Contribution] *Journal of Chemical Information and Modeling*. 2019 Jan 2;59(1):605-14. PMID: 30602117 PMCID: PMC6533070 DOI: 10.1021/acs.jcim.8b00745

9. **Kirpich A.**, Ainsworth L., Wedow J., Newman J.R., Michailidis G., and McIntyre L.M. Variable selection in omics data: a practical evaluation of small sample sizes. *PLOS ONE* 2018 Jun 21;13(6):e0197910. PMID: 29927942 PMCID: PMC6013185 DOI: 10.1371/journal.pone.0197910

8. **Kirpich A.**, Ibarra M.A., Moskalenko O., Fear J.M., Gerken J, Mi X., Ashrafi A., Morse A., and McIntyre L. M. SECIMTools: A suite of Metabolomics Data Analysis Tools. *BMC Bioinformatics* 2018 Dec;19(1):1-1. PMID: 29678131 PMCID: PMC5910624 DOI: 10.1186/s12859-018-2134-1

7. Mir R.A., Weppelmann T.A., Teng L., **Kirpich A.**, Mauricio A.E., Driver J.D., and Jeong K.C. Colonization Dynamics of Cefotaxime Resistant Bacteria in Beef Cattle Raised Without Cephalosporin Antibiotics. *Frontiers in Microbiology* 2018 Mar 21;9:500. PMID: 29619015 PMCID: PMC5871660 DOI: 10.3389/fmicb.2018.00500

6. Patterson, R.E., **Kirpich A.**, Koelmel J.P., Kalavalapalli S, Morse A.M., Cusi K, Sunny N.E., McIntyre L.M., Garrett T.J., and Yost R.A. Improved experimental data processing for UHPLC–HRMS/MS lipidomics applied to nonalcoholic fatty liver disease. *Metabolomics* 2017 Nov DOI: 10.1007/s11306-017-1280-1

5. Ragavan M., **Kirpich A.**, Fu X., Burgess S.C., McIntyre L.M., Merritt M.E. A Comprehen-

sive Analysis of Myocardial Substrate Preference Emphasizes the Need For a Synchronized Fluxomic/Metabolomic Research Design. *Heart and Circulatory Physiology. American Journal of Physiology*. 2017 Jun 1;312(6):H1215-23. PMID: 28411229 PMCID: PMC5495932 DOI: 10.1152/ajp-heart.00016.2017

4. **Kirpich A.**, Weppelmann T.A., Yang Y., Morris J.G., Longini I.M. Controlling Cholera in the Ouest Department of Haiti Using Oral Vaccines. *PLOS Neglected Tropical Diseases* 2017 Apr 14;11(4):e0005482. PMID: 28410382 PMCID: PMC5406029 DOI: 10.1371/journal.pntd.0005482

3. **Kirpich A.** and Leary E. Superfund Locations and Cancer Incidence in Florida. *Statistics and Public Policy. ASA Journal*. 2017 Jan 1;4(1):1-9. DOI: 10.1080/2330443X.2016.1267599

2. **Kirpich A.**, Weppelmann T.A., Yang Y., Ali A., Morris J.G., Longini I.M. Cholera Transmission in Ouest Department of Haiti: Dynamic Modeling and the Future of the Epidemic. *PLOS Neglected Tropical Diseases* 2015 Oct 21;9(10):e0004153. PMID: 26488620 PMCID: PMC4619523 DOI: 10.1371/journal.pntd.0004153

1. Minarich L.A., **Kirpich A.**, Fiske L.M., Weinstein D.A. Bone Mineral Density in Glycogen Storage Disease Type Ia and Ib. *Genetics in Medicine. Nature Publishing Group*. 2012 Aug 1;14(8):737-41. PMID: 22481133 PMCID: PMC3884026 DOI: 10.1038/gim.2012.36

## IN PROGRESS/DRAFTS/SUBMITTED/UNDER REVIEW

pr5. Shishkin A, Kuzmin K, Chowell G, Gankin Y, Perez Tchernov A, Skums P, **Kirpich A.** Enhancing COVID-19 Incidence and Mortality Predictions Using Google Trends Data Across the 50 U.S. States and D.C. *Submitted for the review*.

pr4. Holty J-E., Person M.K., Binney S., Cook R., Mongkolrattanothai T., **Kirpich A.**, Schrodtt C.A., Bower W.A., Hendricks K.. Clinical characteristics and survival of hospitalized anthrax patients with pleural, pericardial, or peritoneal fluid collections. *Draft*.

pr3. Falvey J., Shishkin A., Skums P., Chowell G., **Kirpich A.** The Use of Auxiliary Data Sources in Forecasting Viral Respiratory Illness Hospitalizations: An Illustrative Example using COVID-19 Publicly Available Data. *Draft*.

pr2. Shishkin A., Falvey J., Chowell G., Skums P., **Kirpich A.** Retrospective Study of HCV Outbreak in Scott County, Indiana by Combining Genomic and Web Search Data. *Draft*.

pr1. Meador S.A., **Kirpich A.**, Chowell G. Forecasting HIV: The Past, Present, and Future, 1990-2030. *Draft*.

## OTHER PUBLICATIONS

ot4. Skums P., **Kirpich A.**, Baykal P.I., Zelikovsky A., and Chowell G. Global transmission network of SARS-CoV-2: from outbreak to pandemic. *MedRxiv*. 2020

ot3. **Kirpich A.**, Yang Y., Longini I.M., Halloran E. 2013. Simulation Studies for Dengue Transmission and Within-Host Immune Responses. *Joint Statistical Meetings Proceedings 2013, Section on Statistics in Epidemiology*. 4217-4221. 2013

ot2. Kirpich S. and **Kirpich A.** Integrity approach to analyzing of open systems. Joint Monograph: Harmonious development of systems - the third way of human development. *Institute of Creative Technologies Ltd.*, Odessa, Ukraine. ISBN: 978-966-8888-03-9. 2011.

ot1. Kirpich S., Chernomorets V., **Kirpich A.** Structural and temporal organization of systems. Joint Monograph: Harmonious development of systems - the third way of human development. *Institute of Creative Technologies Ltd.*, Odessa, Ukraine. ISBN: 978-966-8888-03-9. 2011.

## HONORS & AWARDS

Epidemics: 9<sup>th</sup> International Conference on Infectious Disease Dynamics - **Poster Award 2<sup>nd</sup> Prize. Nov 28 - Dec 1, 2023.** Publication Fee Waiver for One Publication in Epidemics Journal.

UF Informatics Institute Postdoctoral **One Year Fellowship** in **2016** calendar year.

Travel award and modules tuition at the 5<sup>th</sup> Summer Institute in Statistics and Modeling in Infectious Diseases (**SISMID**) Seattle, WA USA **July 8-24, 2013** (workshop, 3 Modules)

Travel award and modules tuition at the 4<sup>th</sup> Summer Institute in Statistics and Modeling in Infectious Diseases (**SISMID**) Seattle, WA USA **July 9-25, 2012** (workshop, 4 Modules) **\$500**

University of Florida **Grinter Fellowship** in **2011-2012** academic years (Department of Biostatistics) and in **2008-2010** years (Department of Statistics). The Grinter Fellowship is provided to prospective Ph.D. students by corresponding graduate programs to support their studies and research at the University of Florida. **\$4000** Annually.

**GlaxoSmithKline Scholar Award 2008.** This award was assigned annually to one outstanding first year graduate student of the Statistics Department at the University of Florida. **\$1000**

**Belarusian State University extended fellowships** in **2001-2006** academic years. The fellowships are provided to students with high GPA to support their studies at the Belarusian State University.

## FUNDED GRANTS AND CONTRACTS

Award Number: 2412914 04/2024 – 03/2026  
Title: **EAGER: IMPRESS-U: Modeling and Forecasting of Infection Spread in War and Post War Settings Using Epidemiological, Behavioral and Genomic Surveillance Data**  
PI: Alexander Kirpich, Ph.D., School of Public Health, Georgia State University  
Funder: NSF  
Role: **PI**  
Total Cost: \$298,582

Award Number: RIG-260 07/2024 – 06/2025  
Title: **Using AI Techniques to Uncover Transmission Dynamics and Hotspots from HIV Big Data**  
PI: Alexander Kirpich, Ph.D., School of Public Health, Georgia State University  
Funder: Georgia State University  
Role: **PI**  
Total Cost: \$20,000

Award Number: No Number 11/2023 – 10/2025  
Title: **Halal Research Fellowship: Food and Nutrition Security Among College Students**  
PI: Nida Izhar Shaikh, Ph.D., College of Nursing and Health Professions, Georgia State University  
Funder: Academy of Nutrition and Dietetics Foundation  
Role: **Biostatistician**  
Total Cost: \$180,000

Award Number: 1R01CA289552-01 04/2024 – 03/2029  
Title: **Communicating for Health Equity in Digital Environments**  
PI: Lucy Popova, Ph.D., School of Public Health, Georgia State University  
Funder: NIH  
Role: **CO-I**  
Total Cost: \$3,002,711

Award Number: 2R01CA239308-04A1 09/2023 – 08/2028  
Title: **Communicating about Nicotine and Differential Risks of Tobacco Products in Priority Populations**  
PI: Lucy Popova, Ph.D., School of Public Health, Georgia State University  
Funder: NIH  
Role: **CO-I**  
Total Cost: \$3,910,983

Award Number: U54CK000601 10/2010 – 09/2025  
Title: **Prevention Epicenter Of Emory And Collaborating Healthcare Facilities (Peach II)**  
PI: Lisa Casanova, Ph.D., School of Public Health, Georgia State University  
Funder: CDC-Emory (GSU Subcontract under Emory)  
Role: **CO-I**  
Total Cost: \$190,000

Award Number: INNU23000451 (Recently Transferred from GSU to UFL) 05/2023 – 04/2028  
Title: **Project HOPEFUL (Helping Older Persons Find Useful Links)**  
PI: Laura Shannonshouse, Ph.D., College of Education, University of Florida  
Funder: HHS-UFL (GSU Subcontract under UFL)  
Role: **CO-I (Subaward PI)**  
Total Cost: \$393,853

Award Number: No Number 08/2021 – 03/2026  
Title: **Postdoctoral Fellowship in Global Tobacco Research**  
PI: Lucy Popova, Ph.D., School of Public Health, Georgia State University  
Funder: CDC Foundation  
Role: **Biostatistician**  
Total Cost: \$1,597,609

Award Number: IISR-2021-200152 10/2022 – 06/2023  
Title: **Natural History of Growth in Pediatric Intestinal Failure**  
PI: Anita M. Nucci, Ph.D., College of Nursing and Health Professions, Georgia State University  
Funder: Takeda Pharmaceutical Company  
Role: **Biostatistician**  
Total Cost: \$115,526

Award Number: No Number 07/2022 – 06/2023  
Title: **Working Together to Enhance Preparedness against Pandemics - WE-PReP**  
PI: Richard Plemper, Ph.D., Institute for Biomedical Sciences, Georgia State University  
Funder: Georgia State University  
Role: **CO-I**  
Total Cost: \$300,000

## COMMITTEES & OTHER SERVICE

Committee: School of Public Health - Academic Program Review. (Spring 2025, Summer 2025)  
Role: **Committee Member**

Committee: School of Public Health Certificate in Applied Biostatistics. (Fall 2022, Spring 2023, Fall 2023)  
Role: **Committee Member**

Committee: Department of Population Health Sciences Comprehensive Assessment of Ph.D. Students. (Fall 2023)  
Role: **Committee Member**

Committee: School of Public Health Student Technology Fee Proposals. (Spring 2021, Spring 2022, Spring 2023, Spring 2024)  
Role: **Committee Member**

Committee: School of Public Health/Department of Population Health Sciences Ph.D. Graduate Admissions. (Spring 2020, Spring 2021, Spring 2022, Spring 2023, Spring 2024, Spring 2025)  
Role: **Committee Member**

Committee: School of Public Health MPH Graduate Admissions. (Spring 2020, Fall 2020, Fall 2021, Spring 2022, Fall 2022, Fall 2023, Spring 2024, Summer 2024, Fall 2024, Spring 2025)

Role: **Committee Member**

Service: iScience Journal Editorial Advisory Board (Since Fall 2022).

Role: **Editorial Board Member**

Service: School of Public Health Biostatistics Computer Lab (Since Fall 2021).

Role: **Lab Administrator (together with Karen Nielsen Ph.D.)**

Service: Peer-Reviewer for PLOS ONE, MDPI Systems, Epidemics, MDPI IJERPH, MDPI Health-care, Journal of Inverse and Ill-Posed Problems, Acta Biotheoretica, Heliyon and iScience

Role: **Paper Reviewer**

## STUDENTS

<b>Elise Caruso</b> Ph.D. Public Health-Health Promotion and Behavior. Dissertation Committee Chair.	Starting Fall 2025
<b>Israel Atobrhnan</b> Ph.D. Public Health-Epidemiology. Dissertation Committee Chair.	Starting Fall 2025
<b>Mehedi Hasan</b> Ph.D. Public Health-Epidemiology. Dissertation Committee Chair.	Starting Fall 2025
<b>Julia Falvey</b> Ph.D. Public Health-Epidemiology. Dissertation Committee Chair.	Ongoing
<b>Daniel Bowen</b> Ph.D. Public Health-Epidemiology. Dissertation Committee Chair.	Ongoing
<b>Kaustubh Wagh</b> Ph.D. Public Health-Epidemiology. Dissertation Committee Member.	Ongoing
<b>Sena Dzakuma</b> Ph.D. Public Health-Epidemiology. Dissertation Committee Member.	Ongoing
<b>Benjamin Redmond</b> Ph.D. Public Health-Epidemiology. Dissertation Committee Member.	Ongoing
<b>Seth Meador</b> Ph.D. Public Health-Epidemiology. Dissertation Committee Member.	Ongoing
<b>Alina Nemira</b> Ph.D. Computer Science. Dissertation Committee Member.	Summer 2025
<b>Myesha Iqbal</b> MPH Biostatistics. Thesis Committee Member.	Summer 2025
<b>Corey Hopwood</b> MPH Biostatistics. Capstone Committee Member.	Summer 2025
<b>Aleksandr Shishkin</b> Ph.D. Public Health-Epidemiology. Dissertation Committee Chair.	Spring 2025
<b>Amanda Bleichrodt</b> Ph.D. Public Health-Epidemiology. Dissertation Committee Member.	Spring 2025
<b>Jimin Son</b> MPH Biostatistics. Capstone Committee Chair.	Spring 2025

<b>Ji Kim</b> MPH Biostatistics. Capstone Committee Chair.	Spring 2025
<b>Harry Cole</b> MPH Biostatistics. Capstone Committee Member.	Spring 2025
<b>Akshay Juyal</b> Ph.D. Computer Science. Dissertation Committee Member.	Fall 2024
<b>Zainab Alonge</b> MS Health Sciences-Nutrition. Thesis Committee Member.	Fall 2024
<b>Valentina Paralitci</b> MPH Biostatistics. Thesis Committee Chair.	Summer 2024
<b>Khang Nguyen</b> MPH Biostatistics. Capstone Committee Chair.	Summer 2024
<b>Zenobia Roberts-Harley</b> MPH Epidemiology. Thesis Committee Member.	Spring 2024
<b>Victoria Gallaher</b> MPH Biostatistics. Capstone Committee Chair.	Spring 2024
<b>Mahmud Sheku</b> MPH Epidemiology. Thesis Committee Member.	Spring 2024
<b>Jacy Donaldson Harrell</b> MPH Biostatistics. Capstone Committee Chair.	Spring 2024
<b>Sarah Beharry</b> MPH Biostatistics. Thesis Committee Member.	Fall 2023
<b>Gabriel Rainisch</b> Ph.D. Public Health-Epidemiology. Dissertation Committee Member.	Fall 2023
<b>Reisha Rhodenbaugh</b> MPH Biostatistics. Capstone Committee Chair.	Fall 2023
<b>Meosha Simpson</b> MPH Epidemiology. Thesis Committee Member.	Fall 2023
<b>Jha'Meisheia Griffin</b> MPH Biostatistics. Capstone Committee Chair.	Spring 2023
<b>Pema Lhewa</b> MPH Epidemiology. Capstone Committee Chair.	Spring 2023
<b>Chen Yang</b> BS Biology. Mathematics. Supervised Research.	Summer 2022
<b>Sophie Binney</b> MPH Epidemiology. Capstone Committee Chair.	Summer 2022
<b>Amna Tariq</b> Ph.D. Public Health-Epidemiology. Dissertation Committee Member.	Spring 2022

## CONFERENCES AND TALKS

**Kirpich A.**, Shishkin A., Lhewa P., Adeniyi E., Norris M., Chowell G., Gankin Y., Skums P., Perez Tchernov A. Clustering-Based Methodology for Comparing Multi-Characteristic Epidemiological Dynamics with Application to COVID-19 Epidemiology in Europe. (poster) *ITISE 2025 – The 11th International Conference on Time Series and Forecasting*, July 2025, Grand Canaria, Spain

Kirichenko L., Yakovlev S., Matsyi O., **Kirpich A.** Estimation and LSTM-Based Detection. (poster) *ITISE 2025 – The 11th International Conference on Time Series and Forecasting*, July 2025, Grand Canaria, Spain

Chumachenko T., **Kirpich A.**, Skums P., Chowell G., Zelikovsky A., Yakovlev S., Chumachenko D. Waterborne Disease Risks in Conflict Zones: Analysis of Hepatitis A Dynamics. *Medical Biodefense Conference 2025*, April 2025, Munich, Germany

Yakovlev S., **Kirpich A.**, Kirichenko L., Matsyi O., Chumachenko T. Solving location-allocation problem for mobile medical facilities using predictive analytics. *21st ESICUP Meeting* April 2025, Bordeaux-Cestas, France

**Kirpich A.**, Chumachenko D., Chumachenko T., Yakovlev S., Zelikovsky A., Chowell G., Skums P. The study of the effects of the full-scale Russian-Ukrainian war on the epidemiological situation and respiratory and intestinal diseases in the Kharkiv region of Ukraine from 2022 to 2024. *ICCABS 2024 - 13th International Conference on Computational Advances in Bio and Medical Sciences*, January 2025, Atlanta, GA, USA

Nemira A., Skums P., **Kirpich A.** Phylodynamics Analysis of HIV Epidemic History in Belarus in 1987-2022. *ICCABS 2024 - 13th International Conference on Computational Advances in Bio and Medical Sciences*, January 2025, Atlanta, GA, USA

Shishkin A., Kuzmin K., Skums P., Chowell G., **Kirpich A.** The Use of Google Trends Data to Improve COVID-19 Incidence and Mortality Predictions Over Time in the 50 States of the USA and the District of Columbia. *ICCABS 2024 - 13th International Conference on Computational Advances in Bio and Medical Sciences*, January 2025, Atlanta, GA, USA

**Kirpich A.**, Chumachenko D., Chumachenko T., Yakovlev S., Zelikovsky A., Chowell G., Skums P. The study of the effects of the full-scale Russian-Ukrainian war on the epidemiological situation and respiratory and intestinal diseases in the Kharkiv region of Ukraine from 2022 to 2024 (poster) *MIDAS 2024 - Models of Infectious Disease Agent Study*, November 2024, Washington, DC, USA

Nucci A., Bashaw H., **Kirpich A.**, Rudolph J. Growth after Weaning from Parenteral Nutrition in Children Post-Intestinal Transplant. *13th International Pediatric Intestinal Failure and Rehabilitation Symposium*, September 2024, Pittsburgh, PA, USA

Nucci A., Rudolph J., **Kirpich A.**, Bashaw H. Growth in Children with Intestinal Failure on Parenteral Nutrition During the First Two Years after Diagnosis (poster). *13th International Pediatric Intestinal Failure and Rehabilitation Symposium*, September 2024, Pittsburgh, PA, USA

**Kirpich A.**, Perez Tchernov A., Shishkin A., Lhewa P., Adeniyi E., Norris M., Chowell G., Gankin Y., Skums P. Clustering-Based Multi-Characteristic Comparative Analysis of COVID-19 Epidemiology in Europe *ICCABS 2023 - 12th International Conference on Computational Advances in Bio and Medical Sciences*, November 2023, Norman, OK, USA

Bleichrodt A., Luo R., **Kirpich A.**, Chowell G., Multi-model and ensemble forecasts in the context of the 2022-2023 Mpox outbreak in multiple countries, July 2022, through January 2023 (poster)

*Epidemics*<sup>9</sup> - *International Conference on Infectious Disease Dynamics*, December 2023, Bologna, Italy

**Kirpich A.**, Perez Tchernov A., Shishkin A., Lhewa P., Adeniyi E., Norris M., Chowell G., Gankin Y., Skums P. Comparative analysis of COVID-19 epidemiology in Europe: Insights based on country characteristics. (poster) *Epidemics*<sup>9</sup> - *International Conference on Infectious Disease Dynamics*, December 2023, Bologna, Italy

**Kirpich A.**, Shishkin A., Lhewa P., Yang C., von Fricken M., Norris M., Weppelmann T.A. An investigation of the seasonal relationships between meteorological factors, water quality and sporadic cases of Legionnaires' disease in Washington, DC (poster) *Epidemics*<sup>9</sup> - *International Conference on Infectious Disease Dynamics*, December 2023, Bologna, Italy

**Kirpich A.**, Perez Tchernov A., Shishkin A., Lhewa P., Adeniyi E., Norris M., Chowell G., Gankin Y., Skums P. Comparative analysis of COVID-19 epidemiology in Europe: Insights based on country characteristics. (poster) *MIDAS 2023 - Models of Infectious Disease Agent Study*, October 2023, Atlanta, GA, USA

Shishkin A., Lhewa P., Yang C., Skums P., and **Kirpich A.** Excess Mortality in Ukraine During the Course of COVID-19 Pandemic in 2020-2022 (talk) *11<sup>th</sup> International Conference on Emerging Infectious Diseases (ICEID)*, September 2022, Atlanta, GA, USA

**Kirpich A.**, Shishkin A., Weppelmann T.A., Perez Tchernov A., Skums P., Gankin Y. Excess mortality in Belarus during the COVID-19 pandemic: the case of a country with limited non-pharmaceutical interventions and limited reporting. (poster) *Epidemics*<sup>8</sup> - *International Conference on Infectious Disease Dynamics*, December 2021, Bologna, Italy (held online due to COVID-19)

**Kirpich A.** Infectious Disease Modeling Challenges – COVID-19 Pandemic in the Modern World (online talk) *University of Florida Informatics Institute*, April 2020, Gainesville, FL USA

**Kirpich A.**, Solomon S.S., Mehta S.H., Cummings D.A.T. Assessing the impact of a community intervention targeting HIV transmission among PWID in multiple sites in India: insights from transmission models. (poster) *Epidemics*<sup>7</sup> - *International Conference on Infectious Disease Dynamics*, December 2019, Charleston, SC USA

Xinsong D., Manfio L., **Kirpich A.**, Hogan W., Garrett T. J., Lemas D. J. UMPIRE: A Reproducible Pipeline for Scalable Untargeted Metabolomics Data Analysis. (poster) *1<sup>st</sup> Annual Metabolomics Association of North America (MANA) Conference*, November 2019, Atlanta, GA USA

Lemas D.J., Xinsong D., Dado-Senn B., **Kirpich A.**, Francois M., Cacho N., Thompson L., Parker L., Neu J., Laporta J., Garrett T. The human and bovine milk metabolome at 2-weeks postnatal. (poster) *1<sup>st</sup> Annual Metabolomics Association of North America (MANA) Conference*, November 2019, Atlanta, GA USA

**Kirpich A.**, Merritt M. E., Michailidis G., McIntyre L. M. Variable selection in untargeted metabolomics data analysis. (speed talk and poster) *Joint Statistical Meeting 2016*, August 2016 Chicago, IL USA

McIntyre L. M., Patterson R., Garrett T., Morse A., **Kirpich A.**, Fear J., Ibarra M., Moskalenko O., Koelmel J. Metabolomic Data Analysis: Data Preprocessing. (talk) *Joint Statistical Meeting 2016*, August 2016, Chicago, IL USA

**Kirpich A.**, Weppelmann T. A., Yang Y., Morris J. G., Longini I. Cholera transmission in Ouest Department of Haiti: dynamic modeling and prediction. (poster) *Epidemics*<sup>5</sup> - *International Conference on Infectious Disease Dynamics*, December 2015, Clearwater Beach, FL USA

**Kirpich A.**, Weppelmann T. A., Yang Y., Morris J. G., Longini I. Cholera transmission in Ouest Department of Haiti: dynamic modeling and prediction. (talk) *ENAR Meeting 2015*, March 2015, Miami, FL USA

Leary E., **Kirpich A.** Cancer Incidence and Superfund Sites in Florida. (talk) *ENAR Meeting 2015*, March 2015, Miami, FL USA

**Kirpich A.**, Weppelmann T. A., Yang Y., Morris J. G., Longini I. Cholera transmission in Ouest Department of Haiti: dynamic modeling and prediction. (poster) *49<sup>th</sup> US-Japan Conference on Cholera and Other Bacterial Enteric Infections*, February 2015, Gainesville, FL USA

**Kirpich A.**, Yang Y., Longini I., Halloran E. Simulation Studies and Inference Challenges for Dengue Transmission and Within Host Immune Responses. (poster) *University of Florida - Research Day of the Emerging Pathogens Institute 2014*, February 2014, Gainesville, FL USA

**Kirpich A.**, Yang Y., Longini I., Halloran E. Simulation Studies and Inference Challenges for Dengue Transmission and Within Host Immune Responses. (poster) *Joint Statistical Meeting 2013*, August 2013, Montreal QC, Canada

## SYMPOSIUMS & WORKSHOPS

***ICCABS 2024 - Workshop*** January 2025  
Atlanta, GA USA  
Participant. Presenter.

***ICCABS 2023 - Workshop*** December 2023  
Norman, OK USA  
Participant. Presenter.

***2022 Quantitative Biosciences Workshop (QBioS - Georgia Tech)*** May 2022  
Atlanta, GA USA  
Participant.

***2022 Georgia Scientific Computing Symposium (GSCS - Georgia Tech)*** February 2022  
Atlanta, GA USA  
Participant.

***ACM-BCB Computational Advances in Molecular Epidemiology (CAME)*** September 2019  
Niagara Falls, NY USA  
Presenter. Participant.

***Florida ASA Chapter Meeting 2015*** February 2015  
Tampa, FL USA  
Participant.

***5<sup>th</sup> Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID)*** July 2013  
Seattle, WA USA  
Workshop participant. Took 3 Modules.

***4<sup>th</sup> Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID)*** July 2012  
Workshop participant. Took 4 Modules.

**University of Florida Workshop on New Directions in Monte Carlo Methods** February 2013  
Gainesville, FL USA  
Participant.

## RESEARCH EXPERIENCE

**Assistant Professor** August 2019 - Present  
Georgia State University, School of Public Health, Atlanta, Georgia USA  
Georgia State University, Department of Population Health Sciences, Atlanta, Georgia USA

**Postdoctoral Associate** November 2017 - June 2019  
University of Florida, Department of Biology, Gainesville, Florida USA  
University of Florida, Emerging Pathogens Institute, Gainesville, Florida USA

**Postdoctoral Associate/Postdoctoral Fellow** September 2015 - October 2017  
University of Florida, Southeast Center for Integrated Metabolomics, Gainesville, Florida USA  
University of Florida, Informatics Institute, Gainesville, Florida USA

**Research Assistant** August 2012 - August 2015  
University of Florida, Department of Biostatistics, Gainesville, Florida USA  
University of Florida, Emerging Pathogens Institute, Gainesville, Florida USA

## TEACHING EXPERIENCE

**Assistant Professor & Course Instructor** January 2020 - Present  
Georgia State University, School of Public Health, Atlanta, Georgia USA  
Georgia State University, Department of Population Health Sciences, Atlanta, Georgia USA  
PHPH7525 – Statistical Computing (taught 9 times)  
PHPH8820 – Categorical Data & Generalized Linear Models (taught 2 times)  
PHPH8890 – Stochastic Modeling for Public Health (taught 1 time)  
PHPH8910 – Directed Reading (taught 5 times)  
PHPH9820 – Biostatistical Methods II (taught 3 times)

**Graduate Teaching Assistant** August 2011 - August 2012  
University of Florida, Department of Biostatistics, Gainesville, Florida, USA

**Graduate Teaching Assistant & Course Instructor** May 2011 - June 2011  
University of Florida, Department of Statistics, Gainesville, Florida USA

**Graduate Teaching Assistant & Labs Instructor** August 2008 - April 2011  
University of Florida, Department of Statistics, Gainesville, Florida, USA

## INDUSTRIAL EXPERIENCE

### **Quality and Service Assurance Analyst**

June 2008 - August 2008

*Nature Publishing Group, New York City, New York, USA*

### **Marketing Analyst**

February 2008 - May 2008

*DADA Entertainment LLC (Sony BMG & DADA Joint Venture), New York City, New York, USA*

### **Quality and Service Assurance Analyst**

September 2006 - February 2008

*DADA Entertainment LLC (Sony BMG & DADA Joint Venture), New York City, New York, USA*

### **Quality Assurance Specialist**

March 2006 - September 2006

*ITransition Software Development Company, Minsk, Belarus*

## CONSULTING

### **Postdoctoral Consultant**

September 2015 - September 2017

*University of Florida, Genetics Institute*

### **Student Consultant**

August 2012 - August 2015

*University of Florida, Department of Biostatistics*

*University of Florida, Emerging Pathogens Institute*

## RELEVANT SKILLS

### **Programming Languages and Software**

R, SAS, C++, Python, ArcGIS,  $\text{\LaTeX}$

### **Language Skills**

English (fluent), Belarusian (native), Russian (native), German (basic).

## FORMAL TRAINING

### **Applied Coursework**

Spatial Statistics, Regression Analysis, Design of Experiments, Advanced Design and Analysis of Experiments, Categorical Data Analysis, Linear Models, Generalized Linear Models, Longitudinal Data Analysis, Applied Survival Analysis, Stochastic Modeling, Epidemiology, Biostatistical Consulting, Computational Methods.

### **Theoretical Coursework**

Statistical Inference, Probability Theory, Stochastic Processes, Limit Theory, Nonparametric Statistics, Advanced Survival Analysis, Abstract and Linear Algebra, Matrix Algebra, Mathematical Analysis, Functional Analysis, Analytical Geometry, Topology, Differential Geometry, Differential Equations.