

Ivo D. Dinov, PhD

Henry Philip Tappan Collegiate Professor
Professor, Departments of Computational Medicine & Bioinformatics
Professor, Department of Health Behavior & Biological Sciences
Faculty, Michigan Center for Applied and Interdisciplinary Mathematics
Director, Statistics Online Computational Resource
Director, Michigan Graduate Data Science Certificate Program
Director, Michigan Biomedical Informatics and Data Science Training Program
Chair, Department of Systems, Populations, and Leadership
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EDUCATION AND TRAINING

1987-1991	BS	Mathematics & Computer Science, University of Sofia, Sofia, Bulgaria
1991-1993	MS	Mathematics, Michigan Technological University, MI (Advisor: Ken Kuttler)
1996-1998	Predoc	Industrial Engineering, Florida State University, FL (Advisor: Samuel Awoniyi)
1995-1998	MS	Statistics, Florida State University, FL
1993-1998	PhD	Mathematics, Florida State University, FL (Advisors: De Witt Sumners & Fred Huffer)
1998-2000	Postdoc	Neuroscience, UCLA, CA (Mentors: Arthur W. Toga & Jan de Leeuw)

CERTIFICATION AND LICENSURE

Strategies and Tactics for Recruiting to Improve Diversity and Excellence (STRIDE), recertified 2022
Mentor Training for Clinical and Translational Researchers, University of Wisconsin-Madison's Center for the Improvement of Mentored Experiences in Research (2021)
Collaborative research training (CITI Collaborative Institutional Training Initiative)
Training in regulatory and responsible conduct of research (Program for Education and Evaluation in Responsible Research and Scholarship, PEERs)
Michigan research administration training
DEI training (Michigan Diversity, Equity & Inclusion course)
Biomedical Responsible Conduct of Research
Good Clinical Practice
HIPAA
Human Research-Biomedical Researchers
PRIME Training in Evidence-Based Simulations in Practice
Sexual Harassment
Treatment Strategies for Women with Coronary Artery Disease (CAD)
University of California Ethical Values and Conduct
American Heart Association Basic Life Support (CPR and AED)

ACADEMIC, ADMINISTRATIVE, AND CLINICAL APPOINTMENTS

1995-Present	Member of the American Mathematical Society (AMS)
1998-2000	NIH Postdoctoral Fellow, Department of Neurology, UCLA School of Medicine
2000-2002	Visiting Assistant Professor, Program in Computing, UCLA Mathematics
2001-2008	Assistant Professor of Statistics, UCLA College of Arts & Sciences
2002-Present	Director, Statistics Online Computational Resource (SOCR)
2004-2013	Chief Operations Officer, Center for Computational Biology (CCB), School of Medicine
2008-2013	Associate Professor of Statistics, UCLA College of Arts & Sciences
2008-Present	Co-Director of the multi-institutional Probability Distributome Initiative

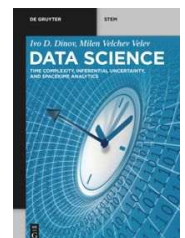
2013-2017	Associate Professor, University of Michigan, Health Behavior and Biological Sciences
2015-2017	Associate Professor, University of Michigan, Computational Medicine & Bioinformatics
2014-2020	Director, Biostatistics and Informatics Core, Michigan Nutrition Obesity Research Center
2014-Present	Co-Director, Center for Complexity and Self-management of Chronic Disease (CSCD)
2014-2019	Director, Biostatistics Core, Michigan Udall Center for Excellence in Parkinson's Disease
2015-2022	Associate Director, Education & Training, Michigan Institute for Data Science (MIDAS)
2015	Chair, Brain Canada Foundation Study Section, Platform Support Grants
2015-Present	Member of the American Statistical Association (AmStat)
2016-Present	Faculty, Michigan Center for Applied and Interdisciplinary Mathematics (MCAIM)
2016-Present	Member of the International Association for Statistical Education (IASE)
2016-Present	<i>Elected Member</i> of the International Statistical Institute (ISI)
2016-Present	Core faculty, Michigan Interdepartmental Neuroscience Graduate Program (NGP)
2016-Present	Core faculty, University of Michigan Program In Biomedical Sciences (PIBS)
2016-Present	Core faculty, Michigan Center for Applied and Interdisciplinary Mathematics (MCAIM)
2017-Present	Professor, University of Michigan, Health Behavior & Bio Sciences, School of Nursing
2017-Present	Professor, University of Michigan, Computational Medicine & Bioinformatics
2018-2021	Vice Chair, Department of Health Behavior & Biological Sciences, School of Nursing
2019-2021	Associate Director, Michigan Interdepartmental Neuroscience Graduate Program (NGP)
2021-Present	Member of the American Physical Society (APS)
2021-Present	(Inducted) Honorary Member of the Sigma Theta Tau International Honor Society
2022-2022	Interim Associate Director, Precision Health (PH), Education and Training
2022-Present	Chair, Department of Systems, Populations, and Leadership
2022-Present	Editor, Journal Neuroinformatics
2024-Present	Henry Phillip Tappan Collegiate Professor

RESEARCH INTERESTS

1. Spacekime analytics, mathematical representation, statistical modeling, computational algorithms for complex temporal observations.
2. Development of advanced mathematical techniques for representation, scientific computing, statistical analysis and interactive visualization of complex, high-dimensional, multisource, and multimodal data.
3. Artificial intelligence (AI), machine learning (ML), and data science methods for joint human-machine augmented decision-making
4. Manipulation and longitudinal analysis of heterogeneous Big Data in healthy and pathological populations.
5. Development of interactive web-based resources for methods-learning, data-modeling, and statistical-computing.
6. Open-science implementation, validation, and sharing of trustworthy, ethical, and high-throughput graphical pipeline workflows for biomedical and biosocial applications.

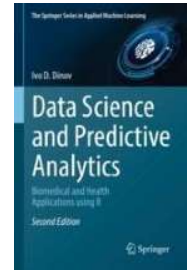
CONTRIBUTIONS TO SCIENCE

1. **Spacekime Analytics:** My group pioneered a novel extension of 4D spacetime where longitudinal data can be represented in terms of complex 2D time (*kime*). The corresponding 5D spacekime manifold generalizes the classical time-series (curves) to kime-series, which are represented geometrically as surfaces. High-dimensional data transformed into spacekime can be modeled, interpreted, analyzed, and predicted using advanced spacekime analytical methods. This new approach unifies quantum mechanics, data science, and artificial intelligence methods.



Dinov, ID and Velev, MV (2021) *Data Science: Time Complexity, Inferential Uncertainty, and Spacekime Analytics*, De Gruyter (STEM Series), Berlin/Boston, ISBN 9783110697803/3110697807.

2. Data Science and Predictive Analytics: My group is continuously developing advanced computational protocols, machine learning tools, predictive analytics, and high-throughput modeling techniques, for managing, interrogating, analyzing, visualizing, and interpreting large amounts of heterogeneous, multisource, incomplete, incongruent and multiscale data. For example, the second edition of my Data Science and Predictive Analytics textbook (1) covers basic and advanced, classification and regression, supervised and unsupervised, model-based and model-free techniques, and mathematical and computational aspects of data science.



Recently, we validated a diagnostic decision support protocol for diagnostic prediction of Parkinson's disease using imaging, genetics, clinical, physiologic, and cognitive data of over 600 patients (2). The SOCR team examines the pros and cons of Big Healthcare Data by testing dozens of advanced techniques in a variety of biomedical applications and concluded the importance of team-driven scientific discovery in translational healthcare research (3). We recently presented the foundation of a new compressive big data analytics (CBDA) framework for representation, modeling, and inference of large, complex, and heterogeneous datasets (4). In the era of extremely large and complex datasets, sharing, aggregation, harmonization, and joint modeling of complex datasets is critical. We developed a novel method for statistical obfuscation of sensitive information that provides a unique mechanism for sharing and merging of data that can be utilized for developing and translating advanced mathematical models, statistical techniques, and computational algorithms to tackle challenging biomedical and health problems (5).

- (1) Dinov, ID, 2023. Data Science and Predictive Analytics: Biomedical and Health Applications using R, 2nd edition, Springer Series in Applied Machine Learning, ISBN 978-3-031-17482-7.
 - Dinov, ID (2018). Data Science and Predictive Analytics: Biomedical and Health Applications using R. 1st edition, Springer (ISBN 978-3-319-72346-4).
- (2) Gao C, Sun H, Wang T, Tang M, Bohnen NI, Müller MLTM, Herman, T, Giladi, N. Kalinin, A, Spino, C, Dauer, W, Hausdorff, JM, Dinov, ID. (2018) Model-based and Model-free Machine Learning Techniques for Diagnostic Prediction and Classification of Clinical Outcomes in Parkinson's Disease, Scientific Reports, 8(1):7129. doi: 10.1038/s41598-018-24783-4 2018.
- (3) Zhou, Y, Zhao, Zhou, N, Zhao, Yi, Marino, S, Wang, T, Sun, H, Toga, AW, Dinov, ID. (2019). Predictive Big Data Analytics using the UK Biobank Data, Scientific Reports, 9(1): 6012, DOI: 10.1038/s41598-019-41634-y.
- (4) Marino, S, Zhao, Y, Zhou, N, Zhou, Y, Toga, AW, Zhao, L, Jian, Y, Yang, Y, Chen, Y, Wu, Q, Wild, J, Cummings, B, Dinov, ID. (2020). Compressive Big Data Analytics: An ensemble meta-algorithm for high-dimensional multisource datasets, PLoS ONE, 15(8):e0228520, DOI: 10.1371/journal.pone.0228520.
- (5) Zhou, N., Wu, Q., Wu, Z., Marino, S., Dinov, ID. (2022) DataSifterText: Partially Synthetic Text Generation for Sensitive Clinical Notes, Journal of Medical Systems, 46(96):1-14, DOI: 10.1007/s10916-022-01880-6.

Research Output (Winter 2025) *	Metric	Value
	Number of Grants	36
	Total Grant Funding	\$62M
	Total Number of Pubs	299
	Citations	13,031
	h-index	61
	i10-index	152

* https://dimensions.umich.edu/discover/experts_publication?and_facet_profiles_author=957

* <https://scholar.google.com/citations?user=dyiqnocaaaaj>

GRANTS

This table summarizes my primary funded research, see Michigan Experts for complete past and current funding and publication profile https://experts.umich.edu/discover/featured_project?or_facet_profiles_author=957.

Grant ID	Title	Role	Notes
NIH/NIGMS T32GM141746	Biomedical Informatics and Data Science Training Program (BIDS-TP)	PI	2-year grad student appointments. Annually, 8-funded Fellows and 8 independently-supported Trainees are enrolled
NSF 1734853 2017-2021	Connectome mapping algorithms with application to community services for big data neuroscience	Co-PI (with Franco Pestilli, Lei Wang, Robert Henschel, Eleftherios Garyfallidis)	
NSF 2019-2025	BD Hubs: Collaborative Proposal: Midwest: Midwest Big Data Hub (MBDH): Building Communities to Harness the Data Revolution	Co-PI (with HV Jagadish and Brian Athey)	MBDH aims to coordinate current Big Data R&D activities in the Midwest region
NIH R01MH121079 2019-2025	Computational Examination of RDOC Threat & Reward Constructs in a Representative, Predominantly Low-Income, Longitudinal Sample at Increased Risk for Internalizing Disorders	PIs: Monk, Hyde, Mitchell Co-investigator	Data-driven analytics to investigate multilevel-multimodal models of Threat and Reward in a longitudinal cohort
NIH R01CA233487-01A1 2019-2025	Optimal Decision Making in Radiotherapy Using Panomics Analytics	PI: El Naqa Co-investigator	Prediction uncertainties in clinical decisions for real-time radiotherapy

ACTIVE

NIH/NIGMS T32GM141746 (Dinov/Sartor) 9/01/2021-8/31/2026 1.0 Academic
Biomedical Informatics and Data Science Training Program (BIDS-TP)

The overarching goal of the BIDS-TP is to train a cadre of data science-competent and computationally skilled biomedical scholars through development of an intellectually stimulating training environment and implementation of an effective competency-based curriculum. To enhance their scientific, clinical, and translational abilities, all BIDS-TP students will be trained in collecting, managing, processing, interrogating, and analyzing large amounts of complex high-dimensional biomedical information with rigor and transparency. Addressing these needs requires novel education and training programs implementing evidence-based approaches for high-quality research training, mentored research experiences, professional skills development, diverse, equitable, and inclusive biomedical research training opportunities.

Role: PI

NSF 1916425 (Jagadish, Dinov) 06/03/19 - 05/31/2025

The Midwest Big Data Hub (MBDH) coordinates regional and national Big Data activities including stakeholders in the twelve states of the Midwest Census region (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin) and six leading universities that support hundreds of researchers, technologists, and students. This hub provides a basis for collaboration and outreach that increases the potential for benefitting society.

Role: Co-PI

NIH/NIMH 1R01MH121079 (Monk, Mitchell, Hyde) 08/15/19-06/30/2025

Computational Examination of RDOC Threat and Reward Constructs in a Representative, Predominantly Low-Income, Longitudinal Sample at Increased Risk for Internalizing Disorders. \$7,400,000 (total)

Examine multisource/multimodal data structure in 1,000s of participants cross-sectionally and 213 participants longitudinally. Develop novel methods and protocols to harmonize, aggregate, cross-sectionally and longitudinally analyze, cluster, and visualize the high-dimensional datasets.

Role: Chair of Data Analytics Section

Dinov, Ivo

NIH/NCI 1R01CA233487 (El Naqa) 09/26/14– 07/31/2025
 Optimal Decision Making in Radiotherapy using Panomics Analytics. \$2,300,000 (total)
 Develop and quantitatively evaluate: (1) graph-based supervised machine learning algorithms for robust prediction outcomes before and during radiation therapy (RT); (2) deep reinforcement learning to dynamically optimize treatment adaptation; and (3) a user-centered software prototype for RT decision support, with the broader goal of building a comprehensive real-time framework for outcome modeling and response-based adaptation in RT.
 Role: Co-Investigator

COMPLETED

NIH/NINR P20NR015331 (PIs: Dinov/ Barton) 09/26/14– 07/31/2020
 Center for Complexity and Self-management of Chronic Disease (CSCD) \$1,112,416 (total)
 Center for Complexity and Self-management of Chronic Disease (CSCD) aims to advance the science of self-management (SM) by addressing complexity, including the study of complex multi-component interventions and SM for people with complex comorbid conditions. In addition, the Center will provide the infrastructure to facilitate interdisciplinary approaches and expand the pool of investigative teams who are equipped to successfully develop and implement externally funded programs of research in self-management. The Center theme is “Leveraging complexity to improve health outcomes through self-management.”
 Role: Co-Principal Investigator

NSF 1636840 (Gonzalez, Marcotte, Dinov) 09/01/16-12/30/2020
 Big Data Regional Spoke \$300,000
 This multi-institutional network will develop workflow standards for the growing area of research in data-intensive neuroimaging (e.g., MRI, PET, MEG, and NIRS), which typically includes additional clinical (e.g., cognitive assessment), demographic, genetic, and phenotypic data.
 Role: Co-Principal Investigator

UCLA Library 09/01/13-07/31/19 no effort
 (PI: Dinov) \$3,000 total direct costs
 The UCLA library award for development of new course materials (Statistics 13, Statistics for the Health and Life Sciences) as part of the UCLA Affordable Course Materials Initiative.
 Role: Principal Investigator

NIH 5R21MH092576-02 09/01/13 – 05/31/15 .62 academic
 (PI: Jovanovic, Emory) \$13,376 total
 Effects of cortisol suppression on fear-potentiated startle in trauma & PTSD. This study develops innovative tools to tease apart the relationship between the amygdala and the HPA axis in a human clinical population. HPA axis suppression and fear dysregulation coupled with the development of new fear conditioning paradigms provide an opportunity to interrogate the amygdala-HPA interactions to determine aspects of the neurobiological underpinnings of the pathology related to PTSD.
 Role: Site-Principal Investigator

NSF (PI: Dinov/Siegrist/Pearl) 09/01/10 - 09/30/14 .38 summer
 Probability Distributome Project \$600,000
 The Distributome Project (<http://distributome.org>) is an open-source, open content-development project for exploring, discovering, learning, and computational utilization of diverse probability distributions. Probability distributions are a special class of functions defined in terms of integrals of positive density functions.
 Role: Principal Investigator

NIH HG006508 (PI: Pienta/Athey) 10/01/13 - 12/31/14 .60 calendar
 John Hopkins University (PI: Athey) \$497,916
 Promoting Scientific Progress through Biomedical Research, Biomedical Informatics and the Development of Ontological and Biomedical Informatics Tools that enable Collaborative Biomedical Research.
 Role: Co-Investigator

NIH U24 RR25736 Kesselman (PI) 12/01/08-11/30/13
 Bio-Informatics Research Network Coordinating Center (BIRN-CC)
 The BIRN is organized as a large-scale collaboration between a distributed collection of neuroscientists and experts in computation. Working together, this is a powerful engine for scientific productivity. Taking this organization from its present framework and organizing it around a new means for the coordination of infrastructural activity under a new BIRN CC is the focus of this proposal.
 Role: Subcontract Investigator

NIH U24 RR026057 Rosen (PI) 09/30/09-07/31/13
 Collaborative Tools Support Network for the BIRN
 The goal of the BIRN Community Service Award is to disseminate the technologies, applications and expertise produced during the development of the Biomedical Informatics Research Network.
 Role: Operations Committee Member

NSF DUE 0716055 (PI: Dinov) 09/01/05 - 08/31/11
 Statistics Online Computational Resource (SOCR), www.SOCR.ucla.edu. The SOCR resource (DUE 1416953, 0716055 and 1023115) designs, validates and distributes portable online interactive aids for motivating, modernizing and improving the teaching format in college level probability and statistics courses.
 Role: Principal Investigator

NIH/NIDA R21DA027561-01 (PI: Warner and Sowell) 09/30/09 - 08/31/11
 Brain Development, Cognition and Behavior in Pre- and Postnatal Cocaine Exposure. Secondary data analysis grant to analyze two sets of brain MRI, behavioral and neuropsychological data collected from children/adolescents enrolled in a prospective, longitudinal study of prenatal cocaine exposure (Project CARE).
 Role: Investigator

NIH U54 EB020406 (PI: Toga, USC) 07/01/14-12/30/2019
 Big Data for Discovery Science. \$3,600,672 (total)
 All translational biomedical research involves generation and interrogation of increasingly large, complex, and diverse data sets. The LONI/USC Big Data to Knowledge Initiative is focused on advancing the science and enhancing the ability of clinicians to integrate modern biomedical and behavioral information. This project aims to create innovative techniques, methods, software, and tools for addressing the pressing Big Data needs of the entire community.
 Role: Site-Principal Investigator

NIH P50NS091856 (PI: Dauer/Albin) 07/01/14-06/30/2020
 Cholinergic Mechanisms of Gait Dysfunction in Parkinson's Disease \$9,283,780 (total)
 The Udall Center Biostatistics and Data Management Core will provide vital biostatistical support and data management for the Udall Center and contribute to the national Udall program and wider Parkinson's disease research community. The two specific aims of the Core are designed to ensure broad and reliable support of all Udall Center investigators, as well as external collaborators and the wider Parkinson's community.
 Role: Biostats Core Director

NIH P30DK089503 (PI: Sealy) 07/15/15-06/30/2020
 Michigan Nutrition and Obesity Research Center (MNORC) \$5,801,675 (total)
 Dinov, Ivo

The MNORC investigates important new information related to nutrition, obesity and related metabolic disorders. In order to support an integrative, 'team science' approach to biomedical research, the breadth of scientific talent that needs to be attracted to a Center, such as the MNORC, will necessarily need expansion.
Role: Biostats Core Director

NIH P30AG053760 (Paulson) 9/01/16-06/30/2021
Michigan Alzheimer's Disease Core Center \$1,129,255/yr
A regional center, the Michigan ADCC will promote research across the UM campus, throughout the state of Michigan via collaborations with our partner universities Michigan State University and Wayne State University, and across the nation through collaborations with other ADC's and NIA-sponsored programs
Role: Data and Biostatistics Core Co-Director (with H. Dodge)

NIH/HHS 1-R56-NS-082941-01-A1 (Albin) 9/28/14 – 8/31/2020
Serotonin and Amyloidopathy \$443,916
Amyloidopathy is an important feature of several dementias - Alzheimer disease (AD), Dementia with Lewy Bodies (DLB), and Parkinson disease dementia (PDD). Amyloid (A) peptide production is an important therapeutic target. Based on preliminary studies, our central hypothesis is that serotonergic neurotransmission inhibits A amyloid production-deposition. An important corollary of this hypothesis is that diminished regional serotonergic innervation should correlate inversely with A deposition. Parkinson disease (PD) - a disorder characterized by variable degeneration of serotonergic projection systems and variable A peptide deposition – provides a model to evaluate this corollary prediction.
Role: Co-Investigator

SCHOLARSHIP

Spacekime Analytics Research: Developing the theoretical mathematical foundation to extend the notion of time to the complex plane. This approach lifts the concept of time from the positive reals, representing the longitudinal event ordering, to a 2D complex-time (*kime*), parameterized by *time* and *phase*. The induced spacekime representation enables powerful data-driven analytical strategies for large longitudinal data. The 5D spacekime analytics utilize information measures, entropy KL divergence, PDEs, Dirac's bra-ket operators, and the Fourier transform. This fundamentals-of-data-science research project explores time-complexity and inferential uncertainty in modeling, analysis and interpretation of large, heterogeneous, multi-source, multi-scale, incomplete, incongruent, and longitudinal data (<https://spacekime.org>).

Health Analytics Research: I'm building new and supporting existing collaborations with many colleagues in the five UM Health Science Colleges and Schools. These projects involve gathering, managing, modeling, processing, interrogating and interpreting massive amounts of heterogeneous data. For instance, we develop machine learning and artificial intelligence techniques to analyze a wide spectrum of biomedical and health case-studies. Applications include Alzheimer's disease behavior, agitation; Parkinson's disease falls, gait, imaging and clinical biomarkers; and alcohol withdrawal, addiction and bio-behavior. In these projects, we identify the common characteristics and challenges, develop data-driven predictive analytical models that can be trained on subset of data within each case-study, tested on additional retrospective data. Prospective clinical data, simulations, and internal statistical cross-validation are used to quantitatively assess algorithmic performance. Finally, we introduce effective web-based tools for data wrangling, visualization, modeling, and clinical outcome forecasting (<https://socr.umich.edu/HTML5>). In support of open science and FAIR data sharing, we developed a novel statistical data obfuscation methods (*DataSifter*) that promotes rapid, responsible, and rigorous biomedical research by investigator-controlled data desensitization and sharing.

Future Work: I plan to continue my work in expanding the scientific methods, data visualization, modeling, and spacekime analytic techniques, ML/AI learning materials, and instructional resources included in SOCR. In collaboration with other colleagues, I am continuing the development, implementation, and offering of a

massive open online course (MOOC) on Data Science and Predictive Analytics (<https://predictive.space>). I plan to expand my collaborative research (computational neuroscience, predictive big data analytics, and transdisciplinary education) nationally through the Midwest Big Data Hub Initiative and the Advanced Computational Neuroscience Network (ACNN). I'm very excited about developing the Compressive Big Data Analytics (CBDA) foundation leading to a canonical mathematical representation theory that enables effective computational modeling, statistical analysis, and scientific visualization of large and complex datasets. Finally, SOCR will continue to develop the DataSifter, a novel statistical data obfuscation method enabling desensitizing personal and health information in large data archives to promote secure and effective data sharing.

Implications and Impact: Solving many healthcare and biomedical challenges requires integration of human expert-knowledge, machine-intelligence software, and powerful computational hardware. The era of Artificial Intelligence, big data and quantum computing allows us to generate, manage, aggregate, process, and analyze enormous amounts of information, which provides one of the necessary prerequisites for tackling complex human disorders and heterogeneous health conditions. I plan to continue to develop methods, tools and infrastructure enabling the data interrogation using advanced model-based methods and model-free machine-learning strategies that can be efficiently implemented as software tools, deployed on distributed computing platforms. These techniques will be validated on specific driving biomedical challenges and clinical case-studies. Designing, engineering and testing such integrated solutions will provide much needed clinical decision support for understanding the onset, progression, and prognosis of many diseases, e.g., Amyotrophic Lateral Sclerosis. The findings of our group and other research teams suggest that amalgamation of human-supervised machine-learning and efficient software implementation on distributed hardware resources may provide accuracy exceeding 80% of tracking the progression of various disorders (e.g., brain atrophy). *Translating these protocols to other clinically relevant problems is likely to provide additional economic, diagnostic, health prognostic decision support benefits to physicians, patients, advocates, and policy makers.*

Scholarship Metrics: Some references of specific scholarship impact metrics (as of Spring 2025) include:

- *Publications:* $n = 296$, $h = 61$, *Citations* = 12,135, $i_{10} = 144$
(<https://scholar.google.com/citations?user=DYIQNOcAAAAJ>)
- *SOCR Web Users:* over 1M users annually (https://wiki.socr.umich.edu/index.php/SOCR_Servers)
- *Springer DSPA Textbook:* over 6M downloads (<https://www.springer.com/us/book/9783319723464>).
- *Grant Funding (Number: 35; Total: \$62M):*
https://dimensions.umich.edu/discover/featured_project?and_facet_profiles_author=957

HONORS AND AWARDS

2007 World Wide Web Awards™ "Gold" Award (July 2007)
2008 2008 IEEE Mathematical Methods in Biomedical Image Analysis (MMBIA) Best Paper Award
2010 Runner up/Honorable mention in 2010 ASA Hands-On Statistics Activity Competition
2014 University of Michigan, Michigan Road Scholar
2017 Elected Member (fellow) of the International Statistical Institute
2021 Inducted as an Honorary Member of Sigma Theta Tau International Honor Society
2024 Named as Henry P. Tappan Collegiate Professor, University of Michigan

PATENTS

2019 Electronic Medical Record DataSifter: US US20190042791A1, Dinov, Regents of University of Michigan
2022 Three-dimensional cell and tissue image analysis for cellular and sub-cellular morphological modeling and Classification, WO EP US CN JP AU CA SG EP3756167A4 Dinov, Regents of the University of Michigan
2024 Adaptive Radiotherapy Clinical Decision Support Tool and Related Methods. This patent is licensed by the Moffitt Cancer Center (WO2024064953A1).

EDITORIAL POSITIONS, BOARDS, AND PEER REVIEW SERVICE

Editor of the Journal Neuroinformatics

NIH Review Panels: 01 ZRG1 BST-F (30), ZRG1BST-F50, ZRG1 HDM –P (58), ZNR REV-T (13), ZCA1 SRLB-V (J1), ZCA1 SRLB-4 (M1), ZCA1 SRLB-4 (M2)

NSF Review Panels: NSF, Computational Neuroscience Career Award

Other Funding Agencies: Wellcome Trust (UK), Brain Canada Foundation, Science Foundation of Ireland, MJF Foundation, UK Medical Research Council, Israeli Ministry of Science and Technology, Dutch Research Council, Polish Science Foundation, and Swiss National Science Foundation

VA Review Panel: Office of Research and Development (ORD), Combat Casualty Neurotrauma

Journal Reviews: IEEE Transactions on Medical Imaging (TMI), NeuroImage, MERLOT, JOLT, Computers & Education, Prentice Hall, Pearson Education, Human Brain Mapping Journal, SCAR Publications, Journal of Digital Imaging, Frontiers, Computer Methods and Programs in Biomedicine, JAMIA, PLoS, Statistical Computation and Simulation, TMES, Scientific Data, Technology Innovations in Statistics Education, MathSciNet, MathReviews, and many others.

TEACHING

Complete list of courses including MTU (1991-1993), FSU (1993-1998), UCLA (1999-2013), and UMich (2013+) is available online:

<https://www.socr.umich.edu/people/dinov/courses.html>

Courses (UCLA)

1999-2000	PIC 20 JAVA and Internet Programming, Computation, and Visualization
2000-2001	PIC 10A C++ Programming PIC 10B Problem Solving Using C++ Programming
2001-2002	STAT 10 Introduction to Statistical Reasoning STAT XL 10, Statistical Reasoning STAT 13 Introduction to Statistical Methods for the Life and Health Sciences STAT 251 Statistical Methods for the Life and Health Sciences (Graduate Level) STAT 110A Applied Statistics PCI 20A JAVA and Internet Programming, Computation, and Visualization
2002-2003	STAT 100 Probability Theory STAT 110A Applied Statistics for Engineers I STAT 110B Applied Statistics for Engineers II STAT 13 Introduction to Statistical Methods for the Life and Health Sciences STAT 251 Statistical Methods for the Life and Health Sciences (Graduate Level)
2003-2004	STAT 13 Introduction to Statistical Methods for the Life and Health Sciences STAT 110A Applied Statistics for Engineers I STAT 19 FIAT Lux STAT 130D Statistical Programming, Computation, & Visualization in C/C++ STAT 223 Statistical methods in Biomedical Imaging IPAM Graduate Summer School, Mathematics in Brain Imaging
2004-2005	STAT 13 Introduction to Statistical Methods for the Life and Health Sciences STAT 110A Applied Statistics for Engineers I STAT 19 FIAT Lux STAT 35 Computational and Interactive Probability Theory
2005-2006	STAT 1 Introduction to Statistical Methods for the Life and Health Sciences STAT 35 Computational and Interactive Probability Theory NS 272/NS 172/ PSYCH 213 Introduction to Brain Mapping and Neuroimaging
2006-2007	STAT 13 Introduction to Statistical Methods for the Life and Health Sciences STAT 130D Statistical Programming, Computation, & Visualization in C/C++

	M 284 Principles of Neuroimaging
	SOCR Invited Session at the USCOTS 2007
	SOCR 2007 Continuing Education Workshop
2007-2008	STAT 13 Introduction to Statistical Methods for the Life and Health Sciences
	STAT 35 Computational and Interactive Probability Theory
2008-2009	STAT 35 Computational and Interactive Probability Theory
	SRP 99 Neuroscience Student Research Program
	SOCR 2007 Continuing Education Workshop
	STAT 13 Introduction to Statistical Methods for the Life and Health Sciences
2009-2010	SRP 99 Neuroscience Student Research Program
	SOCR 2010 Continuing Education Workshop
	STAT 13 Introduction to Statistical Methods for the Life and Health Sciences
	STAT 157 Probability and Statistics Data Modeling and Analysis using SOCR
2010-2011	SRP 99 Neuroscience Student Research Program
	STAT 13 Introduction to Statistical Methods for the Life and Health Sciences
	STAT 157 Probability and Statistics Data Modeling and Analysis using SOCR
	SRP 99/199 Statistics Student Research Program
2011-2012	SRP 99 Neuroscience Student Research Program
	STAT 13 Introduction to Statistical Methods for the Life and Health Sciences
	STAT 375 Teaching Apprentice
	SRP 99/199 Statistics Student Research Program
	STATS 199 Directed Research
2012-2013	SRP 99 Neuroscience Student Research Program
	STAT 13 Introduction to Statistical Methods for the Life and Health Sciences
	STAT 375 Teaching Apprentice
	SRP 99/199 Statistics Student Research Program
2013-2014	SRP 99/199 Statistics Student Research Program
2014-2015	SRP 99/199 Statistics Student Research Program

Courses (University of Michigan, 2013 +)

2013-2014	BIOINFO 699 Directed Student Research
2014-2015	Scientific Methods for Health Sciences: Fundamentals (HS 550)
	Scientific Methods for Health Sciences: Applied Inference (HS 851)
	BIOINFO 699 Directed Student Research
2015-2016	Scientific Methods for Health Sciences: Special Topics (HS 853)
	BIOINFO 699 Directed Student Research
	BIOINFO 599 Nucleome Atlas
2016-2017	Scientific Methods for Health Sciences: Special Topics (HS 853)
	BIOINFO 699 Directed Student Research
	Bootcamp: Predictive Big Data Analytics using R
	Data Science and Predictive Analytics (HS 650)
2017-2018	Scientific Methods for Health Sciences: Special Topics (HS 853)
	BIOINFO 699 Directed Student Research
	Data Science and Predictive Analytics (HS 650)
2018-2019	HS 650: Data Science and Predictive Analytics
	Bioinf 501: Mathematical Foundations of Bioinformatics
	ENG 599: SOCR-MDP R&D Projects
2019-2020	HS 650: Data Science and Predictive Analytics
	Bioinf 501: Mathematical Foundations of Bioinformatics
	ENG 599: SOCR-MDP R&D Projects
2020-2021	HS 650: Data Science and Predictive Analytics

	Bioinf 501: Mathematical Foundations of Bioinformatics
	ENG 599: SOCR-MDP R&D Projects
2021-2022	HS 650: Data Science and Predictive Analytics
	Bioinf 501: Mathematical Foundations of Bioinformatics
	ENG 399/499/599: SOCR-MDP R&D Projects
2022-2023	HS 650: Data Science and Predictive Analytics
	Bioinf 501: Mathematical Foundations of Bioinformatics
	ENG 399/499/599: Multidisciplinary Design Program R&D Projects
2023-2024	HS 650: Data Science and Predictive Analytics
	Bioinf 501: Mathematical Foundations of Bioinformatics
	ENG 255/355/455/599: Multidisciplinary Design Program R&D Projects
2024-2025	HS 650: Data Science and Predictive Analytics
	Bioinf 501: Mathematical Foundations of Bioinformatics
	ENG 255/355/455/599: Multidisciplinary Design Program R&D Projects

Student/Trainee Mentorship

I mentor four types of trainees – undergrad and graduate students, visiting fellows, and junior faculty. Undergraduate Research Opportunity Program (UROP) students are directly supervised by me throughout the Fall and Winter terms of the UROP program. Multidisciplinary design program (MDP) students are directly supervised by me on SOCR projects in Winter and Fall terms. Some of them may also continue their projects over the Summer. Most students meet with me weekly or twice a week to ensure alignment between student learning needs and contributions to SOCR project development efforts. All students work on specific SOCR projects within their respective domain areas.

Former UCLA Undergraduate Students (39): Jameel Al-Aziz; Raymond Chen; Stephan Chiu; Priscilla Chui; Agapios Constantinides; Charles Dang; Rami Elkest; Patrick Tan; John Guo Jun; Chin-Pang Ho; Lei Jin; Keith Kan; Ashwini Khare; Teresa Lam Siu-Ling; Chiachi Lo; Kenneth Lo; Beryl Lou; Jenny Nguyen; Hanzen Shi; Bae-Cheol Shin; Yang Yuan; Jay Zhou; Shelley Zhou; Victor Zhu; Fan Ding; Yanding Wang; Melinda Wang; Emily Wang; Aaron Zhou Qian; Avik Mohan; Zigeng Liu; Jiurui Tang; Qianchuan Li; Jiurui Tang; Matthew Leventhal; Nellie Ponarul; Andy Foglia; Prat Pati; Gary Chen.

Former Graduate Students (26): Ariana Anderson (PhD Committee Co-Chair); Annie Che (PhD Committee Co-Chair); Brigid Wilson (PhD Committee Co-Chair), Rahul Gidwani; Yangyi He; Guogang Hu; Alexandre Kalinin; Scott Kamino; Ashwini Khare; Dushyanth Krishnamurthy; Trudy KwunPoon; Erh-Fang Lee; Selvam Palanimalai; Antonietta Pepe; Ryan Rosario; Andrew Wang; Brigid Wilson; David Zes; James Zhang; Nina Zhou; Chao Gao; Ming Tang; Syed Husain; Patrick You; Chiang Feng; Jingshu Xu; Zhenxun Wang.

Current Students (35+): I Chair the bioinformatics PhD committee of Yueyang Shen and serve on several other doctoral committees. Annually, I mentor about a dozen graduate students and two dozen *Multidisciplinary Design Program (MDP)* students working on a number of SOCR projects. These students come from the School of Medicine, Colleges of Engineering, LS&A, and School of Public Health. Their course-grades reflect their learning, performance, and contributions to the SOCR project (https://mdp.engin.umich.edu/all-projects/?_title=socr).

The Michigan **Multidisciplinary Design Program**, MDP (<https://mdp.engin.umich.edu>), is a College of Engineering program offering students from all the 19 University Schools and Colleges a variety of long-term and team-based research projects. Within the SOCR umbrella, I will mentor dozens of MDP graduate and undergraduate students, see **Table** below, on a wide spectrum of translational research, development, and data analytics projects. Meet (twice a week) and supervise all students throughout the 2-semester cycle of the MDP Program.

LAST NAME	FIRST NAME	MAJOR	LEVEL CURRENT	GENDER
You	Yuzhe	LSA Undeclared: intending Computer Science	Junior	Female
Dihua	Duolan	Computer Science BS	Senior	Female
Peng	Jiajun	Computer Science BS, Economics BS	Senior	Female
Jiang	Junzhe	Computer Science BS, Residential College	Sophomore	Male
Wang	Sky	Computer Science BSE	Junior	Male
Liu	Johnny	LSA Undeclared: intending Computer Science	Junior	Male
Zhang	Zehua	Computer Science BSE	Senior	Male
Li	Siyuan	Data Science BS, Mathematics BS	Junior	Male
Sun	Ziyuan	Quant Finance & Risk Mgt MS	Graduate	Male
Xie	Jim	LSA Undeclared: intending Data Science and Mathematics	Sophomore	Male
Zhang	Audrey	Computer Science BSE	Junior	Female
Chan	I Hun	LSA Undeclared: intending Computer Science & Economics, Residential College	Sophomore	Male
Wall	Emily	LSA Undeclared: intending Data Science, Honors	Sophomore	Female
Tran	Anh Tuan	Engineering: First Year: intending Computer Science	Sophomore	Male
Qi	Zihui	Mathematics BS, Residential College	Junior	Female
Xu	Lingcong	Economics BS, Mathematics BS, Statistics BS	Junior	Female
Li	Jiixin	Computer Science & Eng MS	Graduate	Male
Wang	Fa-Lin	Health Informatics MHI	Graduate	Female
Wild	Jessica	Biostatistics MS	Graduate	Female
Shetty	Ronak	LSA Undeclared: intending Data Science	Sophomore	Male
CHAI	Tianyi	Double major: Business Administration BBA and Industrial & Oper Eng BSE with a minor in Computer Science	4th Year	Male
DANZIG	Benjamin	LSA Undeclared	2nd Year	Male
DHYANI	Parth	Computer Science BSE	2nd Year	Male
DUAN	Shengnan	Information MSI	Graduate	Female
GUO	Yunjie	Data Science BSE	3rd Year	Male
MA	Yue	Information MSI	Graduate	Female
PARK	Roland	Computer Science BS	2nd Year	Male
PUJJI	Simran	Computer Science BSE	2nd Year	Female
SHEN	Yueyang	Data Science BSE	3rd Year	Male
SHEN	Guangyan	Electrical & Computer Eng MS	Graduate	Male
SHEN	Fuhan	3rd Year	Male	No
WANG	Tom	Computer Science	4th Year	Male
WONG	Ka Yu	LSA Undeclared	First Year	Male
WU	Zewen	LSA Undeclared	2nd Year	Male
YANG	Hailan	Statistics BS	3rd Year	Female
ZHANG	Tianqi	Computer Science BSE	3rd Year	Male
ZHANG	Yupeng	Mathematics BS	2nd Year	Male
CHAI	Tianyi	Double major: Business Administration BBA and Industrial & Oper Eng BSE with a minor in Computer Science	4th Year	Male
DANZIG	Benjamin	LSA Undeclared	2nd Year	Male
DHYANI	Parth	Computer Science BSE	2nd Year	Male

Visiting Fellows (I supervised directly)

- Jiachen Xu, Summer 2016, visiting scholar from School of Mathematical Sciences, Shanghai Jiao Tong University, China (Project “Compressive Big Data Analytics”).
- Chang Ming, 2017 visiting scholar from University of Basel, Switzerland (Project: “Prognostic model for early onset breast cancer”).
- Yi Zhao, Summer 2017, visiting scholar from Fudan University (Project: “Mathematical fundamentals of Data Science”)
- Thitiporn Sukaew, Thailand Health ministry, “Interrogation, analysis and prediction of computable clinical phenotypes using a Large Thai National Diabetes Data (2017-2019).
- Yufei Yang, Tsinghua University Department of Electronic Engineering (Project: “SOCR Fundamentals of Data Science R&D”, 2019-2020).
- Zijing Li, Fudan University (2020) (Project: “Spacekime Analytics and Time Complexity”).

Junior Faculty: mentees:

- Vicki **Johnson-Lawrence**, assistant professor, Biostatistics, University of Michigan-Flint (KL2 Project “Clinical and psychosocial determinants of chronic pain over the lifecourse: a study of opioid treatment outcomes for middle-aged and older adults”). Primary mentor of Dr. Johnson-Lawrence (2016-2019).
- Simeone **Marino**, assistant research professor Immunology SoM (and SoN) is directly supervised by me on the “Compressive Big Data Analytics (CBDA)” project (2017-).
- Sheria **Robinson-Lane**, Assistant Professor (Nursing), studying caregivers of older adults with Alzheimer’s disease and/or related dementias using data-analytic methods (2019-).
- Jonathan **Gryak**, Assistant Research Scientist, Michigan Institute for Data Science, Computational Medicine and Bioinformatics, Biomedical & Clinical Informatics Lab (2019-2022).
- Alexander **Weigard** (K23 Fellow, 2021-2026). K23DA051561: Leveraging computational models of neurocognition to improve predictions about individual youths' risk for substance use disorders.
- Dr. Thiago D. **Nascimento** (2021-2023) Evaluating Sex Differences in Central Pain Mechanisms of TMD using Data Science and Neuroimaging in the Clinical Studies.

International Scholars and Fellows:

- Dr. Mohammad **Ottom** (2021-2022 Fulbright Scholar from Yarmouk University, Jordan). Project: Cancer Diagnoses using Deep Learning Techniques
- Dr. Chinakorn **Sujimongkol** (2021-2023 Fogarty International Center D43 Postdoctoral Fellow from Thailand). Project: Environmental and Air Quality association with Chronic Kidney Disease.
- Dr. Hanif Abdul **Rahman** (2021-2022 from PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam). Project: Big Data analytics: A Data-driven Theory of Aging)
- Ricardo Albino **Camacho** (2022 from University of Puerto Rico) – MICHR Fellow.

COMMITTEE, ORGANIZATIONAL, AND VOLUNTEER SERVICE

- 2010 - 2014 Steering Committee: Biomedical Informatics Research Network (BIRN)
- 2010 - 2014 Co-Chair: Biomedical Informatics Research Network (BIRN) Pipeline & Workflows Working Group
- 2011 Co-Chair: Intel International Science and Engineering Fair (ISEF) 2011, Mathematics Section
- 2001-2011 California Science Fair Judge (2001-2011)
- 2010 - NIH Review Panels: 2011/01 ZRG1 BST-F (30), ZRG1BST-F50, ZRG1 HDM –P (58), ZNR REV-T (13), ZCA1 SRLB-V (J1), ZCA1 SRLB-4 (M1), ZCA1 SRLB-4 (M2)
- 2010 - 2012 NSF Review Panels: NSF 05-579, Computational Neuroscience Career Award
- 2009 - 2010 VA Review Panel: Office of Research and Development (ORD), Combat Casualty Neurotrauma
- 2008 - 2012 US Civilian Research and Development Foundation (CRDF Global) Reviewer (CGP 2005A, 2011 Travel Fellowship and Follow-On Grants Program)

2011	US Civilian Research and Development Foundation (CRDF Global) Reviewer (CGP 2005A, 2011 Travel Fellowship and Follow-On Grants Program)
2013-	Executive Committee: Consulting for Statistics, Computing and Analytics Research (CSCAR)
2013 - 2014	UMSN PhD Admissions and Advisory Committee
2013 - 2015	UMSN Chair, Analytics Curriculum Committee
2014 -	Executive Committee, Michigan Institute for Data Science (MIDAS)
2014 - 2015	UMich Senate Assembly Development Advisory Committee
2014 -2016	UMHS Enterprise Data Analytics Advisory group
2014 -2019	UMSN Promotion & Tenure Process Review Committee
2014 -	UMMS Program in Biomedical Sciences (PIBS) Graduate Admission Committee
2015-2019	Chair, UMich Senate Advisory Committee on University Affairs (SACUA) IT Committee
2019-2021	Elected to the 9-member UMich Senate SACUA committee
2020-2023	Elected Member of the University of Michigan Faculty Senate Assembly
2023-	Chair of the Academic Administrator Evaluation Committee (AEC), UM Faculty Senate
2023-	Member of the Information Technology Committee (ITC), UM Faculty Senate.

OPEN-SCIENCE CONTRIBUTIONS

Develop, validate, support, and share an open access sustainable framework for data management, computational infrastructure, analytical tools, learning resources, and web-services. There have been over **20 million Visitors** to these open-science resources.

https://wiki.socr.umich.edu/index.php/SOCR_Servers#SOCR_Users
http://wiki.stat.ucla.edu/socr/index.php/SOCR_Servers#SOCR_Users

Resource Type & Usage	Description	URLs
Data & Web-services Users: Total: 100,000 Past 12 months: 20,000	Research-derived, simulated, translational and clinical data archives. Dashboard for mashing multi-source socioeconomic and medical datasets, big data analytics, graphical data exploration and discovery	https://wiki.socr.umich.edu/index.php/SOCR_Data http://wiki.stat.ucla.edu/socr/index.php/SOCR_Data https://socr.umich.edu/HTML5/Dashboard/
Computational Infrastructure Users: Total: 5,000,000 Past 12 months: 700,000	Comprehensive collection of methods, techniques, and web-tools for probability computation, statistical analysis, simulation and experimentation, and mathematical modeling. These include probability calculators, statistics analysis tools, data modeling and visualization, virtual games, simulations, and experiments	https://SOCR.umich.edu http://SOCR.ucla.edu http://Distributome.org https://socr.umich.edu/Applets/index.html#Tables https://github.com/SOCR https://SOCRedu.atlassian.net/browse/SOCR-7 https://Predictive.Space
Analytical Tools Users: Total: 50,000 Past 12 months: 15,000	Modern HTML5 resources for exploratory analytics, data discovery, simulation, and visualization	https://socr.umich.edu/HTML5 https://socr.umich.edu/HTML5/BrainViewer
Learning Resources Users: Total: 11,000,000 Past 12 months: 1,800,000	Community-built, open-access and multilingual resources blending information technology, scientific techniques, and modern pedagogical concepts	https://wiki.socr.umich.edu/index.php/EBook http://wiki.stat.ucla.edu/socr/index.php/EBook https://wiki.socr.umich.edu/index.php/SMHS https://socr.umich.edu/people/dinov/SMHS_Courses.html https://wiki.socr.umich.edu http://wiki.stat.ucla.edu/socr

PRESENTATIONS (examples of recent presentations, complete list is available online: https://wiki.socr.umich.edu/index.php/SOCR_News)

2024

- August 28-30, 2024: Organizing a special session *Data Science, Artificial Intelligence, and High-Dimensional Spatiotemporal Dynamics* at the 2024 High-Dimensional Data Analysis Conference (HDDA-13) in Singapore.
- May 29–August 9, 2024: Organizing SOCR Graduate Student Summer Research Internship and Training Program in Global Health Equity. This program is open to graduate students in any discipline, including master's, doctoral, and other professional degree programs. This program is based at the U-M Ann Arbor campus. Students will need to be available 20 hours per week from May 29–August 9, 2024. Application Deadline is February 16, 2024.
- May 29-31, 2024: Presenting a short course tutorial on spacekime analytics and organizing a Special Session on Longitudinal Imaging and Biostatistical Methods, at the 2024 American Statistical Association's Statistics in Imaging Annual Meeting in Indianapolis, IN.
- April 4, 2024: Presenting Complex-time Representation of Repeated Measurement Longitudinal Data and Space-kime Analytics at the April 2024 APS Annual Meeting in Sacramento, CA.
- March 3-8, 2024: Organizing an APS Special Invited Session on Model-based Statistical Physics, Computable Data, and Model-Free Artificial Intelligence at the March 2024 APS Annual Meeting in Minneapolis, MN.
- January 19–20, 2024, Presented AI Bio-Innovations in Health & Neurooncology - Research Promises, Learning Opportunities & Clinical Practice Impact at the 2024 Bioengineering in Brain Cancer Challenge, at the University of Michigan Biointerfaces Institute.

2023

- June 26-28, 2023: presented “Data Science Modules Enhancing the Biophysics Curriculum” at the APS Group of Data Science, 2023 DSECOP Workshop at the University of Maryland.
- April 3-4, 2023: presented Nursing and Healthcare 2030: AI Promises & Perils in Education, Scholarship & Clinical Practice, 2023 UMSN Research Day.
- March 14, 2023: presented Data Science and Predictive Analytics (DSPA2) at the March Workshop of the Statistics in Imaging (SII) Section.
- January 4-7, 2023: Organizing a two-day AMS/JMM Special Session on *Tensor Representation, Completion, Modeling and Analytics of Complex Data* at the 2023 JMM Congress, Boston, MA.

2022

- July 26-30, 2021: Organizing the 2022 MIDAS Data Science for Biomedical Scientists Bootcamp.
- March 2022: Organizing a 2022 ISI Short Course on *Data Science and Predictive Analytics* (DSPA).
- March 2022: Organizing a day-long course *Longitudinal Data Tensor-Linear Modeling and Space-kime Analytics* for the March 2022 APS Meeting.

2021

- March 19, 2021 (12PM ET, GMT-5): Presenting Big Neuroscience, Data Sharing & Predictive Health Analytics at the UVA Biomedical Data Science Innovation Seminar Series.
- February 23, 2021: Presenting Data De-Identification & Clinical Decision Support at the 2021 Data Standards and Learning Health Systems—Challenges and Opportunities Symposium, Ann Arbor, MI. Registration and 1:15 PM ET special session 1; ZOOM access.
- February 04, 2021: Presenting Data Science, Time Complexity, and Spacekime Analytics, MICDE Seminar Series, Ann Arbor, MI.

- January 6-9, 2021: Organizing a 2021 JMM Special Session on *Foundations of Data Science: Mathematical Representation, Computational Modeling, and Statistical Inference*, Washington, DC.

2020

- October 15, 2020: presenting Spacekime Analytics at the DCMB Tools and Technology Seminar, Ann Arbor, MI.
- September 4, 2020: presenting the SOCR and DSPA resources at the 2020 ACNN Symposium on Big Neuroscience Data.
- August 26, 2020: presenting Data Sharing & Open, Rigorous, Reproducible Science at the 2020 Rigor and Transparency to Enhance Reproducibility Workshop, University of Michigan.
- June 23-25, 2020: presenting "The Interface between Data Science and Health Analytics" at the MIWI (Michigan Integrative Well-Being and Inequality) Summer School, Ann Arbor, MI.
- June 1-2, 2020: presenting "Data Science, Time Complexity, and Spacekime Analytics" at the 2020 6th annual BRAIN Initiative Investigators Virtual Meeting.
- May 27, 2020: presenting "Computational Neuroscience, Time Complexity, and Spacekime Analytics" at Neuromatch 2.0 Unconference.
- February 14, 2020: presenting Data Science, Time Complexity and Spacekime Analytics at the University of Michigan Applied Interdisciplinary Mathematics (AIM) Seminar Series.

2020

- October 15, 2020: presenting Spacekime Analytics at the DCMB Tools and Technology Seminar, Ann Arbor, MI.
- September 4, 2020: presenting the SOCR and DSPA resources at the 2020 ACNN Symposium on Big Neuroscience Data.
- August 26, 2020: presenting Data Sharing & Open, Rigorous, Reproducible Science at the 2020 Rigor and Transparency to Enhance Reproducibility Workshop, University of Michigan.
- June 23-25, 2020: presenting "The Interface between Data Science and Health Analytics" at the MIWI (Michigan Integrative Well-Being and Inequality) Summer School, Ann Arbor, MI.
- June 1-2, 2020: presenting "Data Science, Time Complexity, and Spacekime Analytics" at the 2020 6th annual BRAIN Initiative Investigators Virtual Meeting.
- May 27, 2020: presenting "Computational Neuroscience, Time Complexity, and Spacekime Analytics" at Neuromatch 2.0 Unconference.
- February 14, 2020: presenting Data Science, Time Complexity and Spacekime Analytics at the University of Michigan Applied Interdisciplinary Mathematics (AIM) Seminar Series.

2019

- December 3, 2019: presented SOCR DataSifter: A Statistical Obfuscation Technique enabling Effective Data Sharing, at the University of Michigan SPH Environmental Epidemiology Seminar Series.
- October 16-17, 2019: invited speaker at the BIG DATA Analytics in Health Care Session of Re-Imaging Health Symposium, Brock University, St. Catharines, ON L2S 3A1, Canada.
- August 18–23, 2019: organizing an Invited Presenter Session; IPS35: Imaging Statistics and Predictive Data Analytics at the International Statistical Institute's 2019 World Stats Congress, Kuala Lumpur, MY.
- April 12-13, 2019: presenting DataSifter: Sharing of Sensitive Data via Statistical Obfuscation at the 2019 Statistics, the Impact of Big Data Conference, FSU, Tallahassee, FL.
- March 26, 2019: presenting Challenges and Opportunities in Predictive Big Data Analytics at the Ann Arbor Chapter of ASA.

2018

- November 2, 2018: Ivo Dinov presented on Open Data Science and Predictive Health Analytics at the 2018 SfN Conference, San Diego, CA.
- October 25, 2018: Ivo Dinov presented DataSifter: Sharing of sensitive information via statistical obfuscation (Video) at the 14th annual cyber security conference on Security at University of Michigan IT (SUMIT), an event for National Cybersecurity Awareness Month on the latest technical, legal, policy, and operational trends, threats, and tools in cybersecurity and privacy.
- October 15-16, 2018: Ivo Dinov presented the Michigan Institute of Data Science: Computational Challenges and Research Opportunities at the 2018 Center for Network and Storage-Enabled Collaborative Computational Science (CNSECCS) Symposium, Ann Arbor, Michigan.
- October 12, 2018: Organized MNORC-IBIC/SOCR/HAC Health Data Analytics Workshop.
- September 21, 2018: Ivo Dinov presented The Enigmatic Kime: Time Complexity in Data Science at the University of Michigan Institute for Data Science (MIDAS) Seminar Series.
- September 18, 2018: Organizes the SOCR semi-annual retreat.
- September 15, 2018: Ivo Dinov presented High-Dimensional Biomedical Data & Predictive Health Analytics at the Fall 2018 DCMB/UMich Retreat, Frankenmuth, MI.
- September 6, 2018: Ivo Dinov presented Data Science & Predictive Neuro-Analytics at the 2018 Advanced Computational Neuroscience Network (ACNN) Workshop, Case Western Reserve University, Ohio.
- July 26, 2018: Ivo Dinov presented Data Science & Predictive Health Analytics at the 2018 Symposium on Big Data, Human Health and Statistics, University of Michigan.
- June 22, 2018: Ivo Dinov presented the Advanced Computational Neuroscience Network (ACNN) at the NSF BIGDATA Conference in Washington DC.
- May 17, 2018, presented a half-a-day-long workshop on Big Data & Health Analytics at the Global Sexual Health Summer Institute. This was an interactive session on Big Healthcare Data: Research Challenges, AI Capabilities, and Educational Opportunities.
- May 11, 2018, presented “Exploratory, Confirmatory, & Predictive Big Cancer Data Analytics” at the University of Michigan Rogel Cancer Center Head and Neck Cancer Retreat.
- April 24, 2018, gave two talks at SUNY-Binghamton on Data Science and Compressive Big Data Analytics (CBDA).

2017

- Dec 08, 2017, "*Big Brain Data Science & Predictive Health Analytics*" webinar at the BD2K Guide to the Fundamentals of Data Science Series, Webinar ID: 932-094-291.
- Nov 05, 2017, A. Sharma (Emory University), W. Hsu (UCLA), E. Siegel (University of Maryland), K. Cheng (Penn State University) and I. Dinov (University of Michigan) organized a half-day workshop at AMIA 2017, “(W15) *Does Integrative Data Analytics on Biomedical Imaging Bring Us Closer to Precision Medicine?*”, Dr. Dinov's keynote lecture was on *Big Brain Data & Predictive Analytics*.
- Sept 8-9, 2017, “*Predictive Big Brain Data Analytics*” at the 2017 Advanced Computational Neuroscience Network (ACNN) Big Data Workshop, Indiana University, Bloomington, IN.
- Aug 15, 2017, keynote lecture on *Predictive Data Analytics* at the Malaysia Telemedicine Conference 2017, Kuala Lumpur, Malaysia.
- Aug 10-18, 2017: Ivo Dinov, Alex Fornito, Andrew Zalesky, Satrajit Ghosh, and Eric Tatt Wei Ho organized a INCF/IBRO Neuroscience Summer School for graduate students and postdoctoral fellows. Dr. Dinov will be lecturing on (1) Statistical Computing, (2) High-Throughput Processing of Big Neuroscience Data, and (3) Neuroimaging-genetics. The Summer Neuroscience School is part of the International Neuroinformatics Coordinating Facility (INCF)/International Brain Research Organization IBRO-APRC School on Neuroinformatics and Brain Network Analysis, Kuala Lumpur, Malaysia.

- May 8-12, 2017: a week-long Bootcamp: *Predictive Big Data Analytics using R*, Ann Arbor, MI.
- Mar 3, 2017: *Brain Visualization, High-throughput computational processing, and the SOCRAT Statistical Computing Framework*, 2017 Brainhack-Global Meet in Ann Arbor, MI.

2016

- Sept 20-21, 2016: Ivo Dinov, Rich Gonzales, George Alter (University of Michigan), Franco Pestilli, Olaf Sporns, Andrew Saykin (Indiana University), Dhabaleswar Panda, Khaled Hamidouche, Xiaoyi Lu, Hari Subramoni (OSU), Satya Sahoo (CWRU), Daniel Marcus (Washington University), and Lei Wang (Northwestern University) organized, and presented at, the 2-day *Midwest Workshop on Big Neuroscience Data, Tools, Protocols & Services*, Ann Arbor, MI.
- Aug 04, 2016: *Big, Deep, and Dark Data: Fundamentals, Research Challenges, and Opportunities*, Section on Statistics in Imaging, at the Joint Statistics Meeting (JSM), Chicago, IL.
- May 19, 2016, *Predictive Big Data Analytics: Imaging-Genetics Fundamentals, Research Challenges, and Opportunities*, AMIA Education & Training Webinar.
- Jan 19, 2016, *Big, Deep, and Dark Data: Fundamentals, Research Challenges, and Opportunities*, Survey Research Center (SRC) seminar series, Institute for Social Research, University of Michigan.

2015

- Nov 23-24, 2015, keynote address *Predictive Big Data Analytics: Using Large, Complex, Heterogeneous, Incongruent, Multi-source and Incomplete Observations to Study Neurodegenerative Disorders*, 2015 Big Data Analytics Experience Conference, Tecnológico de Monterrey (Monterrey Tech), Mexico.
- Oct 9-10, 2015, (with Carl Kesselman) organized a working group on *Scientific Tools and Workflows for Big Data Discovery Science*, Palm Springs, CA.
- Oct 6, 2015, *Michigan Institute for Data Science (MIDAS) Education and Training Program*, Ann Arbor, MI.
- Oct 2, 2015, (with Petros Petrosyan & Sam Hobel) *Hippocampal Meta-Analysis Workflow*, USC Pipeline Demo Day.
- Sept 23, 2015, *Exploratory Big Data Analytics*, the University of Michigan.
- Sept 10 and Sept 17, 2016, (with Ken Powell & Eric Michielssen) *Opportunities for graduate studies in computational and data sciences*, University of Michigan.
- August 8–13, 2015, organized a special session on *Big Data: Modeling, Tools, Analytics, and Training*, 2015 Joint Statistical Meeting, Seattle, WA 98101.
- June 14-18, 2015, *The Pipeline Environment: A Scalable, Distributed and Service-Oriented Neuroimaging and Genetics*, the 21st Annual Meeting of the Organization for Human Brain Mapping, Honolulu, Hawaii.
- June 14-17, 2015, *SOCR Resources*, 43rd Annual Meeting of the Statistical Society of Canada (SSC), Dalhousie University, Halifax, NS, Canada.
- May 5, 2015, (with Deb Barton) *Center for Complexity and Self-management of Chronic Disease (CSCD)*, 2015 National Institute of Nursing Research Center Directors Meeting, National Institutes of Health, Bethesda Maryland.
- April 21-24, 2015, organized a *micro Big Data Analytics workshop*, University of Michigan Institute for Data Science (MIDAS).
- February 18, 2015, *Management, Modeling & Analytic Challenges of Big Biomedical Data*, University of Michigan Psychiatry Grand Rounds.
- January 13-14, 2015, *Pipeline Graphical Workflow Environment for Computational Genomics, Proteomics, Image and Shape Analysis*, Big Data Discovery Science (BDDS) Meeting in Seattle, WA.

2014

- July 8-9, 2014, *Portable Pipeline Workflows for Nuclear and Chromosomal Shape Morphometry Analysis*, 4D Nucleome Workshop, University of Michigan.

- May 22, 2014, (jointly with Dennis Pearl, MBI/OSU, and Kyle Siegrist, VLPS/UAH) organized a workshop entitled *Web Resources for Interactive Probability Instruction*, 2014 eCOTS (Electronic Conference On Teaching Statistics) conference.
- April 1-2, 2014, *Big Data Challenges: Data Management, Analytics & Security*, AAAS/FBI Summit on Big Data, Life Sciences, and National Security in Washington DC.
- Jan 30, 2014, *SOCR Infrastructure for Technology-enhanced Trans-disciplinary Health Research & Science Education*, NCIBI Tools and Technology seminar, University of Michigan.
- Jan 14-17, 2014, Joint Mathematics Meeting (AMS/IMS/MAA):
 - January 16, 2014, organized a special American Mathematical Society (AMS) session on *Big Data: Mathematical and Statistical Modeling, Tools, Services, and Training*, at the Joint Mathematics Meeting (JMM), Baltimore, MD.
 - January 14, 2014, (jointly with Dennis Pearl, MBI/OSU, and Kyle Siegrist, VLPS/UAH) organized a continuing education workshop (2014 Distributome JMM Workshop) *Interactive Probability Instruction*.

2013

- Nov 15, 2013, *Biomedical Informatics: Mathematical Techniques, Computational Challenges & Imaging-Genetics Applications*, at the 2013 CIMAT Neuro Imaging, El Centro de Investigación en Matemáticas A.C. (CIMAT) y el Instituto de Neurobiología de la UNAM, Guanajuato, Mexico.
- Oct 19, 2013, (jointly with Nicolas Christou and Albert Wong) *A SOCR blended approach for teaching the California Common Core State Standards for Probability and Statistics* (for LAUSD Teachers).
- Oct 18, 2013, *Computational Challenges in Neuroimaging-Genetics: Predicting MCI conversion to AD*, at the University of Michigan, Neurodegenerative Disease Research Seminar series.
- Oct 16, 2013, Chaired a panel discussion on *Big-Data* at the 2013 Annual Meeting of the Michigan Bio-Industry, MichBio, Kalamazoo, MI.
- June 26, 2013, *Analytical Pipeline Workflows, Resource Interoperability and Processing of "Big" Genomics Data*, a session on The Science of Investigation and Interpretation at The Clinical Genome Conference (TCGC), Hotel Kabuki 1625 Post Street, San Francisco, CA 94115.
- June 16, 2013, organized a Continuing Education Course entitled *Neuroimaging 'Big Data' Challenges and Computational Workflow Solutions*, workshop was part of the 2013 Organization for Human Brain Mapping Meeting in Seattle, Washington.
- May 20, 2013, organized a *Computational Genomics Training Workshop* at UCLA.
- May 15-16, 2013, organized (jointly with Dennis Pearl, OSU, Kyle Siegrist, UAH) *USCOTS 2013 Workshop: Interactive Probability Instruction*, at the USCOTS 2013 meeting.
- April 08, 2013, *Pipeline Workflow Environment at the Epilepsy Bioinformatics Workshop* at UCLA.
- March 21, 2013, (jointly with Nicolas Christou) *SOCR blended mathematics and statistics education resources relative to the California Common Core State Standards*, LAUSD.
- March 4-6, 2013, *How to Ride the Perfect Neuroimaging-Genetics-Computation Storm? Collision of Peta Bytes of Data, Thousands of Software Tools and Millions of Hardware Devices*, at the New Horizons in Human Brain Imaging, Oahu, Hawaii USA.
- January 23-25, 2013, two presentations at the 2013 AAAS TUES/CCLI conference in Washington, DC; American Association for the Advancement of Science, AAAS, and the National Science Foundation, NSF, Programs for Course, Curriculum, and Laboratory Improvement, CCLI, and Transforming Undergraduate Education in Science, Technology, Engineering, and Mathematics.

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- Steering Committee: Biomedical Informatics Research Network (BIRN), since 2010
- Co-Chair: Biomedical Informatics Research Network (BIRN) Pipeline & Workflows Working Group
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- NIH Review Panels: 01 ZRG1 BST-F (30), ZRG1BST-F50, ZRG1 HDM –P (58), ZNR REV-T (13), ZCA1 SRLB-V (J1), ZCA1 SRLB-4 (M1), ZCA1 SRLB-4 (M2)
- NSF Review Panels: NSF 05-579, Computational Neuroscience Career Award
- VA Review Panel: Office of Research and Development (ORD), Combat Casualty Neurotrauma
- US Civilian Research and Development Foundation (CRDF Global) Reviewer (CGP 2005A, 2011 Travel Fellowship and Follow-On Grants Program)
- Executive Committee: UMich Center for Statistical Consultation and Research (CSCAR), 2013-2016
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- Chair, Brain Canada Foundation Study Section, Platform Support Grants, since 2015
- NIH/NCI-ITCR Panel, Technologies, Revisions Early Stage Informatics Technologies & Advanced Stage Informatics technologies, since 2014
- Michigan Institute for Clinical and Health Research (CTSA): Program Grant Panel Reviewer, since 2014
- Executive Committee (since 2017), University of Michigan, School of Nursing
- Vice Chair, Department of Health Behavior and Biological Sciences, University of Michigan, School of Nursing (2017-2021)
- Member of 9-faculty UMich Faculty Senate Executive Committee, SACUA (2019-2021)
- Member of UMich Faculty Senate (2020-2023)
- Chair, UMich Faculty Senate's Academic Evaluation Committee (2023-2025)
- Chair, UMich Faculty Senate's Information Technology Committee (2014-2019, 2023-).

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Current up-to-date publication records are freely available online:

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