

Alexander Kirpich Ph.D.

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Atlanta, GA 30303
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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

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, Nature Publishing Group* 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, Nature Publishing Group* 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, Nature Publishing Group* 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, Nature Publishing Group* 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
19. 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. *PLoS one* 2021 Jul 21;16(7):e0254826. PMID: 34288969 PMCID: PMC8294497 DOI: 10.1371/journal.pone.0254826
14. **Kirpich A.***, Koniukhovskii, V.*, Shvartc, V., Skums, P., Weppelmann, T.A., Imyanitov, 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 Comprehensive 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

DRAFTS/SUBMITTED/UNDER REVIEW

8. Bleichrodt A., Phan A., Luo R., **Kirpich A.**, Chowell G.. StatModPredict: a user-friendly R-Shiny interface for fitting and forecasting with statistical models. *Submitted for the review.*
7. **Kirpich A.**, Shishkin A, Lhewa P, Adeniyi EA, Norris M, Chowell G, Gankin Y, Skums P, Perez Tchernov A. Clustering-Based Multi-Characteristic Comparative Analysis of COVID-19 Epidemiology in Europe. *Submitted for the review.*
6. 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.*
5. **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. *Submitted for the review.*
4. Holty J-E., Person M.K., Binney S., Cook R., Mongkolrattanothai T., **Kirpich A.**, Schrodte C.A., Bower W.A., Hendricks K.. Clinical characteristics and survival of hospitalized anthrax patients with pleural, pericardial, or peritoneal fluid collections. *Draft.*
3. 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.*
2. 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.*
1. Wagh K., **Kirpich A.**, Chowell G. The Future Diabetes Mortality: Challenges in Meeting the 2030 Sustainable Development Goal of Reducing Premature Mortality from Diabetes. *Draft.*

OTHER PUBLICATIONS

4. Skums P., **Kirpich A.**, Baykal P.I., Zelikovskiy A., and Chowell G. Global transmission network of SARS-CoV-2: from outbreak to pandemic. *MedRxiv.* 2020
3. **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
2. 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.

1. 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: 9th International Conference on Infectious Disease Dynamics - **Poster Award 2nd 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 5th Summer Institute in Statistics and Modeling in Infectious Diseases (**SISMID**) Seattle, WA USA **July 8-24, 2013** (workshop, 3 Modules) **\$500**

Travel award and modules tuition at the 4th 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 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)

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 (Spring 2020, Spring 2021), MDPI Systems (Spring 2020), Epidemics (Spring 2020, Spring 2021), MDPI IJERPH (Fall 2020, Fall 2021, Fall 2022), MDPI Healthcare (Fall 2020), Journal of Inverse and Ill-Posed Problems (Fall 2021), Acta Biotheoretica (Spring 2021), Heliyon (Fall 2022) and iScience (Fall 2022)

Role: **Paper Reviewer**

STUDENTS

Julia Falvey

Ph.D. Student. Dissertation Committee Chair.

Ongoing

Daniel Bowen Ph.D. Student. Dissertation Committee Chair.	Ongoing
Shishkin Aleksandr Ph.D. Student. Dissertation Committee Chair. Joint Publications.	Spring 2025
Jimin Son MPH Student. Capstone Committee Chair.	Spring 2025
Ji Kim MPH Student. Capstone Committee Chair.	Spring 2025
Cole Harry MPH Student. Capstone Committee Member.	Spring 2025
Hopwood Corey MPH Student. Capstone Committee Member.	Spring 2025
Zainab Alonge MS Student. Thesis Committee Member.	Fall 2024
Paralitci Valentina MPH Student. Thesis Committee Chair.	Summer 2024
Nguyen Khang MPH Student. Capstone Committee Chair.	Summer 2024
Roberts-Harley Zenobia MPH Student. Thesis Committee Member.	Spring 2024
Gallaher Victoria MPH Student. Capstone Committee Chair.	Spring 2024
Sheku Mahmud MPH Student. Thesis Committee Member.	Spring 2024
Donaldson Harrell Jacy MPH Student. Capstone Committee Chair.	Spring 2024
Beharry Sarah MPH Student. Thesis Committee Member.	Fall 2023
Rainisch Gabriel Ph.D. Student. Dissertation Committee Member.	Fall 2023
Rhodenbaugh Reisha MPH Student. Capstone Committee Chair.	Fall 2023
Simpson Meosha MPH Student. Thesis Committee Member.	Fall 2023
Griffin Jha'Meisheia MPH Student. Capstone Committee Chair.	Spring 2023
Lhewa Pema MPH Student. Capstone Committee Chair. Joint Publications.	Spring 2023
Chen Yang Undergraduate Student. Collaboration. Joint Publication.	Summer 2022
Binney Sophie MPH Student. Capstone Committee Chair.	Summer 2022

CONFERENCES AND TALKS

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) *Epidemics⁹ - 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) *Epidemics⁹ - 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) *Epidemics⁹ - 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) *11th 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) *Epidemics⁸ - 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) *Epidemics⁷ - 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) *1st 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) *1st 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) *Epidemics⁵ - 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) *49th 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.

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

4th 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

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
University of Florida, Genetics Institute

September 2015 - September 2017

Student Consultant
University of Florida, Department of Biostatistics
University of Florida, Emerging Pathogens Institute

August 2012 - August 2015

RELEVANT SKILLS

Programming Languages and Software

R, SAS, C++, Python, ArcGIS, L^AT_EX

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.