

Precision Health (T32) Methodology Summer Boot Camp

August 8 - 11, 2022
A virtual event

Precision Health Methodology Summer Bootcamp 2022 Program Resource Guide

All times are Central Time.
This was an Online Event via Zoom
August 8th through the 11th, 9am to 4pm CT daily

Please [CLICK HERE](#) to access the UT School of Nursing T32 Precision Health Methodology Summer Boot Camp 2021.

Day/Date/Section	Central Time Zone	Topics/Speakers
August 8, 2022 Day 1 Facilitated by Drs. Miyong Kim and Bo Xie	9:00am-9:05am	Welcome and Opening Remarks Dr. Miyong Kim
	9:05am-10:05am	<i>The Now of Nursing Science: The Here, The Now, The Path Forward</i> Keynote Speaker – Dr. Usha Menon Resources <ul style="list-style-type: none"> • https://www.ninr.nih.gov/aboutninr/ninr-mission-and-strategic-plan/directors-overview • https://www.ninr.nih.gov/aboutninr/ninr-mission-and-strategic-plan/research-framework • https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3863701/ • https://www.insightintodiversity.com/the-enrollment-crisis-for-men-continues-to-worsen/ • https://www.sciencedirect.com/science/article/pii/S0165178119307541
	10:05am-11:05am	<i>Wireless e-tattoos for Mobile Health</i> Speaker: Dr. Nanshu Lu
	11:05am-11:15am	10 min. BREAK
	11:15am-12:15pm	<i>Data Visualization Techniques to Examine Patterns in Chronic Disease Management</i> Speaker: Dr. Karen Monsen Resources <ul style="list-style-type: none"> • https://www.autodesk.com/research/publications/same-stats-different-graphs • https://www.virtualartacademy.com/three-components-of-color/
	12:15pm-1:15pm	1 hr. LUNCH

1:15pm-2:15pm	<p><i>Harnessing the Power of Artificial Intelligence to Transform Precision Health</i> Speaker: Dr. Zhe He</p> <p>Resources</p> <ul style="list-style-type: none"> • https://www.healthcarediver.com/news/us-healthcare-spending-estimated-to-grow-to-36t-this-year/555658/ • https://www.cdc.gov/genomics/about/precision_med.htm • https://www.potentiaco.com/what-is-machine-learning-definition-types-applications-and-examples/ • https://www.healthit.gov/data/quickstats/office-based-physician-electronic-health-record-adoption
2:15pm-2:30pm	15 min. BREAK
2:30pm-4:00pm	<p><i>Small group discussions/breakout rooms to discuss what was learned and how it will be applied.</i></p> <p>Facilitator: Jacki Hecht</p>
4:00pm	Closing Remarks by Dr. Bo Xie

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<p>August 9, 2022</p> <p>Day 2</p> <p><i>Facilitated by Dr. Michelle Wright</i></p>	Intro to topics for the day 5 mins	Today we will cover characterizing valid and sensitive biomarkers to enhance personalized interventions for people with multiple chronic conditions (MCC) and potential use of genetic and genomic data in self-management research.
	9:00am-10:45am	<p><i>Fundamentals of Genetics and Genomic Data</i> Speaker: Dr. Michelle Wright</p> <p>Resources</p> <ul style="list-style-type: none"> • http://hyperphysics.phy-astr.gsu.edu/hbase/Biology/gene.html • https://www.technologynetworks.com/genomics/lists/what-are-the-key-differences-between-dna-and-rna-296719 • https://www.genome.gov/genetics-glossary/Mendelian-Inheritance • https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1002822 • https://www.creative-proteomics.com/services/untargeted-metabolomics.html
	10:45am-11:00am	15 min. BREAK
	11:00am-12:00pm	<i>Analytic Methods for Precision Health Research Questions</i> Speaker: Dr. Shelli Kesler
	12:00pm-12:45pm	45 min. LUNCH
	12:45pm-1:45pm	<p><i>Defining and Improving Cognitive Outcomes for Cancer Survivors</i></p> <p>Speaker: Dr. Ashley Henneghan</p>
	1:45pm- 2:45pm	<p><i>Applying Epigenetics in Nursing Science</i> Speaker: Dr. Hudson Santos</p> <p>Resources</p> <ul style="list-style-type: none"> • https://www.sciencedirect.com/science/article/abs/pii/S002239562200067X?via%3Dihub • https://www.sciencedirect.com/science/article/pii/S2352289520300631 • https://www.sciencedirect.com/science/article/abs/pii/S030645301830386X • https://www.sciencedirect.com/science/article/abs/pii/S0165032720332833
	2:45pm-3:00pm	15 min. BREAK

3:00pm to 4:00pm	<p><i>Data-Informed Women's Health: Data Science and the Microbiome</i> Speaker: Dr. Caitlin Dreisbach</p> <p>Resources</p> <ul style="list-style-type: none"> Dreisbach, C., & Koleck, T. A. (2020). The State of Data Science in Genomic Nursing. <i>Biological research for nursing</i>, 22(3), 309–318. https://doi.org/10.1177/1099800420915991 https://theconversation.com/gender-bias-in-medicine-and-medical-research-is-still-putting-womens-health-at-risk-156495 https://github.com/johnmcculloch/JAMS_BW
4:00pm	Closing Remarks by Dr. Wright

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August 10, 2022 Day 3 <i>Facilitated by Drs. Beth Heitkemper and Bo Xie</i>	Intro to topics for the day 5 mins	This day will focus on innovative strategies to personalize interventions for dynamic health behaviors. It will include presentations on adaptive study designs like just-in-time adaptive interventions, data collection through passive and active sensors and ecological momentary assessment, the management of data in recommender systems and digital tools, and innovative data analysis methods. The day will culminate in a workshop that allows participants to practice these skills by developing their own decision rules for an adaptive intervention for various health conditions.
	9:00am-10:00am	<p><i>Machine Learning for Intelligent Patient Care</i> Speaker: Dr. Daqing He</p> <p>Resources</p> <ul style="list-style-type: none"> https://aws.amazon.com/blogs/startups/adapting-deep-learning-to-medicine-with-behold-ai/ https://pubmed.ncbi.nlm.nih.gov/31015651/ https://www.sciencedirect.com/science/article/pii/S2666603022000069
	10:00am-11:00am	<p><i>Text Analysis in the Health Sciences</i> Speaker: Dr. James Pennebaker</p> <p>Resources</p> <ul style="list-style-type: none"> https://books.google.com/ngrams https://trends.google.com/trends/?geo=US https://liwc.app/
	11:00am-11:15am	15 min. BREAK
	11:15am-12:15pm	<p><i>Timely and Tailored: Precision Interventions for Health Behavior Change</i> Speaker: Dr. Emily Hebert</p>
	12:15pm-1:00pm	45 min. LUNCH
	1:00pm-2:00pm	<p><i>Advanced Digital Tools & Research Methodologies for Understanding Health Behaviors</i> Speaker: Dr. Stephanie Goldstein</p> <p>Resources</p> <ul style="list-style-type: none"> https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4732571/
	2:00pm-4:00pm	<p><i>Developing Decision-Rules for Adaptive Interventions: An EMA Exemplar and Workshop</i> Speakers: Drs. Beth Heitkemper & Emily Hebert</p> <p>Resources</p> <ul style="list-style-type: none"> https://docs.google.com/document/d/1yE5wl0w6lc-IO1HxDp6LYRUqZ-c0mpJ-oUSdM01YUU/edit https://docs.google.com/document/d/1_nxNVklS0HJJn-QvrsBLT9CAgfflxSOBz0jUSALf7Es/edit
	4:00pm	Closing Remarks by Dr. Heitkemper

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<p>August 11, 2022</p> <p>Day 4 Facilitated by Drs. Bo Xie, Beth Heitkemper and Sharon Horner</p>	Intro to topics for the day 5 mins.	<p>We will start the day with topics that cover conducting socially responsible research in precision health and data science (social justice informatics). Then we will provide overviews of funding mechanisms, a virtual field trip to highlight NIH grant writing resources and guidelines, and a panel presentation of strategies (lessons learned) in developing and writing different grant proposals including career development and research proposals.</p> <p>Resources</p> <ul style="list-style-type: none"> • https://www.wbur.org/onpoint/2022/05/25/smarter-health-artificial-intelligence-and-the-future-of-american-health-care
	9:00am- 10:00am Dr. Xie Introduction	<p><i>Ethical AI and Responsible Computing</i> Speaker: Dr. Kenneth Fleischmann</p> <p>4Resources</p> <ul style="list-style-type: none"> • https://time.com/5520558/artificial-intelligence-racial-gender-bias/
	10:00am-11:00am Dr. Heitkemper Introduction	<p><i>Building an Artificial Intelligence-Assisted Identification of Child Abuse and Neglect in Hospital Settings with Implications for Bias Reduction and Future Interventions</i> Speaker: Dr. Aviv Landau</p>
	11:00am-11:15am	15 min BREAK
	11:15am-12:15pm	<p><i>NIH Program Officers Panel Discussion Strategies for finding appropriate grant mechanisms for Precision Health and Self-Management Science</i> Moderators: Dr. Miyong Kim/ Jacki Hecht Panelists: Drs. David Banks, Erin Iturriaga, Kristopher Bough, Holly Nicastro</p> <p>Resources</p> <ul style="list-style-type: none"> • Strategic Plan for NIH Nutrition Research: https://dpcpsi.nih.gov/onr/strategic-plan • Parent announcements: https://grants.nih.gov/grants/guide/parent_announcements.htm • NIH Matchmaker https://reporter.nih.gov/ • https://health.ucdavis.edu/nursing/NurseLeaderFellows/index.html • https://seed.nih.gov/small-business-funding/find-funding/sbir-sttr-funding-opportunities • https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.600-phs-assignment-request-form.htm • https://dpcpsi.nih.gov/onr/strategic-plan • https://www.nsf.gov/pubs/2021/nsf21530/nsf21530.htm
	12:15pm-1:00pm	45 min. LUNCH
	1:00pm – 2:00pm	<p><i>Funding Mechanisms- Building a Successful Program of Research with Extramural Funding</i> Speaker: Dr. Sharon Horner</p> <p>Resources</p> <ul style="list-style-type: none"> • https://fconline.foundationcenter.org/ • https://www.rwjf.org/ • https://www.sigmanursing.org/advance-elevate/research/research-grants • https://snrs.org/research-grants-funding-program/research-funding/ • https://researchtraining.nih.gov/programs/career-development • https://grants.nih.gov/funding/index.htm
	2:00pm-2:30pm	<p><i>Field Trip: Resources for Developing & Writing Grant Proposals</i> Speaker: Dr. Sharon Horner</p> <p>Resources</p> <ul style="list-style-type: none"> • https://sigmapubs.onlinelibrary.wiley.com/doi/abs/10.1111/j.1547-5069.1990.tb00168.x • https://www.amazon.com/Writing-Winning-Proposals-Nurses-Professionals/dp/0826122728
	2:30pm- 2:45pm	15 min. BREAK

2:45pm- 3:45pm	<p><i>Grant Writing Panel Discussion Winning Strategies from Successful Proposals</i></p> <p>Moderator: Dr. Sharon Horner</p> <p>Panelists: Drs. Ashley Henneghan (F31), Michelle Wright (K01), Heather Cuevas (R21), Shelli Kesler (DP2) Kavita Radhakrishnan (R01)</p> <p>Resources</p> <ul style="list-style-type: none">• https://www.goodreads.com/book/show/8049401-the-grant-application-writer-s-workbook--national-institutes-of-health
3:45pm - 4:00pm	Closing Remarks by Dr. Horner