CV – Eugene Stephane Mananga, Ph.D.

INSTITUTIONS: City University of New York (BCC & Graduate Center) and New York University (NYU)

POSITION TITLE: Professor of Physics, Chemistry (CUNY)&Adjunct Professor of Applied Physics (NYU)

PERSISTENT IDENTIFIER (PID) of the Senior/Key Person: https://orcid.org/0000-0002-0302-8231

LANGUAGES: English (fluent & proficient), French (fluent & proficient), Spanish (basic), Bassa (native)

PROFILE

Researcher, Educator and Mentor in Condensed Matter Physics and Computational Chemistry with a deep passion for Spin Dynamics, Nuclear Magnetic Resonance (NMR), and STEM Education. Strong Foundation in Theoretical Approaches of Spin Dynamics and Control Theory with Specialization in Solid-State NMR. Experienced in High Pressure Solid-State NMR, Fuel Cells, Lithium-Ion Batteries, and Energy Storage– Areas of Deep Importance to Sustainability. Interdisciplinary Work Spanning both Scientific Curiosity, Educational, and Mentoring Impact, Particularly for Students from Underrepresented Backgrounds in STEM Including Individuals with Disabilities. One of the Most Meaningful Contributions Been to Expanding Access to STEM Education and Career Pathways for Those who May have Otherwise Been Overlooked or Excluded. Self-motivated and Continually Seeking New Challenges that Allow to Apply Expertise and Grow Through Learning.

PROFESSIONAL PREPARATION & EDUCATION

INSTITUTION	LOCATION	MAJOR / AREA OF STUDY	DEGREE (if applicable)	YEAR YYYY
Harvard University (HES)	Cambridge, MA	Sustainability	N/A	*2022*
Massachusetts Institute of Technology	Cambridge, MA	Structure of Materials	Certificate (*MITx*)	*2020*
Harvard University (HMS)	Boston, MA	Nuclear Medicine	Research Fellow	*2011-14*
Massachusetts General Hospital	Boston, MA	Medical Physics	Postdoctoral	*2011-14*
Harvard Medical School	Boston, MA	Applied Biostatistics	Graduate Certificate	*2012-13*
French Atomic Energy Commission	**CEA**-Saclay-Paris	NEUROSPIN	Research Fellow	*2009-11*
National High Magnetic Field LAB	Tallahassee, FL	Solid-Sate NMR	Postdoctoral	*2007-08*
City University of New York (CUNY)	NYC, New York	NSF/AGEP-MAGNET	Chancellor Fellow	*2005-07*
The City University of New York	NYC, New York	Physics	Ph.D. Advisor: Distinguished Prof Steven G. Greenbaum	*2005*
The City University of New York	NYC, New York	Physics	M. Phil.	*2004*
The City College of New York	NYC, New York	Physics	M.A.	*2002*
The University of Yaounde	Cameroon	Mechanics - Solitons	Doctorate 3^{ieme} Cycle Program (*Thesis not defended*)	1992-94
The University of Yaounde	Cameroon	Physics	DEA (Rank 1st)	*1992*
The University of Yaounde	Cameroon	Physics	M.Sc.(With Distinction)	*1991*
The University of Yaounde	Cameroon	Physics/Chemistry	B.Sc. (Rank top 5%)	*1990*
Lycee Classique d'Edea/ High School	Cameroon	Scientific (Mathematics highest score)	Baccalaureate	*1987*

APPOINTMENTS

- **Los Alamos National Laboratory**, **Department of Energy** *05/2026-08/2026*
  Position Title: *VFP Faculty Fellowship*
- **Brookhaven National Laboratory** *08/2022-01/2026*
  Position Title: *Visiting Scientist*
- **CUNY Graduate Center – Nanoscience Program** *2025-Present*
  Position Title: *Faculty Mentor*
- **CUNY Advanced Science Research Center – NanoBioNYC** *2022-Present*
  Position Title: *Faculty Mentor*
- **CUNY Academy for Humanities & Sciences** *2019-Present*
  Position Title: *Executive Board*
- **CUNY Academy for Humanities & Sciences** *2019-Present*
  Position Title: *Program Director of STEM (Science, Technology, Engineering, and Mathematics)*
- **CUNY Academy for Humanities & Sciences** *2018-Present*
  Position Title: *Member, Board of Director-at-Large*
- **CUNY Graduate School** & **University Center** (The Graduate Center) *2016-Present*
  Position Title: *Doctoral Faculty (Professor) of Chemistry*
- **New York University (NYU)** *2015-Present*
  Position Title: *Adjunct Professor of Applied Physics*
- **CUNY Bronx Community College (BCC)** *2015-Present*
  Position Title: *Professor of Physics and Nuclear Medicine*
- **CUNY Graduate School** & **University Center** (The Graduate Center) *2015-Present*
  Position Title: *Doctoral Faculty (Professor) of Physics*
- **University of California**, **Santa Barbara** *2024-2025*
  Position Title: *Selected Fellow KAVLI Institute for Theoretical Physics (KITP)*
- **Brookhaven National Laboratory**, **Department of Energy** *09/2024-11/2024*
  Position Title: *VFP Faculty Fellowship*
- **Brookhaven National Laboratory, SHI-Berkeley, Department of Energy** *06/2022-08/2022*
  Position Title: *Visiting Faculty*
- **Lawrence Berkeley National Laboratory**, **Department of Energy** *06/2021-08/2021*
  Position Title: *VFP Faculty Fellowship*
- **Lawrence Berkeley National Laboratory, Department of Energy** *06/2020-08/2020*
  Position Title: *VFP Faculty Fellowship*
- **Argonne National Laboratory**, **Department of Energy** *06/2019-08/2019*
  Position Title: *VFP Faculty Fellowship*
- **CUNY Academy for Humanities and Sciences** *2018- 2019*
  Position Title: *Deputy Executive Director*
- **Harvard University (**HMS**)** & **Massachusetts General Hospital** (MGH) *2011-2014*
  Position Title: *Research Fellow*
- **French Alternative Energies & Atomic Energy Commission - CEA-SACLAY** *2009-2011*
  Position Title: *«Ingenieur de Recherche» Senior Engineer*
- **National High Magnetic Field Laboratory**, USA *2007-2008*
  Position Title: *Postdoctoral Research Associate*
- **CUNY Graduate Center** *2005-2007*
  Position Title: *NSF/AGEP MAGNET-STEM Chancellor Postdoc Fellow*
- **Department of National Education**, Lycee d'Etat de Franceville (High School) *1995-1999*
  Position Title: *Lecturer of Physical Sciences*
- **University of Sciences and Technology of Masuku**, Franceville *1995-1999*
  Position Title: *Adjunct Lecturer of Physics*
- **University of Yaounde, Cameroon** *1992-1994*
  Position Title: *Graduate Teaching Assistant of Physics & Mechanics*

SELECTED NOTABLE HONORS & AWARDS

- **VFP FELLOWSHIP, LOS ALAMOS NATIONAL LABORATORY** *2026*
  Source of Honor: *U.S. Department of Energy,* **USA**
- **PRESIDENTIAL AWARDS FOR EXCELLENCE IN SCIENCE, MATHEMATICS AND ENGINEERING MENTORING (PAESMEM)** *2025*
  Source of Award: *White House – Bestowed by the President of the United States, Joseph R. Biden*
  Award Description: *The Presidential Awards for Excellence in Science, Mathematics, and Engineering is the highest national mentoring award bestowed by the White House. Each year through the PAESMEM, the President of the United States recognizes outstanding individuals and organizations who have made significant contributions to science, technology, engineering, and mathematics (STEM) mentoring across the Nation. The National Science Foundation (NSF) administers the awards program on behalf of the White House Office of Science and Technology Policy (OSTP). OSTP selects both individuals and organizations to receive the honor. Each Presidential Awardee receives a certificate signed by the President of the United States and a $10,000 award from NSF. In 2025, 25 Awardees were honored by the White House*
- **TRUSTED CYBERINFRASTRUCTURE (CI) FELLOWSHIP** *2025*
  Source of Honor: *Trusted CI, The National Science Foundation (NSF) Cybersecurity Center of Excellence*
- **CITY UNIVERSITY OF NEW YORK AWARD** *2025*
  Source of Honor: *The Graduate Center of The City University of New York (CUNY)*
  Award: *In recognition of outstanding scholarly contributions, mentorship and dedication to CUNY*
- **SELECTED PANELIST FOR DISCUSSION ON HOW BELONGING UNLOCKS INNOVATION IN STEM (SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS)** *2025*
  Source of Honor: *Presidential Event, American Chemical Society (ACS)*
- **HONORARY LETTER FROM NEW YORK ACADEMY OF SCIENCES** *2025*
  Source of Honor: *President and Chief Executive Officer of The New York Academy of Sciences (NYAS)*
- **STEM ROLE MODEL OF THE AFTERSCHOOL STEM MENTORING PROGRAM** *2025*
  Source of Honor: *The New York Academy of Sciences (NYAS) – ASMP*
  Honor: *For commitment to mentoring New York City's young scientists*
- **FACULTY GRAND MARSHAL FOR THE 65th BCC-CUNY COMMENCEMENT CEREMONY** *2025*
  Source of Honor: *The President and Provost of BCC designate the Grand Marshal from a shortlist of eligible candidates*
  Award: *In recognition of a distinguished faculty member chosen for this honor based on their contributions and respect within Bronx Community College of CUNY community*
- **AWARD OF THE PRESIDENT OF THE BOROUGH OF BRONX NY CITY** *2025*
  Source of Honor: *President of the Borough of Bronx, New York City,* ***USA***
  Award: *In recognition of the time, dedication, and giving back to the diverse African Communities in the Bronx.*
  The President of the Bronx Statement*: We Honor you as a trailblazer for your commitment to the Neighborhoods and Boroughs you Serve Through Service and Charity. your Hard Work and Leadership Serve as a Great Inspiration to Bronxites Throughout the Borough, and you Represent the Best that the Bronx Community has to Offer. For these Reasons and more, on Behalf of the more than 1.4 million residents who Call this Borough Home, I, the President of the Borough of the Bronx, salute you and wish you the best in all your endeavors.*
- **NAMED THE 2024 SACNAS DISTINGUISHED MENTOR AWARD** *2024*
  Source of Honor: *SACNAS (Advancing Chicanos/Hispanics & Native Americans in Science) National Diversity in STEM*
  Award: *In recognition for the commitment to and personification of the spirit of the SACNAS mission: to foster the success of Chicano/Hispanic and Native American scientists, from college students to professionals, in attaining advanced degrees, careers, and positions of leadership in science, technology, engineering, and mathematics (STEM). Honor for exemplifying the SACNAS mission by showing exceptional dedication to excellence in STEM research and mentoring. Awards were presented during a Keynote Session as part of the 2024 SACNAS National Diversity in STEM Conference.*
- **SELECTED FELLOW OF KAVLI INSTITUTE FOR THEORETICAL PHYSICS** *2024-2025*
  Source of Honor: *University of California, Santa Barbara, KITP,* **USA**
- **VFP FELLOWSHIP, BROOKHAVEN NATIONAL LABORATORY** *2024*
  Source of Honor: *U.S. Department of Energy,* **USA**
- **PRESIDENT'S AWARD FOR EXCELLENCE IN RESEARCH** *2023*
  Source of Award: *Office of the President Bronx Community College - The City University of New York,* **USA**
  Award: *For Excellence in Research, Creative Activities, Outstanding Dedication, Hard Work, and Passion for Education*
- **NOMINATED FOR THE USERN PRIZE 2023** *2023*
  Source: Universal Scientific Education and Research Network (USERN), Branch of Prize and Scientific Affairs
  Nomination: *In Recognition of Recent Publications as First author in Top Rank (Q1) Journals in my Field of Research*
- **BROOKHAVEN NATIONAL LABORATORY** *2023*
  Source of Honor : *Sustainable Horizons Institute (Berkeley) & DOE Visiting Faculty,* **USA**

- **CUNY JUNIOR FACULTY RESEARCH AWARD IN SCIENCE AND ENGINEERING** *2022*
  Source of Award: *Alfred P. Sloan Foundation,* **USA**
  Award: *For Potential to Make a Significant Contribution to Physics, to NMR & LIB fields, to CUNY, and to Society*
- **BROOKHAVEN NATIONAL LABORATORY** *2022*
  Source of Honor: *Sustainable Horizons Institute (Berkeley) & DOE Visiting Faculty,* **USA**
- **SELECTED PANELIST FOR DISCUSSION HOSTED BY US DEPARTMENT OF ENERGY** *2021*
  Source of Honor: *Nominated by Argonne National Laboratory,* **USA**
- **LIFETIME ACHIEVEMENT AWARD** *2021*
  Source of Award: *VDGOOD Professional Association,* **INDIA**
  Award: *In Recognition of International Scientists of Engineering, Science and Medicine*
- **VFP FELLOWSHIP, LAWRENCE BERKELEY NATIONAL LABORATORY** *2021*
  Source of Honor: *U.S. Department of Energy,* **USA**
- **VFP FELLOWSHIP, LAWRENCE BERKELEY NATIONAL LABORATORY** *2020*
  Source of Honor: *U.S. Department of Energy,* **USA**
- **VFP FELLOWSHIP, ARGONNE NATIONAL LABORATORY** *2019*
  Source of Honor: *U.S. Department of Energy,* **USA**
- **FACULTY FELLOWSHIP PUBLICATION PROGRAM AWARD** *2019*
  Source of Honor: *The City University of New York,* **USA** (declined)
- **DEPUTY EXECUTIVE DIRECTOR** *2018–2019*
  Source of Honor: *The City University of New York, Academy for Humanities & Sciences,* **USA**
- **DISTINGUISHED SCIENTIST AWARD** *2018*
  Source of Award: American Chemical Society (ACS New York Section), **USA**
  Award: *For Contributions and Advanced Studies in the Theory of Spin Dynamics in Solid-State Nuclear Magnetic Resonance and Quantum Mechanics*
- **PKAL STEM LEADERSHIP INSTITUTE II, STEM FACULTY LEADER** *2018*
  Source of Honor: *Association of American Colleges & Universities,* **USA**
- **HENRY WASSER AWARD (PHYSICS)** *2017*
  Source of Award: *The City University of New York Academy for Humanities & Sciences,* **USA**
  Award: *In Recognition of Outstanding Scholarship*
- **BROOKHAVEN NATIONAL LABORATORY PHYSICS DIVERSITY FELLOW** 2017
  Source of Honor: *Brookhaven National Laboratory,* **USA**
- **ARTICLE, "CHEMICAL PHYSICS, *450, 83 (2015)*" HONORED AT THE 70th ANNIVERSARY** *2016*
  Source of Honor: *Russian Academy of Sciences,* **RUSSIA**
- **NEW ENGLAND SCIENCE SYMPOSIUM** *2013*
  Source of Award: Harvard Medical School/ Office for Diversity Inclusion & Community Partnership and the Biomedical Science Careers Program
  Award: *For Recognition in Contribution to Science and Poster Presentation at the 2013 New England Science Symposium*
- **HARVARD MEDICAL SCHOOL & MGH POSTDOCTORAL FELLOWSHIP** *2011 -2014*
  Source of Honor: Massachusetts General Hospital
- **COMMISSARIAT A L'ENERGY ATOMIQUE *«INGENIEUR DE RECHERCHE»*** *2009-2011*
  Source of Honor: CEA-SACLAY, *NEUROSPIN - French Alternative Energies and Atomic Energy Commission,* **FRANCE**
- **ARRHENIUS LABORATORY POSTDOCTORAL RESEARCH FELLOWSHIP** *2009*
  Source of Honor: *Stockholm University*, **SWEDEN** (declined)
- **NATIONAL HIGH MAGNETIC FIELD Laboratory POSTDOCTORAL FELLOWSHIP** *2007-2008*
  Source of Honor: *Florida State University, Florida University, & Los Alamos National Laboratory*, **USA**
- **LAWRENCE BERKELEY NATIONAL LABORATORY & UNIVERSITY OF CALIFORNIA BERKELEY POSTDOCTORAL POSITION** *2007*
  Source of Honor: *University of California Berkeley*, **USA** (declined)
- **NSF/ AGEP FELLOW AWARD** *2006*
  Source of Honor: *Chancellor of the City University of New York, President of the Graduate Center of CUNY, and NSF/AGEP Project Director of the National Science Foundation,* **USA**
  Award: *In Recognition of Outstanding Scholarship and Academic Performance*
- **SPECIAL SCHOLARSHIP, GRADUATE STUDY IN NUCLEAR PHYSICS, FRANCE** *1991*
  Source of Award: *Ministry of Higher Education & Government of Cameroon,* **CAMEROON** (declined)
  Award: *In Recognition of Outstanding Scholarship and Academic Performance*

SELECTED OTHER HONORS

- Invited keynote speaker for the 1st Annual Research Symposium of CUNY Black Male Initiative (BMI), New York City College of Technology - City Tech, New York City, May 02, 2025. *2025*
- Elected Member to the Graduate Council Committee on Student Services at the Graduate Center of CUNY *2025-2027*
- "Who's Who in Solid-State NMR" - Prominent researchers and pioneers in the field of solid-state NMR spectroscopy *2025*
- Scientific Committee, Global Congress on Nanotechnology and Materials Science, London, UK *2025*
- Organizing Committee Member, World Conference on Astronomy, Neutrino Physics, Space Science, Netherlands *2024*
- Organizing Scientific Committee Member, World Congress on Nanotechnology (NANO2023), Boston, USA *2023*
- Organizing Scientific Committee, 2nd International Conference on Advanced Nanomaterials and Nanotechnology, Austria *2023*
- Organizing Committee Member, 5th Global Conference & Expo on Nanoscience and Nanotechnology, Online *2023*
- Organizing Committee Member, World Conference on Astronomy, Particle physics, Space Science, Amst., Netherlands 23
- Organizing Committee Member, 2nd International Conf. on Advanced Physics & Quantum Physics**,** Vienna, Austria *2023*
- Organizing Committee Member, European congress on Biomaterials and Bio-devices, Paris, France *2023*
- Organizing Committee Member, 8th European Congress on Advanced Nanotechnology & Nanomaterials, London, UK *2023*
- Organizing Committee Member, 2nd Global Summit on Gravitation, Astrophysics and Cosmology, Paris, France *2023*
- Organizing Committee Member, 4th Global Conference & Expo on Nanoscience and Nanotechnology (ISTNANO) *2023*
- Organizing Committee Member, World Congress on Materials Science & Engineering San Francisco, USA *2022*
- Organizing Committee Member, 5th Global Webinar on Applied Science, Engineering and Technology *2022*
- Organizing Committee Member, 2nd International Conference NANOMEET 2022, Edinburgh, UK *2022*
- Organizing Committee Member, Global Conference on Physics, Brussels, Belgium *2021*
- City University of New York – BCC, Service Recognition Award *2021*
- College Nomination to the 2023 SLOAN Research Fellowships – Alfred P. Sloan Foundation *2022*
- Board of Directors - at - Large, CUNY Academy for Humanities & Sciences *2018-20*
- Organizing Committee Member, 2nd European Congress on Chemistry, Amsterdam, Netherlands *2020*
- Organizing Committee Member, International Conference on Applied Chemistry, Munich, Germany *2020*
- Organizing Committee Member, 4th World Congress on Biotechnology and Healthcare, 2020 San Diego, USA *2020*
- Organizing Committee Member, 2nd International Conference on Green and Renewable Energy, Vancouver, Canada *2020*
- Scientific Board, Physics and Theoretical Chemistry, Luxembourg *2020*
- Organizing Committee Member, International Conference on Physics, Rome, Italy *2020*
- Organizing Committee Member, 3rd International Confer. on Physical and Theoretical Chemistry, Budapest, Hungary *2020*
- Organizing Committee Member, Materials Chemistry & Science, Webinar (Tokyo, Japan) *2020*
- Expert Advisory Board, Condensed Matter Physics 2020, Miami, USA *2020*
- Organizing Committee Member, 3rd International Conf. on Semiconductors, Optoelectron. and Nanostructures, Venice *2020*
- Organizing Committee Member, Catalysis & Applied Chemical Engineering, Dubai, UAE *2020*
- Organizing Committee Member, Applied-Science-2020, Montreal, Canada *2020*
- Organizing Committee Member, International Conference on Physics and Networks, Houston, USA *2019*
- Honorable Organizing Committee Member, 2nd International conf. on Quantum Mechanics & Nuc. Eng., Paris, France *2019*
- CUNY William Stewart Travel Award for National and International Conferences *2018*
- CUNY ACADEMY for the Humanities & Sciences, FELIKS GROSS Endowment Awards, Award Reviewer *2018*
- Organizing Committee Member, Cancer USA *2018*
- Nominated for the Academy's FELIKS GROSS Endowment Awards, CUNY Academy for the Humanities &Sciences 2017
- Natural Sciences and Engineering Research Council of CANADA (NSERC), External Grant Reviewer *2017*
- Scientific Advisor & Organizing Committee Member, Material Science Meeting 2018, Rome, Italy *2017*
- Recipient of the «NEXT B*II*G THING INQUIRY» Grant *2017*
- Best Poster Award, 3rd International Conference on Theoretical & Condensed Matter Physics, USA *2017*
- International Conference on Physics, Certificate for Chairing the Session on Physics, in Different Sciences *2016*
- Massachusetts Institute of Technology (MIT), FRANCIS BITTER MAGNET LABORATORY Scholarship to the 1ST U.S. - CANADA Winter School on Bio molecular Solid-State NMR, Stowe *2008*
- National High Magnetic Field Laboratory, Travel Award to the Rocky Mountain Conference *2007*
- NSF/ AGEP- AWARD, The City University of New York, Graduate Center *2005*
- Hunter College of CUNY: Awards for Outstanding Academic Performance *2004*
- MBRS-RISE/ NIH Scholarship, Hunter College of CUNY *2004*
- PSC/CUNY Tuition Award, The Graduate Center of CUNY *2002*
- University Fellowship, The City University of New York, Graduate Center *2000*
- Laboratory of Fluids Mechanics: Doctoral Program – "ECOLE CENTRALE DE FRANCE" (Declined) *1992*
- University Scholarship, The University of Yaoundé, Faculty of Sciences *1987-1992*

RESEARCH EXPERIENCE

Professor Mananga research spans over many disciplines; condensed matter physics, materials science, and computational chemistry. His work utilizes mix methodologies that include experimental solid-state nuclear magnetic resonance (NMR), theoretical chemical physics and spectroscopy, and computational chemistry with high-performance computing capabilities. Specifically, his work includes controlling the spin dynamics in solid-state NMR, and DFT-based mechanistic simulations of chemical reactions (e.g., alcohol dehydration, oxidation, and reduction) to provide insights that inform the design of efficient catalysts and sustainable technologies. His key contributions are in three areas:

- In solid-state NMR, Dr. Mananga conducted foundational research, including the introduction of the Floquet–Magnus expansion (in collaboration with Dr. Thibault Charpentier, CEA–Saclay), and the development of a novel phase-cycling protocol to eliminate spectral artifacts in quadrupolar echo spectroscopy (with Dr. Gregory Boutis). Their collective contributions to spin dynamics have significantly advanced the theoretical understanding of spin dynamics and high-resolution solid-state NMR. Using NMR techniques during his earlier work, Dr. Mananga and his co-workers (Prof. Steven Greenbaum' Group) have produced the first definitive study demonstrating the effect of high pressure on self-diffusion in a membrane.
- In quantum physics and magnonics, Dr. Mananga's work on Floquet–Magnus theory and Fer expansion provides a foundation for extending these formalisms to new regimes, enabling emerging applications in quantum mechanics and spintronics.
- In medical imaging & nuclear medicine, Dr. Mananga's postdoctoral research at Harvard Medical School and Massachusetts General Hospital (with Dr. El Fakhri) studied the detectability of myocardial defects in cardiac PET studies, supporting the development of more effective diagnostic imaging techniques in nuclear medicine.

LOS ALAMOS NATIONAL LABORATORY *05/2026-08/2026*

Department of Energy Visiting Faculty Program

Computational Design of Two-Dimensional Perovskites - Rashba-Dresselhaus Splitting - Optoelectronic Properties - Data Generation - Machine Learning - Interatomic Potentials

BROOKHAVEN NATIONAL LABORATORY *09/2024-12/2024*

Department of Energy Visiting Faculty Program

- First Principle Calculation – Computational Methods Based on Density Functional Theory (DFT) Framework - Potential Energy Surface Analysis - String Method and Bond Constraint - Calculation of NMR Parameters Such as Chemical Shift Constants for Molecules and Complex Materials Such as ZSM-5 Zeolites - COnductor-Like Screening MOdel (COSMO) - Bimolecular Elimination Mechanism (E2) - Unimolecular Elimination Mechanism (E1)

UNIVERSITY OF CALIFORNIA SANTA BARBARA *2024-2025*

Kavli Institute for Theoretical Physics (KITP) Selected Fellow

- Chemical Physics and Spectroscopy: Theory and Methodology development in solid-sate NMR spectroscopy - Time dependent Quantum mechanics - Numerical Tools for Time Evolution in Time-Resolved Spectroscopy - Quantum Control - Real-Time AB Initio Quantum Dynamics - Open System Quantum Dynamics

BROOKHAVEN NATIONAL LABORATORY *06/2022-12/2025*

SHI (Berkeley) & Department of Energy Visiting Scientist

- Energy & Photon Sciences Directorate – High Performance Computing (HPC) Applications Architect ALD's Office, Sustainable Research Pathways for High-Performance Computing (SRP-HPC) program - NWChem, Development of Density Functional Theory (DFT) Capabilities – Applications to Zeolites and Catalysis

LAWRENCE BERKELEY NATIONAL LABORATORY *06/2021-08/2021*

Department of Energy Visiting Faculty

- Berkeley LAB - Energy Technologies Area – Energy Storage & Distributed Resources Division: The evolution of Li-ion batteries from the conventional to the advanced to the state-of-the-art to the hybridized - Advanced LIBs

LAWRENCE BERKELEY NATIONAL LABORATORY *06/2020-08/2020*

Department of Energy Visiting Faculty

- Berkeley LAB - Energy Technologies Area – Energy Storage & Distributed Resources Division: Investigation of electrochemical and energy storage behavior of systems of high-capacity variants of the spinel LiMn2O4 and disordered rocksalt lithium excess cathode materials for Li-ion batteries

ARGONNE NATIONAL LABORATORY *05/2019-08/2019*

Department of Energy Visiting Faculty

- Applied Materials Division - MERF: Flame Spray Pyrolysis Synthesis – Solid-State Lithium-ion Battery Materials (**$Li_7La_3Zr_2O_{12}$** and **$Li_7P_2S_8I$**)

HARVARD UNIVERSITY (MEDICAL SCHOOL) – MASSACHUSETTS GENERAL HOSPITAL *2011-2014*

NIH T32 Research Fellow

- Harvard Medical School & Massachusetts General Hospital, Center for Advanced Medical Imaging Sciences, Department of Radiology, Division of Nuclear Medicine & Molecular Imaging Physics
- Harvard Medical School & Boston Children's Hospital, Department of Radiology and Nuclear Medicine

ATOMIC ENERGY COMMISSION & ALTERNATIVE ENERGIES (CEA–SACLAY), FRANCE *2009-2011*

"Ingenieur de Recherche"

- Institute Rayonnement Matiere SACLAY (IRAMIS): Atoms, Molecules & Condensed Matter – Theory of Solid-state NMR
- NEUROSPIN - National Research Agency Program (ANR): Diffusion Enhancement of Signal & Resolution (DESIRE)

NATIONAL HIGH MAGNETIC FIELD LABORATORY (FSU, UF, & LOS ALAMOS), USA *2007-2008*

Post-doctoral Research Associate

- Center for Interdisciplinary Magnetic Resonance (CIMAR) – Application of Solid-State NMR to study Membrane Proteins

THE CITY UNIVERSITY OF NEW YORK *1999-2007*

NSF/AGEP - MAGNET Chancellor Post-doctoral Research Fellow: The Graduate Center of CUNY (*2005–2007)*

- Control of Spin Dynamics in Solid-State NMR - NMR Quantum computing in the solid-state

Graduate Research Assistant: Hunter College *(2002–2005)*

- High Pressure & Variable Température NMR – Solid-State NMR – Fuel Cells – Condensed Matter Physics

Graduate Research Assistant: City College of New York (*Benjamin Levich Institute*), *(2001–2002)*

- Granular Materials – Discrete Element Methods - Computational Modeling.

UNIVERSITY OF YAOUNDE *1991-2094*

Graduate Research Assistant: Faculty of Sciences, Department of Physics

- Theory of Solitons, Theory of Chaos, Numerical Methods, Rheology, Fluid Mechanics, and Elasticity

SELECTED INVITED VISITS

- Kavli Institute for Theoretical Physics (KITP) 2024
- Argonne National Laboratory: DOE Visiting Faculty Program 2019
- Brookhaven National Laboratory: 2017 Electron-Ion-Collider Conference 2017
- American Chemical Society National Offices : Cottrell Scholars Collaborative & New Faculty Workshop 2017
- Schlumberger (Physics Consultant): Al-Khobar, Saudia Arabia 2015
- North Shore – Long Island Jewish Medical Center (NS-LIJ) *2014*
- New York University: NMR Program *2011*
- Rochester Institute of Technology: Center for Imaging Science in the College of Science *2008*
- Harvard University: Harvard Medical School; Martinos Center & MGH; Physics & Biophysics Department *2007*
- National High Magnetic Field Laboratory: CIMAR, Tallahassee *2007*
- Rensselaer Polytechnic Institute: Department of Physics, Applied Physics & Astronomy *2006*

UNIVERSITY SERVICES & SYNERGISTIC ACTIVITIES

- Elected Member to the Graduate Council Committee on Student Services at the Graduate Center of CUNY
- Faculty Lead and Adviser of ‘‘student chapter’’ of the Materials Research Society (MRS), The Graduate Center
- Deputy Chairperson of summers 2019-2023, Department of Engineering, Physics and Technology, BCC-CUNY
- Department Search Committees for Tenure-track faculty: Assistant Professor
- Department Search Committees for Tenure-track faculty: Lecturer
- Department Search Committees for Tenure-track: College Laboratory Technician
- Program Coordinator for Astronomy, Department of Engineering, Physics and Technology, BCC-CUNY
- Reviewer of Research’ Posters for the Math and Science Fair, BCC-CUNY, 2020
- Moderator of the 3rd International Conference on Theoretical & Condensed Matter Physics, New York 2017
- Serving on the Experiential-Based Learning Opportunuty Committee (EBLO), BCC-CUNY
- Engineering & Physics Department Faculty Representative to the Technology Oversight Committee (TOC)
- Summer 2017 Advisement & Registration, BCC-CUNY
- Advisory in the STEM (Science, Technology, Engineering, & Mathematics) Fields
- Engineering & Physics Department Faculty Representative to the Committee on Academic Standing, BCC-CUNY
- Serving on the BCC COLLEGE SENATE Committee (Alternate), The City University of New York
- Serving on the Department Personnel & Budget Committee (Alternate), BCC-CUNY
- Faculty of the Doctorate Programs of Physics & Chemistry at the Graduate Center, CUNY (2015-Present)
- Serving on the Curriculum Committee (Alternate), BCC-The City University of New York
- Serving on several Sub-Committees on Academic Standing, BCC- The City University of New York
- Designed the Curriculum Development on Fuel Cells for ‘’College Now’’, Center of Sustainable Energy (Summer 2016)
- Chair of the Sessions on Quantum Physics, Chemical Physics, & Physics in Different Sciences at the International Conference on Physics, New Orleans, LA June 2016
- Co-coordinator of the monthly MAGNET round table with underrepresented students for academic discussions, mentoring, & peer-support, OEODP, The Graduate Center - CUNY (Sept. 2005 – August 2007)

SELECTED PEER-REVIEW & JOURNALS REVIEWED

- Reviewer of Grants for the National Science Foundation (NSF)
- Reviewer for proposals of the 2021 Association of American Colleges & Universities (AAC&U) Transforming STEM Higher Education Conference
- External Grant Reviewer for Natural Sciences & Engineering Research Council of CANADA (NSERC)
- The Journal of Chemical Physics - AIP
- Journal of Applied Physics – AIP
- Review of Scientific Instruments - AIP
- Heliyon - Elsevier
- Applied Mathematics and Computation - Elsevier
- Solid-State Nuclear Magnetic Resonance (SSNMR) – Elsevier
- International Journal of Modern Physics B – World Scientific
- Journal of Nonlinear Science, Springer-Verlag Publishing
- American Journal of Public Health (AJPH)
- International Conference of Numerical Analysis & Applied Mathematics

SELECTED EDITORIAL SERVICES

- Physics Advisory Board Member, *Heliyon-Elsevier (October 22, 2018 – January 25, 2024)*
- Editorial Board Member, *Heliyon - Elsevier (October 22, 2018 – January 25, 2024)*
- Review Editor and Editorial Board Member, *Frontiers in Materials – Energy Materials*
- Guess Editor, *Special Issue:* Mathematical Numerical Simulation in Chemical Physics *(Journal: Mathematics)*
- Guess Editor, *Special Issue: Advanced materials systems in fuel cells and batteries/Synthesis and Characterizations of advanced materials for energy storage (Journal of Energy and Power Technology)*
- Guess Editor, *Special Issue: Advanced Nuclear Magnetic Resonance in Batteries and Fuel Cells Research (Journal: Recent Progress in Materials)*

GRANTS & AWARDS

- **VISITING FACULTY PROGRAM** *SUMMER 2026*
  Source of Support: *Department of Energy/ Los Alamos National Laboratory*
  Title: *Computational Design of Two-Dimensional Perovskites: Rashba-Dresselhaus Splitting, Optoelectronic Properties, and Data Generation for Machine Learning Interatomic Potentials*
- **PSC-CUNY RESEARCH AWARD (TRADB-56-215)** *2025–2026*
  Award # 68482-00 56, Amount = $6,000
  Source of Support: *CUNY Research Foundation*
  Title: "Using Density Functional Theory to Compute and Predict NMR Chemical Shift Parameters*"*
- **BCC FACULTY SCHOLARSHIP SUPPORT GRANT** *2025*
  Award Amount = $1,025.00*;* Source of Support: *BCC of CUNY Foundation*
  Title: From Theory to Practice: Floquet-Magnus and Fer Expansions in Triple Oscillating Field NMR
- **VISITING FACULTY PROGRAM** *FALL 2024*
  Total Award Amount = $31,000
  Source of Support: *Department of Energy/ Brookhaven National Laboratory*
  Title: *Using Density Functional Theory to Investigate the Mechanistic Simulation of ZSM-5 Zeolite Catalyst and to Compute and Predict NMR Chemical Shift Parameters*
- **KAVLI INSTITUTE FOR THEORETICAL PHYSICS FELLOWSHIP** *2024*
  Source of Support: University of California Santa Barbara, KAVLI Institute for Theoretical Physics (KITP)
  Amount = $8,000
  Title: *Control of Spin Dynamics in Solid-State NMR Using Theoretical Less-Established Methods*
- **AMERICAN ASSOCIATION OF PHYSICS TEACHERS (AAPT)** *2024*
  Source of Support: The Special Projects and Philanthropy Committee - Amount = $500
  Type: Travel Grant for the 2024 Summer AAPT Meeting
- **PSC-CUNY RESEARCH AWARD (TRADB-54-75)** *2023–2024*
  Award # 66377-00 54, Amount = $6,000
  Source of Support: *CUNY Research Foundation*
  Title: "Computing NMR properties for ZSM-5 Zeolite Catalyst using Density Functional Theory*"*
- **SUSTAINABLE RESEARCH PATHWAYS FOR HIGH-PERFORMANCE COMPUTING** *SUMMER 2023*
  Total Award Amount = $25,800
  Source of Support: *Sustainable Horizons Institute & Department of Energy/ Brookhaven National Laboratory*
  Title: NWChemEx capability assessment
- **2022 JUNIOR FACULTY RESEARCH AWARD IN SCIENCE AND ENGINEERING** *2022–2023*
  Award # 7V603-47-02, Amount = $50,000
  Source of Support: *Alfred P. Sloan Foundation*
  Title: "*Novel advanced approaches to characterize recent cathode and electrolyte materials in LIBs and beyond"*
- **PSC-CUNY RESEARCH AWARD (TRADB-53-3)** *2022–2023*
  Award # 65315-00 53, Amount = $6,000
  Source of Support: *CUNY Research Foundation*
  Title: "*Mechanistic Understanding at the Atomic Scale of Structure-Composition-Property Relationships"*
- **CUNY RESEARCH SCHOLAR PROGRAM** *2022–2023*
  BCC CRSP Award, Amount = $3,000
  Source of Support: *The City University of New York Office of Research*
  Title: "*Simulation of solid-state nuclear magnetic resonance experiments using SPINEVOLUTION software"*
- **SUSTAINABLE RESEARCH PATHWAYS FOR HIGH-PERFORMANCE COMPUTING** *SUMMER 2022*
  Total Award Amount = $25,300
  Source of Support: *Sustainable Horizons Institute & Department of Energy/ Brookhaven National Laboratory*
  Title: NWChemEx capability assessment
- **VISITING FACULTY PROGRAM** *SUMMER 2021*
  Total Award Amount = $22,000
  Source of Support: *Department of Energy/ Lawrence Berkeley National Laboratory*
  Title: *The Evolution of Li-ion Batteries from the Conventional to the Advanced to the State-of-the-Art to the Hybridized*
- **CUNY RESEARCH SCHOLAR PROGRAM** *2021–2022*
  BCC CRSP Award, Amount = $3,000
  Source of Support: *The City University of New York Office of Research*
  Title: "*Simulation of solid-state nuclear magnetic resonance experiments to investigate lithium-ion battery materials"*

- **PSC-CUNY RESEARCH AWARD (TRADB-52-66)** *2021–2022*
  Award # 64382-00 52, Amount = $6,000
  Source of Support: *CUNY Research Foundation*
  Title: "*Advanced solid-state NMR technique to characterize two superionic conductors, Li7P2S8I and Li7La3Zr2O12 for Li-Ion battery materials"*
- **THE LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION** *2021–2022*
  BCC LSAMP Program, Source of Support: NSF/BCC-*CUNY*
  Title: "*Spin Dynamics and Simulation of Solid-State NMR Experiment Using SIMPSON Software"*
- **CUNY RESEARCH SCHOLAR PROGRAM** *2020–2021*
  BCC CRSP Award, Amount = $2,400
  Source of Support: *CUNY Research Foundation Office of Research*
  Title: "*Simulation and theory of solid-state NMR and investigation of lithium-ion battery materials electrodes"*
- **THE LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION** *2020–2021*
  BCC LSAMP Program, Source of Support: NSF/BCC-*CUNY*
  Title: "*Simulation of Solid-State Nuclear Magnetic Resonance Experiments Using SIMPSON Software"*
- **THE LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION** *2020–2021*
  BCC LSAMP Program: Source of Support: NSF/BCC-*CUNY*
  Title: "*Spin Dynamics and Simulation of Solid-State NMR Experiments Using SIMPSON Software"*
- **VISITING FACULTY PROGRAM** *SUMMER 2020*
  Total Award Amount = $22,000
  Source of Support: *Department of Energy/ Lawrence Berkeley National Laboratory*
  Title: *Investigation of electrochemical and energy storage behavior of systems of high-capacity variants of the spinel LiMn2O4 and disordered rock salt lithium excess cathode materials for Li-ion batteries*
- **PSC-CUNY RESEARCH AWARD (TRADB-50-333)** *2019–2020*
  Award # 62654-00 50, Amount = $6,000
  Source of Support: *CUNY Research Foundation*
  Title: "*Molecular-level structures of lithium battery materials measured by solid-state 6,7Li dipolar-recoupling"*
- **FACULTY MENTOR: NATIONAL SCIENCE FOUNDATION S-STEM SCHOLARSHIP** *2018-2025*
  Award # 1833852, Amount = $**5** MILLION
  Source of Support: *NSF*
  Title: "*Developing a Growth Mindset Model to Build Resiliency in Underrepresented STEM Students*"
- **RESEARCH GRANT OF THE CITY UNIVERSITY OF NEW YORK** *2018-2019*
  CCRG Award # 1517, Amount = $10,000
  Source of Support: *CUNY Research Foundation*
  Title: "*Comparison between Floquet-Magnus expansion and Fer expansion approaches in solid-state nuclear magnetic resonance spectroscopy"*
- **CUNY RESEARCH SCHOLAR PROGRAM** *2018–2019*
  BCC CRSP Award Amount = $2,400
  Source of Support: *The City University of New York Office of Research*
  Title: *Theory and simulation in solid-state nuclear magnetic resonance spectroscopy and its application*
- **VISITING FACULTY PROGRAM** *SUMMER 2019*
  Total Award Amount = $18,000
  Source of Support: *Department of Energy/ Argonne National Laboratory*
  Title: *Application of Continuous Flow Reactors to Advance Synthesis: Powerful tools to Understand Processes at the Atomic Level and advance manufacturing of fine chemicals and nanosized materials*
- **BCC OFFICE OF ACADEMIC AFFAIRS GRANTS** *2018*
  Award Amount = $500/ Source of Support: *Bronx Community College of CUNY*
  Title: *Using the Floquet-Magnus and the Fer Expansion Approaches to Control the Spin Dynamics in Solid-State Nuclear Magnetic Resonance and Beyond*
- **CUNY WILLIAM STEWART TRAVEL AWARD FOR NATIONAL AND INTERNATIONAL CONFERENCES** *2018*
  Award Amount = $360 / Source of Support: *CUNY Academy for Humanities & Sciences*
- **CUNY RESEARCH SCHOLAR PROGRAM** *2017–2018*
  BCC CRSP Award Amount = $2,400
  Source of Support: *The City University of New York Office of Research*
  Title: *Theory and simulation of solid state nuclear magnetic resonance spectroscopy and its applications*
- **HENRY WASSER AWARD** *2017*
  Award Amount = $750
  Source of Support: *CUNY Academy for Humanities and Sciences*
- **THE NEXT B*II*G THING INQUIRY GRANT** *2017*
  Award Amount = $500
  Source of Support: *Bronx Community College of CUNY;* Title: Advisory in the STEM Fields
- **BCC FOUNDATION FACULTY SCHOLARSHIP SUPPORT GRANTS** *2017*
  BCCF Award Amount = $500
  Source of Support: *Bronx Community College of CUNY*
  Title: *Spin Dynamics in Solid-State Nuclear Magnetic Resonance and Beyond*

- **CUNY RESEARCH SCHOLAR PROGRAM** *2016-2017*
  BCC CRSP Award Amount = $1,000
  Source of Support: *The City University of New York Office of Research*
  Title: *Theory and simulation of NMR experiments to investigate fuel cell electrolytes for energy applications*
- **BCC FOUNDATION FACULTY SCHOLARSHIP SUPPORT GRANTS** *2016*
  BCCF Award Amount = $500*;* Source of Support: *Bronx Community College of CUNY*
  Title: On Fer expansion and its application in solid-state nuclear magnetic resonance and physics
- **CUNY RESEARCH SCHOLAR PROGRAM** *2015–2016*
  BCC CRSP Award Amount = $1,000
  Source of Support: *The City University of New York Office of Research*
  Title: *Theory and simulations of NMR experiments to investigate fuel cell electrolytes for energy applications*

CURRENTLY FUNDED PROJECTS:

- **PSC-CUNY RESEARCH AWARD (TRADB-56-215)** *2025–2026*
  Award # 68482-00 56, Amount = $6,000
  Source of Support: *CUNY Research Foundation*
  Title: "Using Density Functional Theory to Compute and Predict NMR Chemical Shift Parameters*"*
- **FACULTY MENTOR: NATIONAL SCIENCE FOUNDATION S-STEM SCHOLARSHIP** *2018-2025*
  Award # 1833852, Amount = $**5** MILLION
  Source of Support: National Science Foundation
  Title: "*Developing a Growth Mindset Model to Build Resiliency in Underrepresented STEM Students*"

PENDING PROPOSALS:

- **NASA NSPIRES: F.19 COLLABORATIVE OPPORTUNITIES FOR MENTORSHIP, PARTNERSHIP AND ACADEMIC SUCCESS IN SCIENCE,** in Progress *2026*
  Source of Support: *NASA NSPIRES (NNH25ZDA001N-COMPASS)*, Amount = $200,000
  Title: Characterization of ion-molecule interactions in deep eutectic solvent polymer composites
- **PSC-CUNY RESEARCH AWARD (TRACK1-57-285)**, in Progress *2026–2027*
  Source of Support: *CUNY Research Foundation,* Amount = Track 1: up to $7,000
  Title: Mechanistic Understanding of Electrochemical Oxidation of Alcohols to Ketones and Aldehydes through Density Functional Theory Calculations
- **CUNY INTERDISCIPLINARY RESEARCH GRANT**
  Source of Support: *CUNY Office of Research.* Amount = $45,000
  Title: "Developing new theoretical methods for solutions of quantum master equations with applications to NMR and Magnetophononics"

PLANNED PROPOSALS:

- **Proposal/Award # (if available):** NSF 22-XXX / Division of Chemistry: Disciplinary Research Programs (CHE-DRP). **Title:** Mechanistic Understanding at the Atomic Scale of Diffusion and Structure-Composition-Property Relationships in Superionic Sulfide Solid Electrolyte for Lithium-Based Batteries. **Source of Support:** National Science Foundation
- **Proposal/Award # (if available):** The Collaborative Opportunities for Mentorship, Partnership and Academic Success in Science (COMPASS). **Source of Support:** Program funds collaborations between NASA Centers and academic institutions that will advance NASA's scientific priorities and train the future STEM workforce.
- **Proposal/Award # (if available):** NSF 22-XXX / Division of Chemistry: Disciplinary Research Programs (CHE-DRP). **Title:** Development of new pulse sequences in solid-state NMR for controlling spin dynamics and studying ion dynamics in solid electrolytes. **Source of Support:** National Science Foundation
- **Proposal/Award # (if available):** NSF 22-XXX/ Division of Materials Research: Topical Materials Research Programs (DMR-TMRP). **Title:** Investigation of Dehydrogenation of 2-Propanol Using NWChem. **Source of Support:** NSF
- **Proposal/Award # (if available):** The Advanced Science Research Center (ASRC) Seed Grant Program. **Title:** Theoretical Calculation and Simulation to Design, Develop, and Optimize Sophisticated New Pulse Sequences in Advanced Solid-State NMR. **Source of Support:** CUNY Research Foundation Fund
- **Proposal/Award # (if available):** Black, Race, and Ethnic Studies Initiative (BRESI # XXX), Black, Race, and Ethnic Studies Mentored Student Research. **Title:** Simulation of Pulse Sequences in Solid-State NMR for Structural Studies in Novel Superionic Electrolyte Materials of Lithium-Ion Batteries. Amount = $12,000. **Source of Support:** Mellon Foundation
- **Proposal/Award # (if available):** PSC-CUNY Research Award (TRADB-XXX). **Title:** Using Less-established Methods Like the Fer expansion, FM expansion, or path-sum method to solve quantum Liouville, Fokker-Planck, and Master equations for the understanding of the dynamics of quantum system. **Source of Support:** CUNY Research Foundation
- **Proposal/Award # (if available):** Black, Race, and Ethnic Studies Initiative (BRESI # XXX), Faculty Research Grants for Community Colleges. **Title:** "*Control and Simulation of Spin Dynamics in Solid-State NMR to Investigate LIB Electrolyte materials.*" **Amount** = $50,000. **Source of Support**: Mellon Foundation

SCIENTIFIC COLLABORATIONS AND POSTDOCTORAL SUPERVISORS

- Dr. Sergei Tretiak, Theoretical Division and Center for Integrated Nanotechnologies, Los Alamos National Laboratory
- Dr. Hubertus van Dam, Computational SI, Brookhaven National Laboratory (now at the University of Duisburg-Essen)
- Dr. Thibault Charpentier, CEA-Saclay, CNRS, NIMBE UMR 3685, Université Paris-Saclay, France
- Dr. Vincent Battaglia, Energy Storage & Distributed Resources Division, Lawrence Berkeley National Laboratory
- Dr. Yanbao Fu, Energy Storage & Distributed Resources Division, Lawrence Berkeley National Laboratory
- Dr. Krzysztof Z. Pupek, Applied Materials Division, Argonne National Laboratory
- Dr. Arkadiusz Sitek, Harvard University and Massachusetts General Hospital, USA
- Professor Georges El Fakhri, Harvard University and Massachusetts General Hospital (now at Yale University)
- Dr. Luisa Ciobanu/Prof. Denis Le Bihan, French Alternative and Atomic Energies Commission, CEA SACLAY
- Professor Timothy Cross, National High Magnetic Laboratory of US, NHMFL Tallahassee
- Professor Gregory Boutis, The City University of New York

DOCTORAL ADVISOR AND GRADUATE STUDENT MENTORS

- Distinguished Professor Steven Greenbaum (Ph.D. Supervisor), The City University of New York, Graduate Center & HC
- Professor Joel Gersten (Graduate student Mentor), The City University of New York, City College of New York
- Distinguished Professor Herman Z. Cummins (Mentor), The City University of New York, City College of New York

SELECTED FEATURED WORK & HIGHLIGHT

- https://www.youtube.com/watch?v=Sys10U_DF6M
- https://bidenwhitehouse.archives.gov/ostp/news-updates/2025/01/13/president-biden-honors-more-than-300-americans-with-nations-highest-award-for-science-and-mathematics-teachers-and-mentors/
- https://www.nyas.org/ideas-insights/blog/the-immeasurable-impact-of-an-effective-mentor/
- https://engineering.nyu.edu/news/professors-journey-cameroon-new-york-city-culminates-prestigious-white-house-prize
- https://www.gc.cuny.edu/news/professor-named-distinguished-mentor-society-advancement-chicanoshispanics-and-native-americans
- Alumni Awards 2025
- https://www1.cuny.edu/mu/cunyverse/2025/02/05/
- https://www1.cuny.edu/mu/cunyverse/life-at-cuny/alum-and-professor-recognized-with-nations-highest-stem-mentoring-honor/
- https://www.gc.cuny.edu/news/celebrating-breakthroughs-black-history-month
- https://nsbp.org/news/687302/professor-mananga-named-distinguished-mentor-by-sacnas.htm
- https://paesmem.nsf.gov/recognition/awardeeprofile/1259?referer=recog_home
- https://bronx.news12.com/bronx-professor-awarded-with-highest-presidential-honor
- https://www.sacnas.org/diversity-news/sacnas-2024ndistem-distinguished-awardees
- https://acs.digitellinc.com/live/34/session/558219
- https://www.facebook.com/story.php/?story_fbid=933695328793501&id=100064591278258
- https://www.gc.cuny.edu/news/professor-named-distinguished-mentor-society-advancement-chicanoshispanics-and-native-americans
- https://www.kitp.ucsb.edu/apply/fellowships/kitp-fellows/directory
- https://advanceseng.com/emerging-expansion-schemes-nmr-field/
- Eugene Stephane Mananga (0000-0002-0302-8231) (orcid.org)
- https://rockychem.com/links/whos-who-in-ssnmr.html
- https://www.anl.gov/article/driving-stem-advancements-and-discoveries-through-cuttingedge-technology-and-collaboration?fbclid=IwAR1qw5gRVnGifdnvWCZXaSvkmR9eQY5r1EIQDAsBPUf3u2S8RmbHBiV55nI
- https://scholar.google.com/citations?user=3ILUmIUAAAAJ&hl=en
- https://www.adscientificindex.com/scientist/eugene-stephane-mananga/1344843
- https://www.lidsen.com/journals/rpm/rpm-special-issues/nuclear-magnetic-resonance
- https://www.lidsen.com/journals/jept/jept-special-issues/synthesis-characterizations-advanced-materials-energy-storage
- https://www.shinstitute.org/opening-doors-and-transforming-science-through-srp/?utm_source=main+list&utm_campaign=1981451841-email_campaign_2022_10_12_06_19&utm_medium=email&utm_term=0_b6d58a78f5-1981451841-614575325
- President's Award for Excellence in Research and Creative Activities – Bronx Community College (cuny.edu)
- https://www.mdpi.com/journal/mathematics/special_issues/5F3JG92125
- https://www.nanobionyc.com/mentors/eugene-stephane-mananga
- https://optimumresearchmeetings.com/nanoconf2025/committee

LIST OF TOP FIVE (5) PAPERS

1. **Eugene S. Mananga** and T. Charpentier, "Introduction of the Floquet-Magnus Expansion in Solid-State Nuclear Magnetic Resonance Spectroscopy," *The Journal of Chemical Physics, 135, 044109, (2011).* *(Peer-review)*
2. **Eugene S. Mananga**, "On the Fer Expansion: Applications in Solid-State NMR and Physics," *Physics Reports, Phys. Rep. 608, 1-41, (2016).* doi.org/10.1016/j.physrep.2015.10.006 *(Peer-review)*
3. **Eugene S. Mananga** and Thibault Charpentier, "On the Floquet - Magnus Expansion: Applications in Solid-State Nuclear Magnetic Resonance and Physics," *Physics Reports, 609, 1-49, (2016).* doi.org/10.1016/j.physrep.2015.10.005 *(Peer-rev)*

4. J. R. P. Jayakody, A. Khalfan, **Eugene S. Mananga**, S. G. Greenbaum, T. D. Dang, R. Mantz, "NMR Investigation of Water and Methanol Transport in Sulfonated Polyareylenethioethersulfones for Fuel Cell Applications," *(Peer-review)* *Journal of Power Sources, J. Power Sources, 156, 195-199, (2006).* doi.org/10.1016/j.jpowsour.2005.05.056

5. **Eugene S. Mananga**, "From Theory to Practice: Floquet-Magnus and Fer Expansions in Triple Oscillating Field NMR," *Reviews in Physics, 13, 100109 (2025).* https://doi.org/10.1016/j.revip.2025.100109 *(Peer-review)*

LIST OF (5) SELECTED SCIENTIFIC PUBLICATIONS IN REVISION

35. **Eugene S. Mananga**, "Exploring Spin Dynamics in Solid-State NMR using Floquet-Magnus and Fer Expansions with TPPM Pulse." *In Progress*

34. **Eugene S. Mananga,** "Using the Floquet-Magnus and Fer expansion approaches to investigate the spin dynamics during the XiX radiation in Solid-State NMR." *In Progress*

33. **Eugene S. Mananga** and Hubertus van Dam, *(2025).* "Electrochemical transformations of 2-propanol in aqueous solutions using the COSMO solvation model." *In Preparation*

32. **Eugene S. Mananga,** Vincent Battaglia, and Yanbao Fu, "The Last 30 Years of Diagnostic Studies of the Different Techniques in Li-Ion Batteries and Beyond," Part A and B. *In Preparation*

31. **Eugene S. Mananga,** "The Floquet-Magnus and Fer Expansions: Application to Control the Spin Dynamics under the Dipolar Coupling Hamiltonian During the TOFU experiment in NMR." *In Preparation*

SELECTED (30) PUBLICATIONS IN PHYSICS, CHEMICAL PHYSICS, MATERIALS SCIENCE

30. **Eugene S. Mananga**, "From Theory to Practice: Floquet-Magnus and Fer Expansions in Triple Oscillating Field NMR," *Reviews in Physics, 13, 100109 (2025).* https://doi.org/10.1016/j.revip.2025.100109 *(Peer-review)*

29. **Eugene S. Mananga**, A. Diop, P. Dongomale, F. Diane, K. Van Dam, and H. Van Dam, "A detailed analysis of the thermochemistry of the dehydration of 2-propanol using NWChemEx," submitted to**:** https://arxiv.org/abs/2402.14941 https://arxiv.org/ftp/arxiv/papers/2402/2402.14941.pdf *(Peer-review)*

28. **Eugene S. Mananga,** "The Floquet-Magnus and Fer Expansions: Application to Control the Spin Dynamics During the Phase Modulated Lee-Goldburg Radiation in Solid-State NMR," *(Peer-review)* *Reports in Advances of Physical Sciences, 07, 2350010 (2023).* https://doi.org/10.1142/S242494242350010X

27. **Eugene S. Mananga**, "Lithium-ion Battery and the Future," *Recent Progress in Materials*, 3(2), *(2021).* doi:10.21926/rpm.2101012 *(Peer-review)*

26. **Eugene S. Mananga**, "Application of Floquet-Magnus and Fer expansion approaches during Spin-Locking radiation in Solid-State NMR," *Chemical Physics Letters, Chem. Phys. Lett. 730, 153-164, (2019)***.** doi.org/10.1016/j.cplett.2019.05.054 *(Peer-review)*

25. **Eugene S. Mananga**, "Applications of Floquet-Magnus and Fer expansion approaches on Rotary-Resonance Recoupling sequence in Solid-State NMR," *(Peer-review)* *International Journal of Modern Physics B, 33 (24), 1950278, (2019).* doi.org/10.1142/S0217979219502783

24. **Eugene S. Mananga** and Thibault Charpentier, "Revisiting the applications of Floquet-Magnus and Fer expansion approaches in Physics and solid-state NMR," *(Peer-review)* *International Journal of Modern Physics B, 32 (22), 1850236, (2018).* doi.org/10.1142/S0217979218502363

23. **Eugene S. Mananga**, "Investigation of timing effects in modified composite quadrupolar echo pulse sequences by mean of average Hamiltonian theory," *Physica B: Condensed Matter, 528, 47-59, (2018).* doi.org/10.1016/j.physb.2017.10.087 *(Peer-review)*

22. **Eugene S. Mananga**, "Alternative Directions to Control Spin Dynamics in NMR and Physics," *(Peer-review)* *International Journal of Atomic and Nuclear Physics, Int. J. At. Nucl. Phys., 2:005, (2017).* doi:10.35840/2631-5017/2505

21. **Eugene S. Mananga**, "On the Equivalence of the Floquet-Magnus and Fer Expansions to Investigate the Dynamics of a Spin System in the Three-Level System," *(Peer-review)* *The Journal of Physical Chemistry A, J. Phys. Chem. A, 121, 6063-6078 (2017).* doi.org/10.1021/acs.jpca.7b01723

20. **Eugene S. Mananga** and Bingwen Hu, "Controlling the dynamics of quadrupolar spin-1 nuclei by mean of average Hamiltonian theory when irradiated with composite pulse sequences," *(Peer-review)* *The Journal of Physical Chemistry A, J. Phys. Chem. A, 120 (43), 8657-8679, (2016).* doi.org/10.1021/acs.jpca.6b06595

19. **Eugene S. Mananga**, "On the Fer Expansion: Applications in Solid-State NMR and Physics," *Physics Reports, Phys. Rep. 608, 1-41, (2016).* doi.org/10.1016/j.physrep.2015.10.006 *(Peer-review)*

18. **Eugene S. Mananga** and Thibault Charpentier, "On the Floquet - Magnus Expansion: Applications in Solid-State Nuclear Magnetic Resonance and Physics," *Physics Reports, Phys. Rep. 609, 1-49, (2016).* doi.org/10.1016/j.physrep.2015.10.005 *(Peer-review)*

17. Xiaoshi Hu, X. Lou, Chao Li, Y. Ning, Y. Liao, Qun Chen, **Eugene S. Mananga**, Ming Shen and Bingwen Hu, "Facile synthesis of the Basolite F300-like Nanoscale Fe-BTC Framework and its Lithium Storage Properties," *(Peer-review)* *Royal Society of Chemistry Advances, RSC Advances 6, 114483-114490, (2016).* doi.org/10.1039/C6RA22738D

16. M. Shen, R. Roopchand, **Eugene S. Mananga**, Jean-Paul Amoureux, Q. Chen, G. Boutis, B. Hu, "Revisiting NMR composite pulses for broadband ^{2}H excitation," *Solid-State Nuclear Magnetic Resonance, 66-67, 45, (2015).* doi: 10.1016/j.ssnmr.2014.12.004 *(Peer-review)*

15. **Eugene S. Mananga** and Thibault Charpentier, "Floquet-Magnus expansion for general N-coupled spins systems in magic-angle spinning NMR Spectra,"
Chemical Physics, Chem. Phys. 450-451, 83-90, (2015). doi.org/10.1016/j.chemphys.2015.02.006 *(Peer-review)*

14. M. Shen, R. Roopchand, **Eugene S. Mananga**, J.-P Amoureux, Q. Chen, G. Boutis, B. Hu, "Theoretical calculation of a composite pulse with 8-Step Phase Cycling for ^{2}H broadband excitation by average Hamiltonian theory," *(Peer-review)*
Chinese Journal of Magnetic Resonance, Chinese J. Magn. Reson. 32 (2), (2015). doi: 10.11938/cjmr20150219

13. **Eugene S. Mananga**, "Applications of Floquet-Magnus Expansion, Average Hamiltonian Theory and Fer Expansion to Study Interactions in SSNMR when Irradiated with the Magic-Echo Sequence," doi.org/10.1016/j.ssnmr.2013.08.002
Solid-State Nuclear Magnetic Resonance, Solid State Nucl. Magn. Reson. 55-56, 54-62, (2013). *(Peer-review)*

12. **Eugene S. Mananga,** "Criteria to average out the chemical shift anisotropy in solid-state NMR when irradiated with BABA I, BABA II, and C7 radiofrequency pulse sequences," doi.org/10.1016/j.ssnmr.2013.08.003
Solid-State Nuclear Magnetic Resonance, Solid State Nucl. Magn. Reson. 55-56, 63-72 (2013). *(Peer-review)*

11. **Eugene S. Mananga**, "Progress in Spin Dynamics Solid-State Nuclear Magnetic Resonance with the Application of Floquet-Magnus Expansion to Chemical Shift Anisotropy," doi.org/10.1016/j.ssnmr.2013.04.001
Solid State Nuclear Magnetic Resonance, Solid State Nucl. Magn. Reson. 54, 1-7, (2013). *(Peer-review)*

10. **Eugene S. Mananga**, A. E. Reid, "Investigation of the Effect of Finite Pulse Errors on BABA Pulse Sequence Using Floquet-Magnus Expansion Approach,"
Molecular Physics, Mol. Phys. 111, 2, 243-257, (2013). doi: 10.1080/00268976.2012.718379 *(Peer-review)*

9. **Eugene S. Mananga,** A. E. Reid and T. Charpentier, "Efficient Theory of Dipolar Recoupling in Solid-State NMR of Rotating Solids Using Floquet–Magnus Expansion: Application on BABA and C7 Radio Frequency Pulse Sequences,"
Solid State Nuclear Magnetic Resonance, Solid State Nucl. Magn. Reson. 41, 32-47, (2012). *(Peer-review)*
doi: 10.1016/j.ssnmr.2011.11.004

8. **Eugene S. Mananga** and T. Charpentier, "**Introduction of the Floquet-Magnus Expansion in Solid-State Nuclear Magnetic Resonance Spectroscopy**,"
The Journal of Chemical Physics, J. Chem. Phys. 135, 044109, (2011). doi.org/10.1063/1.3610943 *(Peer-review)*

7. **Eugene S. Mananga**, C. D. Hsu, S. Ishmael, T. Islam, and G. S. Boutis, "Probing the Validity of Average Hamiltonian Theory for Spin I=1, 3/2 and 5/2 Nuclei by Analyzing a Simple Two Pulse Sequence,"
Journal of Magnetic Resonance, J. Magn. Reson. 193, 10-22, (2008). doi: 10.1016/j.jmr.2008.03.014 *(Peer-review)*

6. G. S. Boutis, C. Renner, T. Isahkarov, T. Islam, L. Kannangara, P. Kaur, **Eugene S. Mananga**, A. Ntekim, Y. S. Rumala, and D. Wei "High Resolution Q-Space Imaging Studies of Water in Elastin,"
Biopolymers, Biopolymers, 87, 352-9, (2007), doi: 10.1002/bip.20838 *(Peer-review)*

5. **Eugene S. Mananga**, R. Roopchand, Y. S. Rumala, and G. S. Boutis, "On The Application of Magic Echo Cycles For Quadrupolar Echo Spectros of Spin-1,"
Journal of Magnetic Resonance, J. Magn. Reson. 185, 28-37, (2007). doi: 10.1016/j.jmr.2006.10.016 *(Peer-review)*

4. **Eugene S. Mananga**, Y. Rumala, and G. S. Boutis, "Finite Pulse Width Artifact Suppression in Spin-1 Quadrupolar Echo Spectra by Phase Cycling,"
Journal of Magnetic Resonance, J. Magn. Reson. 181, 296-303, (2006). doi: 10.1016/j.jmr.2006.05.015 *(Peer-review)*

3. J. R. P. Jayakody, **Eugene S. Mananga**, A. Khalfan, S. H. Chung, R. Lopato and S. G. Greenbaum, "Multinuclear NMR Studies of Mass Transport of Phosphoric Acid in Water,"
Solid State Ionic, Advanced Materials for Emerging Technologies, Proceedings of the 10th Asian Conference (World Scientific Publishers, Singapore), 19-28, (2006). doi.org/10.1142/9789812773104_0002 *Invited Paper*

2. J. R. P. Jayakody, A. Khalfan, **Eugene S. Mananga**, S. G. Greenbaum, T. D. Dang, R. Mantz, "NMR Investigation of Water and Methanol Transport in Sulfonated Polyareylenethioethersulfones for Fuel Cell Applications," *(Peer-review)*
Journal of Power Sources, J. Power Sources, 156, 195-199, (2006). doi.org/10.1016/j.jpowsour.2005.05.056

1. J. R. P. Jayakody, P. E. Stallworth, **Eugene S. Mananga**, J. Farrington-Zapata, and S. G. Greenbaum, "High Pressure NMR Study of Water Self-Diffusion in NAFION- 117 Membrane," *(Peer-review)*
Journal of Physical Chemistry B, J. Phys. Chem. B, 108, 4260-4262, (2004). https://doi.org/10.1021/jp037621+

SELECTED (4) BOOK & BOOK CHAPTERS (Peer-Review)

30. **Eugene S. Mananga,** A. Hollington, and K. Registe "Treatment of Group Theory in Spectroscopy,"
Symmetry (Group Theory) and Mathematical Treatment in Chemistry (2018), *Invited Book Chapter*
http://dx.doi.org/10.5772/intechopen.75735 *(Peer-review)*

29. **Eugene S. Mananga**, "Mathematical formulations used in solid-state NMR for structural biology,"
Application of NMR Spectroscopy, Bentham Science Publishers (2015), *Invited Book Chapter*
https://doi.org/10.1016/B978-1-60805-999-7.50005-7 *(Peer-review)*

28. **Eugene S. Mananga,** S. B. Mananga, and A. Reid "Theory and applications in solid-state NMR spectroscopy,"
NMR: Theory, Applications and Technology, Nova Science Publishers, Inc. (2014) *Invited Book Chapter*
https://novapublishers.com/shop/nuclear-magnetic-resonance-nmr-theory-applications-and-technology *Peer-review)*

27. **Eugene S. Mananga** "High-Pressure Nuclear Magnetic Resonance Studies of Fuel Cell Membranes,"
UMI Dissertation Services, The City University of New York (2005) *Ph.D. Dissertation*

SELECTED (7) RESEARCH REPORTS & TECHNICAL/ ABSTRACTS

26. **Eugene S. Mananga** and Hubertus van Dam, **"**Using Density Functional Theory to Investigate the Mechanistic Simulation of Solvation Effects of 2-propanol With COnductor-like Screening MOdel (COSMO)," *US Department of Energy – Brookhaven National Laboratory, 2024 Research Report*

25. **Eugene S. Mananga**, Vincent Battaglia, Yanbao Fu, and Robert Kostecki, "The evolution of Li-ion batteries from the conventional to the advanced to the state-of-the-art to the hybridized," *US Department of Energy – Lawrence Berkeley National Laboratory, 2021 Research Report*

24. **Eugene S. Mananga**, Vincent Battaglia, Yanbao Fu, and Robert Kostecki, "30 Years of Different Techniques Applied in Li-ion Batteries," *US Department of Energy – Lawrence Berkeley National Laboratory, 2020 Research Report*

23. **Eugene S. Mananga**, J. A. Libera, K. Z. Pupek, "Using Flame Spray Pyrolysis and Advanced Solid-State NMR Techniques to Synthesize and Characterize, Respectively, Solid-State Li-Ion Battery Materials ($Li_7La_3Zr_2O_{12}$, $Li_7P_2S_8I$)," *US Department of Energy - Argonne National Laboratory, 2019 Research Report, (July 2019)*

22. **Eugene S. Mananga**, "For Contributions and advanced studies in the Theory of Spin Dynamics in Solid-State Nuclear Magnetic Resonance and Quantum Mechanics," *The Indicator, 99 (6a), 14-24 (June 2018)*

21. **Eugene S. Mananga**, "The Control of Spin Dynamics in SSNMR Spectroscopy," *The Indicator, 99 (4a), 19 (April 2018)*

20. **Eugene S. Mananga**, R. Fu, M. Truong, T. A. Cross, "*Enhanced Sensitivity and Resolution for Orientational Restraints from Lipid Bilayer-Bound Gramicidin A*," *National High Magnetic Field Laboratory, Annual Research Report, 93, (2008)*

SELECTED (4) PUBLICATIONS & ABSTRACTS IN MEDICAL IMAGING & PUBLIC HEALTH

19. **Eugene S.** Mananga, E. Lopez, A. Diop, P. J. T. Dongomale, F. Diane, "The Impact of the Air Pollution on Health in New York City," *Journal of Public Health Research, 12 (4), 1–18, (2023).* *(Peer-review)*

18. **Eugene S. Mananga and** Lamisa Rusmeha**,** "Comparison between the 2020 Coronavirus-19 and the 1665 Great Plague of London," *Annals of Public Health Reports, 5 (2), 216-223, (2021).* doi: 10.36959/856/521 *(Peer-review)*

17. **Eugene S. Mananga,** Georges El Fakhri, J. Schaefferkoetter, Ali Bonab, J. Ouyang, "Myocardial Defect Detection Using PET-CT: Phantom Studies," *PLOS ONE, PONE, 9, e88200, (2014).* doi: 10.1371/journal.pone.0088200 *(Peer-review)*

16. **Eugene S. Mananga,** Georges El Fakhri, Ali Bonab, and Jinsong Ouyang, "Assessment of Myocardial Defect Detectability with PET-CT," *Journal of Nuclear Medicine May 2013, 54, (Supplement 2) 98* *(Peer-review)* *https://jnm.snmjournals.org/content/54/supplement_2/98*

SELECTED (15) CONFERENCE PROCEEDINGS/ABSTRACTS

15. **Eugene S. Mananga**, "Application of Floquet-Magnus Expansion and Fer Expansion Approaches During TPPM Radiation in Solid-State NMR," *60th ENC Conference, Asilomar Conference Center, Pacific Grove, CA (2019)*

14. **Eugene S. Mananga**, "Equivalence of Floquet-Magnus and Fer expansions and the investigation of spin dynamics in the three-level system," *59th ENC (Experimental NMR Conference), Orlando, FL (2018)*

13. **Eugene S. Mananga**, "Study of the dynamics of quadrupolar spin-1 nuclei via AHT when irradiated with modified composite quadrupolar echo sequences," *58th ENC (Experimental NMR), Asilomar Conference Grove, CA (2017)*

12. **Eugene S. Mananga**, "Efficient numerical integrator based on Fer expansion: Application to SSNMR experiments**,**" 3rd International Conference on Theoretical and Cond. Matter Phys., J. Material Sci. Eng. *(2017).*

11. **Eugene S. Mananga**, "Equivalence between FME and FE to investigate the dynamics of a spin system in the three-level system,"*3rd International Conference on Theoretical and Condensed Matter Physics*, J. Material Sci. Eng. *(2017).*

10. **Eugene S. Mananga**, "FME Approach in Solid-State NMR," *57thENC Expt. NMR Conference, Pittsburg, PA, (2016)*

9. **Eugene S. Mananga**, *"*Recent development of Spin Dynamics in Solid-State Nuclear Magnetic Resonance,*"* *J. Phys. Chem. Biophys. 2016, 6:3(Suppl), APS, International Conference on Physics*, New Orleans, LA. *(2016)*

8. **Eugene S. Mananga**, *"*On Fer and Floquet-Magnus Expansions: Application in Solid-State NMR and Physics,*"* *J. Phys. Chem. Biophys. 2016, 6:3 (Suppl), APS, International Conference on Physics*, New Orleans, LA. *(2016)*

7. **Eugene S. Mananga**, C. D. Hsu, S. Ishmael, T. Islam and G. S. Boutis, "A study of the precision of average Hamiltonian theory for spin I= 1, 3/2 and 5/2 nuclei by investigating a two pulse quadrupolar echo sequence," *American Institute of Physics (AIP) Conference Proceedings, 1140, 85-92 (2009)*

6. G. S. Boutis, C. Renner, N. M. Hunt-Walker, T. Isahkarov, T. Islam, L. Kannangara, P. Kauer, **Eugene S. Mananga**, A. Ntekim, Y. Rumala, D. Wei. "High resolution Q-space Imaging studies of water in elastin," *American Institute of Physics (AIP) Conference Proceedings, 1081, 59-62 (2008)*

5. **Eugene S. Mananga,** R. Roopchand, Y. S. Rumala and G. S. Boutis, "An analysis of the magic echo and solid echo sequence for quadrupolar echo spectroscopy of spin I=1 nuclei by average Hamiltonian theory," *American Institute of Physics (AIP) Conference Proceedings, 991, 71-74 (2008)*

4. M. Sharma, J. Moore, H. Nguyen, D. Murray, **Eugene S. Mananga**, T. A. Cross, "Solid-state NMR studies of uniformly aligned full-length membrane proteins," *49th ENC (Experimental NMR), Asilomar Conference Grounds, CA (2008)*

3. T. A. Cross, M. Sharma, J. Hu, M. Truong, D. Murray, **Eugene S. Mananga**, D. Ni, H. Qin, W. Brey, "Membrane Proteins drug targets and prospects for drug-screening using solid-state NMR," *37th Southeastern Magnetic Resonance Conference, Tallahassee, FL, October 15-17, (2008)*

2. Sophia Suarez, J.R. P. Jayakody, **Eugene S. Mananga**, Song-Ho Chung, S. G. Greenbaum, "NMR studies of mass transport in lithium conducting polymer electrolytes," *Unpublished ECS Proceedings, San Antonio, May, (2004)*

1. **Eugene S. Mananga**, S. Greenbaum, P. Stallworth, J. Jayakody, J. Farrington, "Design and development of high pressure NMR to study proton conducting membranes (NAFION)," *First International Conference on Fuel Cell Development and Deployment, Storrs, Connecticut, March, (2004)*

SELECTED 10 PUBLICATIONS IN MENTORING & TEACHING - CURRENTLY IN REVISION

10. **Eugene S. Mananga**, "Expanding the Geography of Knowledge: Mentorship, Representation, Global STEM Advancement, and the Growing Scientific Influence of Underrepresented Communities," In Progress in the Journal: ***Science (2026)***. Perspective/Opinion/Comments/Career Column article, ***Science Careers.***

9. **Eugene S. Mananga**, "The importance of mentorship and resilience," In Progress in the Journal: ***Science (2026)***. Perspective/Opinion/Comments/Career Column article, ***Science Careers.***

8. **Eugene S. Mananga**, "The future of science depends on who gets mentored—not just who gets funded," In Progress in the Journal: ***Nature (2026)***. World View, ***Opinion Nature.***

7. **Eugene S. Mananga**, "Africa is expanding the world's scientific map - if we invest in the mentorship that sustains it," In Progress in the Journal: ***Nature (2026)***. *Perspective/Opinion/Comments/**Career Column article, Nature.***

6. **Eugene S. Mananga**, "The importance of mentorship and resilience," In Progress in the Journal: ***Nature (2026)***. ***Comment article, Nature Africa.***

5. S. Ketwaru, J. Moghaddasi, and **Eugene S. Mananga,** "Mentoring Philosophy, Reflective Practice, Sustainability and Impact Assessment for Targeted Population and Strategies for Supporting Underrepresented Groups in STEM," In Progress in the Journal: ***International Journal of Mentoring and Coaching in Education (2026).***

4. Monika Sikand and **Eugene S. Mananga**, "Integrating Life Cycle Assessment into Physics Curriculum," Under review and in Progress in the Journal: The Physics Teacher (TPT, AIP). Manuscript #TPT26-AR-00062. ***(2026)***

3. Monika Sikand and **Eugene S. Mananga**, "Motivating Physics Learning through Research Applications in Spin Dynamics," in Preparation to be submitted in the Journal: The Physics Teacher (TPT, AIP). ***(2026)***.

2. **Eugene S. Mananga,** "Leadership and Sustainability in Mentoring," *in Preparation **(2026)***.

1. **Eugene S. Mananga,** "Artificial Intelligence (AI) in Mentoring," *in Preparation **(2026)***.

UPCOMING PH.D. THESES COMMITTEE MEMBER ("JURY/RAPPORTEUR/EXAMINATEUR")

2026 Ph.D. Defense/student in the group of Professor Yaovi Gagou, *Université de Picardie Jules Verne*, Amiens, France

RECENT DOCTORAL (PH.D.) STUDENTS SUPERVISED, ADVISED, AND MENTORED

Graduate Students in Supervision/Co-Supervision

2024-2027 Claver Niyondiko, Ph.D. candidate (Chemistry), *Ecole Doctorale de l'Universite du Burundi*
2024-2027 Epimaque Nkurunziza, Ph.D. candidate (Mechanical Engineering), *Ecole Doctorale de l'Universite du Burundi*
2024-2027 Gilbert Nizigiyimana, Ph.D. candidate (Electrical Engineering), *Ecole Doctorale de l'Universite du Burundi*

SELECTED' STUDENTS & FACULTY MENTORED & TRAINED

Faculty and Postdoc mentored & Trained

2011-2014 George Bennett (Ph.D. Physics), Adjunct Professor, *William Paterson University* (Eugene advised and supported the applications of Dr. Bennett during his transition from postdoc to faculty position in Physics)
2007-2011 Samson Tafon Penn (Ph.D. Physics), I mentored Dr. Penn during his transition from graduate studies to Scientist.
2011-2013 Alicia Reid (Ph.D. Chemistry), *Medgar Evers College of CUNY* (trained in the theory of Solid-State NMR)

Undergraduate and Graduate Students Advised, Co-Advised, Mentored, Co-Mentored, Supervised and Co-Supervised

Fall 2025 and Spring 2026 CSTEP Mentees

Andrade	Kevin	Automotive Technology
Ikponmwen	Osaro	Cybersecurity & Networking
Johnson	Hakim	Cybersecurity & Networking
Amer	Muhammad	Cybersecurity & Networking
Nyann	Ishmael	Cybersecurity & Networking
sylla	Mohamed	Cybersecurity & Networking
Bayire	Mustapha	Cybersecurity & Networking

Spring 2025 NSF S-STEM and CSTEP Mentees

LESLIE	JIMENEZ	SCIENCE-AS=Physics
Jason	Fermin	ENGRSCI-AS
Xavier	Duarte Gonzalez	ENGRSCI-AS

2024 (Fall & Spring)	Faculty Mentor and advisor of 12 students, NSF S-STEM Scholarship $5 Million Grant and CSTEP programs Students: (Fall 2024) Leslie Jimenez, Abdoulatif Tchakala, Brandon Van Duyne, Jason Fermin, Duarte Gonzalez Xavier; (Spring 2024) Brandon Van Duyne, Leslie Jimenez, Sakima Rodriguez, Abdoulatif Tchakala, Franklyn Vasquez, Malique McDowell, Duarte Gonzalez Xavier
2023 (Fall & Spring)	Faculty Mentor and advisor of 12 students, NSF S-STEM Scholarship $5 Million Grant and CSTEP programs Students: (Fall 2023) Vasquez Franklyn, Sulayman Konateh, Jiminez Leslie, Hamilton AJ, Rodriguez Sakima, Xavier Duarte Gonzalez; (Spring 2023) Sillah Mohamado Lamen, Hamilton Kyaja, Jimenez Leslie, Traore Boubacar, Ewell Sephiroth, Peter Forrest
Summer2023	Faculty Mentor at Brookhaven National Laboratory for the graduate students: Raksha Gururaj (New York University), Mayowa Osunsanya (CUNY Graduate Center), Kenneth Erzoah Ndede (CUNY Graduate Center); and undergraduate students: Aissata Diop (Smith College) and Lailatu Donkor (CUNY BCC)
2022-2023	PI of Junior Faculty Research Award in Science and Engineering (JFRASE) for the Part-Time Research staff: Berkley Delmonico (University of Connecticut), Nadia Medjkane (CUNY BCC), Josue Rosa Alvarez (CUNY BCC), Willmar Guzman Ulloa (CUNY BCC), Franklin Kwapong (CUNY BCC), Justin West (CUNY BCC)
2022-2023	Lailatu Donkor, Samantha J. Lora, and Kareem McCalla, Undergraduate Students at BCC, CUNY Research Scholar Program (Simulation of Solid-State Nuclear Magnetic Resonance Experiment Using SPINEVOLUTION Software), Student, Faculty-mentor: E. Mananga
Summer2022	Faculty Mentor at Brookhaven National Laboratory for a graduate student (Paulin Dongomale) and undergraduate students (Aissata Diop & Fambougouri Diane)
2021-2022	Aissata Diop, B. Olivencia, and C. Rosario, Undergraduate Students at BCC, CUNY Research Scholar Program (Research in solid-state NMR and Lithium-ion Batteries), Student, Faculty-mentor: E. Mananga
2021-2022	Erika Lopez, Undergraduate Student at BCC, LSAMP (Research in simulation of solid-state NMR experiments and Lithium-ion Batteries), Student, Faculty-mentor: Eugene Mananga (Supervisor)
2020-2021	Lamisa Rusmeha, undergraduate student at Hunter College (honor thesis), Student, E. Mananga (Supervisor)
2020-2021	Fambougouri Diane and Daniel Bosah, Undergraduate Students at Bronx Community College, CUNY Research Scholar Program (Research in solid-state NMR and Lithium-ion Batteries), Faculty-mentor: Eugene Mananga
2020-2021	Aissata Diop and Malik Pernarh, Undergraduate Student at BCC, LSAMP (Research in simulation of solid-state NMR experiments and Lithium-ion Batteries), Student, Faculty-mentor: Eugene Mananga (Supervisor)
2018-2019	Faculty Mentor, NSF S-STEM Scholarship $5 Million Grant and CSTEP programs, USA Students: Richard Ametepey; Saikou Fadiga
2018-2019	Richard Ametepey, Saikou Fadiga, and Erick Canals, Undergraduate Students at BCC, CUNY Research Scholar Program (Research in Physics, NMR, Lithium-ion Batteries), NSF S-STEM Scholarship, Student, Faculty-mentor: E. Mananga (Supervisor)
2017-2018	Willmar Ulloa and Francesca Serrano, Undergraduate Student at BCC, CUNY Research Scholar Program (Research in Physics, NMR, and Fuel Cells), Student, Faculty-mentor: E. Mananga (Supervisor). Ulloa get accepted to several internships in 2019 including the Summer Internship Program at *Princeton University*
2017-2018	Alagah-Komlavi Esseh and Firyal Farage, Undergraduate Students at BCC, Research Grant (CCRG # 1517) Research topics: Numerical simulations of solid-state NMR experiments. Implementation of a General Simulation Program for SSNMR Spectroscopy called SIMPSON. Student, Faculty-mentor: E. Mananga
2017-2018	Akil Hollington, *Dept. of Chemistry, Syracuse University*; K. Registe, *Dept. of Mathematics, Lehman College*
2016-2017	Ahmed Saeed, Undergraduate Student at BCC CUNY Research Scholar Program (Research in Physics, NMR, and Fuel Cells), Student, Faculty-mentor: Eugene Mananga (Supervisor)
2015-2017	Afoma Yvonne Chidune, *LECOM Doctorate School of Pharmacy*
2016-2017	Felix Asante, Undergraduate Student in Chemistry, *State University of New York*
2015-2016	Angel Valentino, Undergraduate Student at BCC, CUNY Research Scholar Program (Research in Physics, NMR, and Fuel Cells), Student, Faculty-mentor: Eugene Mananga (Supervisor)
2015-2016	Azime Aydogmus, Undergraduate Student, BCC (Physical Therapy Doctorate Student, *Kean University*)
2014-2016	Carol Ram-carela, Undergraduate Student, *Lehman College*
2014-2015	Alexis Sobecki, Undergraduate Student, *Saint John's University*
2011-2016	Lesan Mattis, Undergraduate Student at *Hunter College*
2006-2008	T. Islam, Undergraduate Student, Faculty-mentor: Greg, Boutis, York College of CUNY (Co-Supervisor)
2006-2008	S. Ishmael, Undergraduate Student, Faculty-mentor: Greg, Boutis, York College-CUNY (Co-Supervisor)
2007-2008	C. D. Hsu, High School Student, Faculty-mentor: Greg, Boutis, York College-CUNY (Co-Supervisor)
2006-2008	R. Roopchand, Master thesis in Physics, faculty-mentor: Greg. Boutis, York College-CUNY (Co-Supervisor)
2005-2006	Yisa. Rumala, Undergraduate thesis in Physics, faculty-mentor: Greg. Boutis. Co-Supervisor: Dr. Mananga. Rumala won the NSF Graduate Fellow to the *University of Michigan Ann* Arbor and *Princeton University*
2004-2007	Dr. Tamara Hinton, Medical Doctor (Eugene advised and supported Dr. Hinton effort during her transition from undergraduate School at *City College of New York* to Pre-medical school & to medical School
1992-Present	Betina S. Mananga (entered the University at age 15 and obtained her bachelor's in mathematics at age 19 at the *University of Paris - Saclay*

SELECTED MINORITY MENTORING HISTORY

Grants or Types of Support Related to Mentoring Activities and Research	Period	Mentoring Activities and Research/ Physics, chemistry	Number of Minority Students Mentored
Pro bono, Free of Charge	2024-2027	1. Supervise mentees/ STEM 2. Inform my mentees about research opportunities 3. Provide academic guidance and intellectual support	3 underrepresented doctoral students
1. Collegiate Science and Technology Entry Program (CSTEP) 2. Pro bono, Free of Charge	2025-2026	1. Inform my mentees about research/internship opportunities 2. Provide academic guidance/support 3. Supervise mentees/ STEM	> 7 underrepresented minorities mentees
1. NSF S-STEM Scholarship 2. Collegiate Science and Technology Entry Program (CSTEP) 3. Pro bono, Free of Charge	2024-2025	1. Inform my mentees about research/internship opportunities 2. Provide academic guidance/support 3. Supervise mentees/ STEM	> 3 underrepresented minorities mentees
1. NSF S-STEM Scholarship 2. PSC-CUNY Research Award 3. Probono, Free of Charge (Mentoring of 15%)	2023-2024	1. Inform my mentees about research/internship opportunities 2. Provide academic guidance/support 3. Supervise mentees/ STEM	> 25 underrepresented minorities mentees
1. JFRASE from *Alfred P. Sloan Foundation* 2. PSC-CUNY Research Award 3. CUNY Research Scholar Program (CRSP) 4. NSF S-STEM Scholarship 5. Collegiate Science and Technology Entry Program (CSTEP) - Pro bono, Free of Charge	2022-2023	1. Meet with my mentees/bi-weekly 2. Inform my mentees about research/internship opportunities 3. Provide academic guidance/support 4. Supervise STEM research	> 10 underrepresented minorities mentees
1. Louis Stokes Alliance for Minority Participation (LSAMP) 2. CUNY Research Scholar Program 3. Pro bono, Free of Charge	2021-2022	All 1, 2, 3, and 4 above mentoring and research activities	> 5 underrepresented minorities mentees
1. Louis Stokes Alliance for Minor. P. (LSAMP) 2. CUNY Research Scholar Program 3. Pro bono, Free of Charge	2020-2021	All 1, 2, 3, and 4 above mentoring and research activities	> 4 underrepresented minorities mentees
1. Louis Stokes Alliance for Minority Participation 2. Pro bono, Free of Charge (Mentoring of 15%)	2019-2020	All 1, 2, 3, and 4 above mentoring and research activities	> 4 underrepresented minorities mentees
1. CUNY Research Scholar Program (CRSP) 2. NSF S-STEM Scholarship 3. Collegiate Science and Technology Entry Program (CSTEP) 4. Community College Research Grant (CCRG) 5. Pro bono, Free of Charge	2018-2019	All 1, 2, 3, and 4 above mentoring and research activities	2 underrepresented minorities mentees
1. CUNY Research Scholar Program 2. Pro bono, Free of Charge (Mentoring of 15%)	2017-2018	All 1, 2, 3, and 4 above mentoring and research activities	> 5 underrepresented minorities mentees
1. PSC-CUNY Research Award 2. CUNY Research Scholar Program (CRSP) 3. Pro bono, Free of Charge (Mentoring of 15%)	2016-2017	All 1, 2, 3, and 4 above mentoring and research activities	> 5 underrepresented minority mentees
1. PSC-CUNY Research Award 2. CUNY Research Scholar Program (CRSP) 3. Pro bono, Free of Charge (Mentoring of 15%)	2015-2016	All 1, 2, 3, and 4 above mentoring and research activities	> 5 underrepresented minority mentees
1. NSF/AGEP MAGNET Fellowship York College and Graduate Center of CUNY 2. Pro bono, Free of Charge (Mentoring of 15%)	2005-2007	Supervise mentees/ STEM research	> 20 underrepresented minorities mentees

TEACHING EXPERIENCE

Position/Title/Grade	Department	Institution	Dates
Adjunct Professor	Applied Physics Department	New York University	*2015 – Present*
Doctoral Professor	Ph.D. Program in Physics	City University of New York/ Graduate Center	*2015 – Present*
Doctoral Professor	Ph.D. Program in Chemistry	City University of New York/ Graduate Center	*2016 – Present*
Professor	Eng., Physics & Technology	City University of NY-Bronx Community College	*2015 – Present*
Adjunct Professor	Natural Sciences & Maths	Alliance University	*2023 - Present*
Adjunct Full Professor	Physics Department	Saint John's University of New York City	*2014 –2015*
Adjunct Assist. Professor	Physics & Astronomy Dept.	City University of New York/ Lehman College	*2014*
Adjunct Full Professor	Physics Department	Saint John's University of New York City	*Fall 2011*

Adjunct Assist. Professor	Physics Department	City University of New York/ Queens College	*Fall 2011*
Adjunct Assist. Professor	Physics Department	The City University of New York/ Hunter College	*Fall 2011*
Adjunct Assist. Professor	Physics Department	The City University of New York/ MEC	*Spring 2009*
Visiting Assist. Professor	Physics/OEODP Department	City University of New York/ Graduate Center	*2006 – 2007*
Adjunct Assist. Professor	Earth & Physical Sc. Dept.	The City University of New York/ York College	*2005 -2007*
Adjunct Lecturer	Physical Sciences Dept.	City University of New York/Kingsborough C.C.	*Spring 2005*
Adjunct Lecturer	Physics & Astronomy Dept.	The City University of New York/ Hunter College	*2002 – 2005*
Adjunct Lecturer	Physics Department	The City University of New York/ City College	*2000 – 2001*
Adjunct Lecturer	Physics department	University of Sciences & Technique - Franceville	*1996 – 1999*
Lecturer	Physical Sciences	Department of National Education - Franceville	*1995 – 1999*
Teaching Assistant	Physics	The University of Yaounde	*1992 – 1994*

New York University

- Taught PH-UY1213 Physics Course: Motion and Sound
- Taught PH-UY1213 Physics Course: algebra based course
- Taught PH-UY1013 Physics Course: Mechanics
- Taught PH-UY1223 Physics Course: Electricity and light
- Taught PH-UY2033 Physics Course: Waves, Optics, and Thermodynamics
- Taught PH-UY2023 Physics Course: Electric, Magnetism, and Fluids
- Taught PH-UY2121 General Physics Lab I

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Spring 2026

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 – B1RC	Mechanics	Friday: 2:00pm-2:55pm
PH-UY 2033 – A1RC	Waves, Optics, & Thermodynamics	Friday: 08:00am-08:55am
PH-UY 2023 – A3RC	Electric, Magnetism, and Fluids	Friday: 09:00am-09:55am
PH-UY 1223 - ARC	Electricity and Light	Friday: 11:00am-11:55am

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Fall 2025

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 - A3RC	Mechanics	Friday: 10:00pm -10:55pm
PH-UY 2033 – B3RC	Waves, Optics, & Thermodynamics	Friday: 2:00pm - 2:55pm
PH-UY 2023 – A3RC	Electric, Magnetism, and Fluids	Friday: 08:00am - 08:55am
PH-UY 2023 – B2RC	Electric, Magnetism, and Fluids	Friday: 1:00pm - 1:55pm
PH-UY 2023 – C3RC	Electric, Magnetism, and Fluids	Friday: 3:00pm - 3:55pm

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Spring 2025

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 - C3RC	Mechanics	Friday: 12:00pm-12:55pm
PH-UY 2033 - A2RC	Waves, Optics, & Thermodynamics	Friday: 09:00am-09:55am
PH-UY 2023 - A1RC	Electric, Magnetism, and Fluids	Friday: 08:00am-08:55am
PH-UY 1013 - A4RC	Mechanics	Friday: 10:00am-10:55am

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Fall 2024

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 - A3RC	Mechanics	Friday: 10:0pm-10:55pm
PH-UY 2033 - A3RC	Waves, Optics, & Thermodynamics	Friday: 8:00am-8:55am
PH-UY 2023 - A1RC	Electric, Magnetism, and Fluids	Friday: 9:00am-9:55am
PH-UY 2023 - D1RC	Electric, Magnetism, and Fluids	Friday: 5:00pm-5:55pm

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Spring 2024

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 - C3RC	Electric, Magnetism, and Fluids	Friday: 12:0pm-12:55pm
PH-UY 2033 - A2RC	Waves, Optics, & Thermodynamics	Friday: 9:00am-9:55am
PH-UY 1013 - A4RC	Mechanics	Friday: 10:00am-10:55am

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Fall 2023

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 - A3RC	Mechanics	Friday: 10:00am-10:55am
PH-UY 2023 - A1RC	Electric, Magnetism, and Fluids	Friday: 09:00am-09:55am
PH-UY 2033 - A3RC	Waves, Optics, & Thermodynamics	Friday: 08:00am-08:55am

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Spring 2023

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 2023 - A2RC	Electric, Magnetism, and Fluids	Friday: 08:00am-08:55am
PH-UY 2033 - A2RC	Waves, Optics, & Thermodynamics	Friday: 09:00am-09:55am
PH-UY 1013 - A4RC	Mechanics	Friday: 10:00am-10:55am

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Fall 2022

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 - A3RC	Mechanics	Friday: 10:00am-10:55am
PH-UY 2023 - A3RC	Electric, Magnetism, and Fluids	Friday: 08:00am-08:55am
PH-UY 2033 - B1RC	Waves, Optics, & Thermodynamics	Friday: 09:00am-09:55am

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Spring 2022

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1023 - A4RC	Mechanics	Friday: 11:00pm-11:55pm
PH-UY 2023 - A3RC	Electric, Magnetism, and Fluids	Friday: 12:00pm-12:55pm
PH-UY 2033 - B3RC	Waves, Optics, & Thermodynamics	Friday: 02:00pm-02:55pm
PH-UY 2023 - B2RC	Electric, Magnetism, and Fluids	Friday: 05:00pm-05:55pm

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Fall 2021

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1223 - DREC	Electricity and Light	Friday: 10:00am-10:55am
PH-UY 2033 - B3RC	Waves, Optics, & Thermodynamics	Friday: 09:00pm-09:55pm
PH-UY 1013 - A4RC	Mechanics	Friday: 11:00pm-11:55pm

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Spring 2021

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 2023 - A1RC	Electric, Magnetism, and Fluids	Friday: 12:00pm-12:55pm
PH-UY 2033 - A2RC	Waves, Optics, & Thermodynamics	Friday: 01:00pm-01:55pm
PH-UY 2033 - B2RC	Waves, Optics, & Thermodynamics	Friday: 04:00pm-04:55pm

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Fall 2020

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 - A3RC	Mechanics	Friday: 11:00am-11:55am
PH-UY 2023 - A2RC	Electric, Magnetism, and Fluids	Friday: 12:00pm-12:55pm

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Summer 2020

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 - X2RC	Mechanics	Tuesday & Friday: 1:30pm-2:30pm

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Spring 2020

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1213 - DREC	Motion and Sound	Friday: 12:00pm-12:55am

PH-UY 2023 - B2RC	Electric, Magnetism, and Fluids	Friday: 03:00pm-03:55pm
PH-UY 2033 - A2RC	Waves, Optics, & Thermodynamics	Friday: 01:00pm-01:55pm

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Fall 2019

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 - A3LC	Mechanics	Friday: 11:00am-11:55am
PH-UY 1013 - C3RC	Mechanics	Friday: 02:00pm-02:55pm
PH-UY 2023 - A3RC	Electric, Magnetism, & Fluids	Friday: 12:00pm-12:55pm

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Spring 2019

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 - C3RC	Mechanics	Friday: 11:00am-11:55am
PH-UY 2033 - A2RC	Waves, Optics, & Thermodynamic	Friday: 01:00pm-01:55pm
PH-UY 2023 - B2RC	Electric, Magnetism, & Fluids	Friday: 03:00pm-03:55pm

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Fall 2018

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 - A3RC	Mechanics	Friday: 11:00am-11:55am
PH-UY 1013 - B3RC	Mechanics	Friday: 02:00pm-02:55pm
PH-UY 1223 - BREC	Electric and Light	Friday: 12:00pm-12:55pm

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Spring 2018

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 - C3RC	Mechanics	Friday: 11:00am-11:55am
PH-UY 2033 - A2RC	Waves, Optics, & Thermodynamic	Friday: 01:00pm-01:55pm
PH-UY 2023 - B2RC	Electric, Magnetism, Fluids	Friday: 03:00pm-03:55pm

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Spring 2017

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 - C3RC	Mechanics	Friday: 11:00am-11:55am
PH-UY 2033 - A2RC	Waves, Optics, & Thermodynamics	Friday: 01:00pm-01:55pm
PH-UY 2023 - B2RC	Electric, Magnetism, & Fluids	Friday: 03:00pm-03:55pm

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Fall 2016

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 1013 - A3RC	Mechanics	Friday: 12:00pm-12:55pm
PH-UY 2023 - B2RC	Electric, Magnetism, & Fluids	Friday: 03:00pm-03:55pm

New York University – Tandon School of Engineering – Polytechnic Institute
Semester/Year: Spring 2016

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/ Time(s)**
PH-UY 1013 – D2RC	Mechanics	Friday: 05:00pm-05:55pm
PH-UY 2033 – B4RC	Waves, Optics, & Thermodynamics	Friday: 04:00pm-04:55pm

New York University – Polytechnic School of Engineering – Polytechnic Institute
Semester/Year: Fall 2015

Courses Number/Section/Additional Duties	**Course Title**	**Course Meeting Day(s)/Time(s)**
PH-UY 2023 - B3RC	Electric, Magnetism, Fluids	Friday: 03:00pm-03:55pm
PH-UY 2033 - A2RC	Waves, Optics, & Thermodynamics	Friday: 04:00pm-04:55pm
PH-UY 2121 D	General Physics Lab I	Wednesday: 9:30am-12:20am

Saint John's University of New York City

- Taught undergraduate physics laboratory, Lectures and Recitations
- Taught PHY1622 and PHY1942 Physics Courses

Alliance University

- Taught undergraduate physics laboratory

The City University of New York – Bronx Community College

- Taught Electronics Course (ELC 15), Computer Applications: Word, Excel, PowerPoint
- Taught NMT83: Radiation Physics and Dosimetry.
- Taught NMT81: Orientation to Nuclear Medicine.
- Instructed Radiation Physics: Course RAD71
- Taught Physics Courses: PHY 11, PHY 12, PHY 14, & PHY 24
- Supervising research and mentoring students under the CUNY Research Scholar Program, and « The NEXT B*II*G THING » Inquiry Grant 2017
- Taught Physics Courses: 21, 31, 32
- Taught Astronomy Courses: 101, 111

The City University of New York – Lehman College

My Teaching Schedule > 2014 Spring Term > Lehman College

1-4 of 4 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
PHY 167-2LAB (41828)	General Physics II (Laboratory)	21	Tu 12:00PM - 1:40PM	Gillet 337	Jan 27, 2014-May 23, 2014
PHY 167-3LAB (41835)	General Physics II (Laboratory)	22	Th 12:00PM - 1:40PM	Gillet 337	Jan 27, 2014-May 23, 2014
PHY 169-2LAB (42198)	Introductory Physics II (Laboratory)	2	Tu 12:00PM - 1:40PM	Gillet 337	Jan 27, 2014-May 23, 2014
PHY 169-3LAB (42204)	Introductory Physics II (Laboratory)	1	Th 12:00PM - 1:40PM	Gillet 337	Jan 27, 2014-May 23, 2014

The City University of New York – Hunter College

My Teaching Schedule > 2011 Fall Term > Hunter College

1-2 of 2 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
PHYS 110LC-02 (31847)	Gen Mech-Heat-Snd Lc (Lecture)	105	Th 7:00PM - 8:15PM	West Bldg 714	Sep 1, 2011-Dec 23, 2011
PHYS 110RC-02 (31849)	Gen Mech-Heat-Snd Rc (Lecture)	101	Th 8:25PM - 9:15PM	West Bldg 714	Sep 1, 2011-Dec 23, 2011

My Teaching Schedule > 2011 Summer Term > Hunter College

1-5 of 5 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
PHYS 110LC-01 (8139)	Gen Mech-Heat-Snd Lc (Lecture)	81	Mo 11:40AM - 1:14PM	North Bldg C002	Jun 1, 2011-Aug 3, 2011
PHYS 110RC-01 (8143)	Gen Mech-Heat-Snd Rc (Lecture)	19	Th 9:50AM - 10:55AM	West Bldg 522	Jun 1, 2011-Aug 3, 2011
PHYS 110RC-02 (8145)	Gen Mech-Heat-Snd Rc (Lecture)	20	Th 1:30PM - 2:35PM	West Bldg 522	Jun 1, 2011-Aug 3, 2011
PHYS 110RC-03 (8146)	Gen Mech-Heat-Snd Rc (Lecture)	19	Mo 9:50AM - 10:55AM	West Bldg 522	Jun 1, 2011-Aug 3, 2011
PHYS 110RC-04 (8148)	Gen Mech-Heat-Snd Rc (Lecture)	20	Mo 1:30PM - 2:35PM	West Bldg 522	Jun 1, 2011-Aug 3, 2011

My Teaching Schedule > 2005 Summer Term > Hunter College

1-1 of 1 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
ASTRO 10700-04 (7937)	Lab Exercises in Astronomy (Lecture)	16	Tu 1:24PM - 3:09PM	North Bldg 1239	Jun 1, 2005-Aug 15, 2005

My Teaching Schedule > 2004 Summer Term > Hunter College

1-1 of 1 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
PHYS 110LB-02 (3915)	Gen Mech-Heat-Snd Lb (Lecture)	31	Mo 1:24PM - 4:09PM	North Bldg 1241	Jun 1, 2004-Aug 15, 2004

My Teaching Schedule > 2004 Spring Term > Hunter College

1-3 of 3 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
ASTRO 10700-01 (15724)	Lab Exercises in Astronomy (Lecture)	24	Fr 9:10AM - 11:00AM	North Bldg 1239	Feb 1, 2004-May 31, 2004
ASTRO 10700-02 (15725)	Lab Exercises in Astronomy (Lecture)	23	Fr 12:10PM - 2:00PM	North Bldg 1239	Feb 1, 2004-May 31, 2004
ASTRO 10700-03 (15726)	Lab Exercises in Astronomy (Lecture)	27	Th 5:35PM - 7:25PM	North Bldg 1239	Feb 1, 2004-May 31, 2004

My Teaching Schedule > 2003 Spring Term > Hunter College

1-3 of 3 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
ASTRO 10700-01 (15495)	Lab Exercises in Astronomy (Lecture)	16	Fr 9:10AM - 11:00AM	North Bldg 1239	Feb 1, 2003-May 31, 2003
ASTRO 10700-02 (15496)	Lab Exercises in Astronomy (Lecture)	22	Fr 12:10PM - 2:00PM	North Bldg 1239	Feb 1, 2003-May 31, 2003
ASTRO 10700-03 (15497)	Lab Exercises in Astronomy (Lecture)	22	Th 5:35PM - 7:25PM	North Bldg 1239	Feb 1, 2003-May 31, 2003

My Teaching Schedule > 2002 Fall Term > Hunter College

1-3 of 3 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
ASTRO 10700-01 (15237)	Lab Exercises in Astronomy (Lecture)	0	Th 3:10PM - 5:00PM	North Bldg 1239	Sep 1, 2002-Dec 31, 2002
ASTRO 10700-05 (15241)	Lab Exercises in Astronomy (Lecture)	17	Th 5:35PM - 7:25PM	North Bldg 1239	Sep 1, 2002-Dec 31, 2002
ASTRO 10700-06 (15242)	Lab Exercises in Astronomy (Lecture)	22	Th 3:10PM - 5:00PM	North Bldg 1239	Sep 1, 2002-Dec 31, 2002

The City University of New York – Medgar Ever College

My Teaching Schedule > 2009 Spring Term > Medgar Evers College

1-2 of 2 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
PHS 101-05 (30542)	Intro To Physical Sc (Lecture)	28	Tu 6:20PM - 8:00PM	Carroll 324	Feb 1, 2009-May 31, 2009
PHY 114-01 (30567)	Basic Physics (Lecture)	20	Tu 2:00PM - 3:40PM	Carroll 208C	Feb 1, 2009-May 31, 2009

The City University of New York – York College

My Teaching Schedule > 2007 Fall Term > York College

1-1 of 1 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
PHYS 151-04 (5594)	University Physics I (Lecture)	0	Mo 6:00PM - 7:50PM	Classroom 111	Sep 1, 2007-Dec 31, 2007

My Teaching Schedule > 2007 Spring Term > York College

1-2 of 2 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
PHYS 151-01 (5148)	University Physics I (Lecture)	18	We 3:00PM - 4:50PM	Acad Core 2C04	Feb 1, 2007- May 31, 2007
PHYS 151-02 (5149)	University Physics I (Lecture)	15	Mo 3:00PM - 4:50PM	Acad Core 2C04	Feb 1, 2007- May 31, 2007

My Teaching Schedule > 2006 Fall Term > York College

1-2 of 2 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
PHYS 151-01 (5309)	University Physics I (Lecture)	19	Mo 9:00AM - 10:50AM	Acad Core 2E04	Sep 1, 2006- Dec 31, 2006
PHYS 151-02 (5310)	University Physics I (Lecture)	17	We 3:00PM - 4:50PM	Acad Core 2C04	Sep 1, 2006- Dec 31, 2006

The City University of New York – Kingsborough CC

My Teaching Schedule > 2005 Spring Term > Kingsborough CC

1-1 of 1 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
PHY 1100-01 (22998)	General Physics I (Lecture)	16	Mo 9:10AM - 11:20AM	S S213	Feb 1, 2005- May 31, 2005

The City University of New York – The Graduate Center
Office of Educational Opportunity & Diversity Program (OEODP)

- Seek to expand opportunities for science students in Doctoral study and to create a network linking students, faculty and administrators
- Provided academic and counseling support to graduate students.
- Assisted in the recruitment of underrepresented students in doctoral study, and serve as mentor for recipients of the MAGNET fellowships
- Co-coordinator of the monthly MAGNET roundtable with underrepresented students for academic discussions, mentoring, and peer support
- Invited academic professional for talks relating to graduate school experiences
- Provided support to the CUNY Pipeline program, which provides support to undergraduates from CUNY for skill building, research skills and graduate school preparation workshops
- Mentored AGEP MAGNET-STEM scholars at the Graduate Center
- Taught seminars and workshops on graduate school survival skills, research skills, and dissertation support
- Provided support to the Director of OEODP as needed

The City University of New York – City College

My Teaching Schedule > 2001 Spring Term > City College

1-2 of 2 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
PHYS 20401-05 (30127)	Lab (Lecture)	9	Th 9:00AM - 11:50AM	TBA	Feb 1, 2001- May 31, 2001
PHYS 20401-06 (30128)	Lab (Lecture)	9	Th 2:00PM - 4:50PM	TBA	Feb 1, 2001- May 31, 2001

My Teaching Schedule > 2000 Fall Term > City College

1-2 of 2 | View All

Class	Class Title	Enrolled	Days & Times	Room	Class Dates
PHYS 20701-14 (31629)	Lab (Lecture)	9	Th 8:45AM - 10:45AM	TBA	Sep 1, 2000- Dec 31, 2000
PHYS 20801-01 (31677)	Lab (Lecture)	7	Tu 8:45AM - 10:45AM	TBA	Sep 1, 2000- Dec 31, 2000

My Teaching Schedule > 2000 Spring Term > City College

1-2 of 2 | View All

	Class	Class Title	Enrolled	Days & Times	Room	Class Dates
	PHYS 20300-03 (32766)	General Physics (Lecture)	15	Tu 5:55PM - 7:10PM	TBA	Feb 1, 2000-May 31, 2000
	PHYS 20300-04 (32767)	General Physics (Lecture)	11	Th 5:55PM - 7:10PM	TBA	Feb 1, 2000-May 31, 2000

SELECTED PROFESSIONAL DEVELOPMENT

- 2025 NSF Cybersecurity Summit, Trusted CI, Center of Excellence, Center Green Campus at UCAR and NSF NCAR in Boulder, CO, October 20-23, 2025.
- Biological Physics of Biomolecular Condensates: Bridging Theory and Experiment (biomol-c25) | Kavli Institute for Theoretical Physics (KITP) Conference, June 16-18, 2025. (Participation Online).
- NSF's AGEP (Alliances for Graduate Education and Professoriate) @ 25 Conference: Celebrating the Past, Creating the Future, Arlington VA, October 8-10, 2024.
- New York University (NYU) Scholarship of Teaching and Learning (SoTL) Symposium, April 12, 2024.
- SciOPS (Scientist Opinion Panel Survey) Panel is a new type of science, technology, and innovation (STI) knowledge commons that conducts national surveys concerning the scientific community's views on important topics. SciOPS is affiliated with the Arizona State University (ASU), February 2023, Present.
- Exascale Computing Project Annual Meeting (ECP-AM), virtually May 02-6, 2022
- Sustainable Horizons Institute (SHI) and DOE Exascale Computing Project (ECP), Sustainable Research Pathways (SRP)-High Performing Computing (HPC), SRP-HPC Workshop, Feb. 11-21, 2022.
- Sustainable Horizons Institute and Berkeley Lab, Sustainable Research Pathways Workshop, Nov 30-Dec. 03, 2021.
- PANELIST in a roundtable discussion hosted by the Office of Workforce Development for Teachers and Scientists of the U.S Department of Energy's Office of Science (Nominated by Argonne National Laboratory), October 6, 2021, Virtual.
- "InCREASE", The Interdisciplinary Consortium for Research and Educational Access in Science and Engineering, Workshop at Argonne National Laboratory, November 12, 2020.
- VIRTUAL NASA HBCU/MSI Technology Infusion Road Tour, November 18-19, 2020.
- AAC&U Knowledge Exchange Institute May 21-24, 2019 Alexandria, VA.
- 2019 NSF CAREER Bootcamp Program, Advanced Science Research Center, Graduate Center, CUNY, (Jan.– Jul.) 2019
- New York Section of the American Chemical Society (ACS), New York, January 20, 2018.
- 2018 PKAL STEM LEADERSHIP INSTITUTE II, STEM Faculty Participant, Claggett Center, Maryland. July, 2018.
- Cottrell Scholars Collaborative New Faculty Workshop, American Chemical Society (ACS) National Offices, Washington D.C., August 3-5, 2017.
- BNL Electron-Ion-Collider Info Meeting, Brookhaven National Laboratory, May 23-25, 2017.
- HSI STEM Active Learning Professional Development Summer Institute at Lehman College of CUNY, July 10-11, 2017.
- Workshop on NSF Educational and Human Resources (EHR) Grants, RFCUNY, May 17, 2017.
- CUNY Faculty Diversity and Inclusion Conference 2017, CUNY at the Crossroads: Diversity and Intersectionality in Action, Graduate Center, March 31, 2017.
- International Conference on Physics, CPD Certificate of Attendance and Learning Tool, New Orleans, LA. June 2016.
- BCC/CUNY, Center for Teaching, Learning and Technology, CTLT, New Faculty Seminar, January 11-13, 2016.
- Princeton University and the Institute of Advanced Study (IAS) Princeton Summer School on Condensed Matter Physics, Prospects in Theoretical Physics, Princeton, New Jersey, July 2015.
- Joint Meeting of the Biophysical Society 52nd Annual Meeting and 16th International Biophysics Congress, Long Beach, CA, February 02-06, 2008.
- MIT, School on Bio-molecular Solid-State NMR, Stowe, Vermont, January 2008 (1st U.S.A - Canada Winter School).
- 2006 Annual Biomedical Research Conference for Minority Students (ABRCMS), CA, November 8 -11, 2006, USA.
- NIH Regional Seminar on Program Funding and Grants Administration, Co-Hosted by Harvard University and Massachusetts General Hospital, Boston, MA, March 2006.
- Annual Conference of the National Society of Black Physicists and Hispanic Physicists, San Jose, CA, February 2006.
- 7th Annual HBCU - UP, National Research Conference, Baltimore, Maryland, February 09-12, 2006.
- Poster Judge at the 2005 Annual Biomedical Research Conference for Minority Students (ABRCMS), Atlanta, GA, 2005.
- 2005 Institute on Teaching and Mentoring/12TH Annual IOTAM, Arlington, VA, October 27-30, 2005, USA.
- 2005 SACNAS (Society for Advancement of Chicanos and Native Americans in Science) National Conference, 2005, USA
- EMERGE Workshop/Conference 2005: From Conception to Realization: Empowering the Scientists, Engineers and Innovators of Tomorrow, Atlanta, GA, September 22 - 24, 2005, USA.
- Annual Conference of the National Society of Black Physicists and Black Physicists Students, Florida, Orlando, 2005.
- Annual Conference of the National Society of Black Physicists and Black Physicists Students, Washington, D.C, 2004.
- GRC (Gordon Research Conference) on Fuel Cells, 2002, Roger Williams University, RI, USA.

SELECTED TALKS & POSTER'S PRESENTATIONS

- **E. S. Mananga**, "*Acceptance Speech for the* City University of New York (CUNY) Award," New York City, April 24, 2025. *(Talk)*
- **E. S. Mananga,** keynote speaker for the 1st Annual Research Symposium of CUNY Black Male Initiative (BMI), New York City College of Technology - City Tech, New York City, May 02, 2025. *(Talk)*

- **E. S. Mananga**, "*Acceptance Speech for 2024 SACNAS Distinguished Mentor Award*," SACNAS' 2024 National Diversity in STEM Conference in Phoenix, Arizona, November 02, 2024. SACNAS (*Society for Advancement of Chicanos/Hispanics and Native Americans in Science*) *(Talk)*
- **E. S. Mananga**, "*Biosciences, Human Errors, and Mentoring*," 31st Edition Conference (Biosciences) on Economic Perspectives of Biosciences in Cameroon: Contribution to Import-Substitution, Douala, Cameroon, November 29, 2024, Virtual. *(Talk)*
- **E. S. Mananga**, "*Density Functional Theory Calculations of the Thermochemistry of the Dehydration of 2-propanol*," 8th International Conference on Catalysis and Chemical Engineering, Boston, February 29, 2024, Virtual *(Talk)*
- A. Diop, **E. S. Mananga**, and H. Van Dam, "*Stabilization of Various Compounds in Water using COSMO and Implementation of Neural Network Potentials*," Annual Biomedical Research Conference for Minoritized Scientists (ABRCMS), Phoenix Convention Center, Arizona, November 15, 2023 *(Poster)*
- **E. S. Mananga**, "*A detailed Analysis of the Thermochemistry of the Dehydration of 2-Propanol Using NWChemEx*," Earth Week 2023 NANOBIONYC LAUNCH, Graduate Center of CUNY, New York, April 18, 2023 *(Talk)*
- **E. S. Mananga**, A. Diop, P. Dongomale, F. Diane, K. Van Dam, and H. Van Dam, "*Investigation of the Dehydration of 2-Propanol for NWChem*", 2023 Exascale Computing Project (ECP) Annual Meeting, Houston, Tx, January 17, 2023*(Poster)*
- S. Lora, L. Donkor, K. McCalla, and **E. S. Mananga**, "*Control and Simulation of Spin Dynamics in Solid-State NMR*," CUNY Research Scholars Program Symposium, LCC, New York, May 26, 2023 *(Poster)*
- W. G. Ulloa and **E. S. Mananga**, "*Theory and description of solid state nuclear magnetic resonance spectroscopy and its application*," Earth Week 2023 NANOBIONYC LAUNCH, Graduate Center of CUNY, New York, April 18, 2023*(Poster)*
- S. Lora, K. McCalla and L. Donkor, and **E. S. Mananga**, "*Simulation of Spin Dynamics in Solid-State NMR using SPINEVOLUTION software*," Earth Week 2023 NANOBIONYC LAUNCH, New York, April 18, 2023 *(Poster)*
- A. Diop, **E. S. Mananga**, and H. van Dam, "*Investigation of the Dehydration of 2-propanol Over the ZSM-5 Zeolite using NWChem*," Earth Week 2023 NANOBIONYC LAUNCH, NY, April 18, 2023 *(Poster)*
- **E. S. Mananga**, A. Diop, P. Dongomale, F. Diane, K. M. Osunsanya, and H. van Dam, "*Investigation of the Dehydration of 2-Propanol for NWChemEx*," Earth Week 2023 NANOBIONYC LAUNCH, NY, April 18, 2023 *(Poster)*
- **E. S. Mananga**, "*Dehydration of 2-Propanol Using NWChem*", Brookhaven National Laboratory, Sustainable Horizons Institute (SHI), Exascale Computing Project (ECP), & Department of Energy, July 12, 2022 *(Poster)*
- Aissata Diop, **E. S. Mananga**, Hubertus Van Dam, "*Reaction Mechanism for 2-propanol at the Zeolite*", Brookhaven National Laboratory, SHI, Exascale Computing Project, & DOE, July 12, 2022 *(Poster)*
- Fambougouri Diane, **E. S. Mananga**, Hubertus Van Dam, "*Results: Density Functional Theory (DFT) Calculation of 2-Propanol and Propene*", Brookhaven National Laboratory, SHI, ECP, & DOE, July 12, 2022 *(Poster)*
- Paulin Dongomale, **E. S. Mananga**, Hubertus Van Dam, "*Investigate the Dehydrogenation of 2-Propanol Using NWChem*", Brookhaven National Laboratory, SHI, Exascale Computing Project, & DOE, July 12, 2022 *(Poster)*
- Aissata Diop, Brandon Olivencia, and **E. S. Mananga**, "*Spin Dynamics in Solid-State NMR: Application to Spin Echo Sequence*", CUNY Research Scholar Program, 2022 Summer Symposium, August 01, 2022 *(Poster)*
- **E. S. Mananga**, "*Solid-State NMR study and Density Functional Theory Calculations of Structure and Dynamics of Iodide-Based Li7P2S8I Super-Ionic Conductor*", SHI and DOE Exascale Computing Project (ECP), Sustainable Research Pathways (SRP)-High Performing Computing (HPC), SRP-HPC Workshop, Feb. 14, 2022 *(Poster)*
- **E. S. Mananga**, "*Solid-State NMR study and Density Functional Theory Calculations of Structure and Dynamics of Iodide-Based Li7P2S8I Super-Ionic Conductor*", SHI and Berkeley Lab, SRP Workshop, Dec. 01, 2021 *(Poster)*
- **E. S. Mananga**, "*The evolution of Li-ion batteries from the conventional to the advanced to the state-of-the-art to the hybridized*", Lawrence Berkeley National Laboratory & Berkeley Lab, August 2021 *(Talk)*
- **E. S. Mananga**, "*Brief History of NMR and 30 Years of Different Techniques Applied in Li-Ion Batteries*", Lawrence Berkeley National Laboratory & Berkeley Lab, August 2020 *(Talk)*
- **E. S. Mananga,** "*physics/engineering/career options/undergrad research*," BCC/ NSF S-STEM Boot Camp, 2019 *(Talk)*
- **E. S. Mananga**, "*Using Advanced Solid-State NMR to Investigate Solid-State Li-Ion Battery Materials (LLZO, LPSI) Synthesized by Flame Spray Pyrolysis Technique*", Argonne National Laboratory, July 2019 *(Talk)*
- **E. S. Mananga,** "*The Control of Spin Dynamics in Solid-State Nuclear Magnetic Resonance Spectroscopy*," Distinguished Scientist Award Lecture, American Chemical Society, New York Section, Pace University, April 2018 *(Talk)*
- **E. S. Mananga**, "*Spin dynamics in Solid State NMR and Physics*", Henry Wasser Award Lecture, Academy of Humanities and Sciences, The Graduate Center, CUNY, 2017 *(Talk)*
- **E. S. Mananga,** "*Efficient numerical integrator based on Fer expansion: Application to solid-state NMR experiments*", 3rd International Conference on Theoretical and Condensed Matter Physics, New York, 2017 *(Talk)*
- **E. S. Mananga,** "*Equivalence between floquet-magnus and Fer expansions to investigate the dynamics of a spin system in the three-level system*", 3rd International Conf. on Theoretical and Condensed Matter Physics, New York, 2017 *(Poster)*
- **E. S. Mananga**, "*Impact of Physics Newton's Laws in Chemistry*", New Faculty Workshop, American Chemical Society (ACS) National Offices, Washington D.C., 2017 *(Talk)*
- **E. S. Mananga**, "*On the Equivalence of the Floquet-Magnus and Fer expansions to Investigate the Dynamics of a Spin System in the Three-Level System*", Center for Quantum Phenomena Inaugural Symposium, NYU, 2017 *(Poster)*
- **E. S. Mananga**, *"Study of the Dynamics of Quadrupolar Spin-1 Via AHT When Irradiated With Modified Composite Quadrupolar Echo Sequences"*, 58th Experimental NMR Conference, ENC *2017* Asilomar Conference Center *(Poster)*
- **E. S. Mananga**, "*Multi-level encryption-based security approach for loT devices,*" Actualization of the Internet of Things Conference, 2017 Forum on Industrial and Applied Physics (FIAP) Monterey, CA *(Poster Abstract Accepted)*
- **E. S. Mananga**, *"On Fer and Floquet-Magnus Expansions: Application in Solid-State Nuclear Magnetic Resonance and Physics,"* American Physical Society (APS), International Conference on Physics, New Orleans, LA. *2016* *(Talk)*
- **E. S. Mananga**, *"Recent development of Spin Dynamics in Solid-State Nuclear Magnetic Resonance,"* American Physical Society, International Conf. on Physics, New Orleans, LA. *2016* *(Poster)*

- **E. S. Mananga**, *"Floquet-Magnus Expansion Approach in Solid-State Nuclear Magnetic Resonance,"* 57th Experimental Nuclear Magnetic Conference, ENC *2016* Pittsburg, PA *(Poster)*
- **E. S. Mananga,** "*Applications of Nuclear Magnetic Resonance (NMR) in Geophysics: Oil and Gas Exploration Industry,*" World Congres and Expo on Materials Science and Polymer Engineering, Dubai, UAE, *November 2015 (declined' Talk)*
- **E. S. Mananga, "***Theoretical methods in NMR: introduction of Floquet-Magnus expansion as a new approach to control spin dynamics in solid-state NMR,*" Hofstra University, *December 2014 (Talk)*
- **E. S. Mananga,** "*NMR Related Topics: Theory, Experiments, Simulations, and methodology,*" Schlumberger Dhahran Carbonate Research Center, Kingdom of Saudi Arabia, *November 2014 (Talk)*
- **E. S. Mananga,** "Basics operation of gamma-camera and the QC tests and possible artifacts used for evaluation", The City University of New York, BCC, July *2014 (Talk)*
- **E. S. Mananga,** "*Optimization of lesion detection into pediatric bone SPECT,*" Massachusetts General Hospital, Division of Nuclear Medicine, Department of Radiology, *September 2013 (Talk)*
- **E. S. Mananga**, J. Ouyang, A. Bonab, G. El Fakhri, "*Assessment of Myocardial Defect Detectability with PET-CT*", Society of Nuclear Medicine and Molecular Imaging, Vancouver, Canada, Annual Meeting, *June 2013 (Talk)*
- **E. S. Mananga**, "*Application of Physics in Medicine: Cardiac PET and* PET/CT Imaging," National Society of Black Engineers Conference, 39th Annual Convention, Indianapolis, *March 2013 (Talk)*
- **E. S. Mananga**, "*Floquet-Magnus Expansion: A New Theoretical Approach to Control Spin Dynamics in NMR,"* Massachusetts Institute of Technology, Dept. of Nuclear Science and Engineering, Quantum Eng. seminar 2013 *(Talk)*
- **E. S. Mananga**, "*Myocardial Defect Detectability using Phantom Studies on PET-CT,"* Twelfth Annual New England Science Symposium, The Joseph B. Martin Conf. Center at Harvard Medical School, Harvard University, *2013 (Poster)*
- **E. S. Mananga**, "*Myocardium Lesion Detectability in PET Scan,"* National Institute of Health (NIH)/National Institute of Biomedical Imaging and Bioengineering, *June 2012 (Poster)*
- **E. S. Mananga**, "*The Introduction of the Floquet-Magnus Expansion Expansion to NMR Spectroscopy,"* Massachusetts General Hospital and Harvard Medical School, Seminar Radiology *August 2011 (Talk)*
- **E. S. Mananga**, "*The Introduction of the Floquet-Magnus Expansion Approach to Solid-State NMR Spectroscopy and its Applications,"* New York University, Seminar Chemistry (NMR), *May 2011 (Talk)*
- **E. S. Mananga**, "*Prospect For Diffusion Enhancement of Signal and Resolution in MRI,"* Commissariat à l'Energie Atomique, NEUROSPIN, DSV, I2BM, MRI Seminar *October 2010 (Talk)*
- **E. S. Mananga**, "*Solid-State NMR: An Important Technique for Membrane Proteins and Peptides Structure Elucidation,"* University of Pennsylvania, Seminar Chemistry *December 2008 (Talk)*
- **E. S. Mananga**, "*Sensitivity Improvement in Solid State NMR,*" National High Magnetic Field Laboratory, Center for interdisciplinary magnetic resonance, NMR Seminar, *November 2008 (Talk)*
- **E. S. Mananga**, M. Truong, M. Sharma, and T. A. Cross, "*Enhanced Sensitivity and Resolution for Orientational Restraints from Lipid Bilayer-Bound Gramicidin A,*" 37th Southeastern Magnetic Resonance Conference, *2008 (Poster)*
- **E. S. Mananga**, "*Solid-State NMR: an Important Technique for Proteins and Peptides Structure Elucidation*," Rochester Institute of Technology: Center for Imaging Science in the College of Science, Future Faculty Career Exploration Program, Rochester, New York, *September 2008 (Talk)*
- **E. S. Mananga**, "*Mathematical Foundation of the Determination of Proteins Structure From Orientational Constraints,*" National High Magnetic Field Laboratory, CIMAR, NMR Seminar, *August 2008 (Talk)*
- G. S. Boutis, N. M. Hunt-Walker, A. Borovitsky, T. Islam, **E. S. Mananga**, O. A. Mitchell, *"Probing anisotropic motion of water in thermally and mechanically strained elastin by 2H double-quantum NMR,"* Magnetic Resonance in Porous Media (MRPM9), MRI Proceedings of the 9th International Bologna Conference, (Cambridge, MA, USA) *2008 (Talk)*
- G. Boutis, N. Walker, A. Borovitsky, T. Islam, **E. S. Mananga**, O. A. Mitchell, *"Probing anisotropic motion of water in thermally and mechanically strained elastin by 2H double-quantum NMR,"* 49th ENC, Asilomar Conf., CA. *2008 (Poster)*
- G. S. Boutis and **E. S. Mananga**, *"Probing the validity of average Hamiltonian theory for spin I=1, 3/2 and 5/2 nuclei by analyzing a simple two pulse sequence,"* 49th ENC. Asilomar Conf. Grounds, CA. *2008 (Poster)*
- R. Roopchand, **E. S. Mananga**, and G. S. Boutis, *"A Phase cycling schemes for suppressing finite pulse width artifacts of composite pulses for spin I=1 quadrupolar echo spectroscopy,"* 49th ENC (Experimental Nuclear Magnetic Resonance Conference), Asilomar Conference Grounds, Pacific Grove, CA.*March 2008 (Poster)*
- **E. S. Mananga**, C. D. Hsu, S. Ishmael, T. Islam and G. S. Boutis, "*A study of the precision of average Hamiltonian theory for spin 3/2 and 5/2 nuclei and suppression of finite pulse width artifacts by phase cycling for these spin systems,*" Joint Annual Conference of the NSBP/ NSHP, Washington D.C., *February 2008 (Poster)*
- Jaime Farrington, **E. S. Mananga**, J. Jayakody and S. G. Greenbaum, "*Development and application of NMR instrumentation to Determine ionic self-diffusion coefficients as a function of applied hydrostatic pressure,*" Joint Annual Conference of the NSBP/NSHP, Washington D.C., *February 2008 (Poster)*
- **E. S. Mananga**, R. Roopchand, Y. Rumala and G. S. Boutis, "*Controlling the dynamics of quadrupolar nuclei by mean of average Hamiltonian theory,*" National High Magnetic Field Laboratory, Tallahassee, FL. *August 2007 (Talk)*
- **E. S. Mananga**, R. Roopchand, Y. Rumala and G. Boutis, *"On the application of magic echo cycles for quadrupolar echo spectroscopy of spin -1,"* 49th Rocky Mountain Conf. on Analytical Chemistry, Colorado, *July 2007 (Poster)*
- **E. S. Mananga,** C. Renner, C. Hsu, S. Ishmael, T. Islam, and G. S. Boutis, *"Controlling the spin dynamics of I = 1, 3/2 and 5/2 nuclear spins by average Hamiltonian theory*", 49th Rocky Mountain Conf. on Analytical Chemistry, CO *2007 (Poster)*
- R. Roopchand, **E. S. Mananga,** C. Hsu, S. Ishmael, T. Islam, and G. S. Boutis, *"Phase cycling schemes for suppressing finite pulse width artifacts of composite pulses for spin I=1 quadrupolar echo spectroscopy,"* 49th Rocky Mountain Conference on Analytical Chemistry, Breckenridge, Colorado, *July 2007 (Poster)*
- **E. S. Mananga**, RCN NMR Symposium and Workshop, "*Solid-State NMR Spectroscopy of Metals in Biological Systems and in Materials,*" University of Delaware, Newark, DE, *June 2007 (Poster)*

- **E. S. Mananga**, Y. Rumala, and G. S. Boutis *"Finite pulse width artifact suppression in spin-1 quadrupolar echo spectroscopy by phase cycling*," 48th ENC (Experimental NMR Conf.), Solid State NMR, FL. *2007 (Poster)*
- **E. S. Mananga**, R. Roopchand, Y. S. Rumala and G. S. Boutis, *"On The Application Of Magic Echo Cycles For Quadrupolar Echo Spectroscopy of Spin -1,"* 48th ENC (Experimental NMR Conf.), Solid State NMR, FL. *2007 (Poster)*
- C. Renner, G. Boutis, **E. S. Mananga** *"High resolution NMR scattering studies of water confinement in elastin*," 48th ENC (Experimental Nuclear Magnetic Resonance Conf.), Molecular and Cellular Imaging, FL. *2007 (Poster)*
- **E. S. Mananga**, R. Roopchand, Y. S. Rumala and G. S. Boutis, "*The application of solid - echo and magic - echo cycles for quadrupolar echo spectroscopy of spin-1 nuclei,"* Joint Annual Conf. of the National Society of Black Physicists and Hispanic Physicists**,** Boston, MA. *2007 (Talk)*
- **E. S. Mananga**, Y. Rumala, and G. S. Boutis, "*Finite pulse width artifact removal in spin-1 quadrupolar echo spectra by phase cycling*," Rensselaer Polytechnic Institute, Department of Physics, Applied Physics and Astronomy, *2006 (Talk)*
- **E. S. Mananga**, J. Jayakody, A. Khalfan, S. Greenbaum, T. Dong, Z. Bai, and R. Mantz, *"NMR Studies of Water and Methanol Transport in Highly Sulfonated Membranes for Fuel Cells,"* APS Conf., MD,*2006 (Poster)*
- Y. Rumala, **E. S. Mananga**, and G. Boutis, *"Development of Strong Magnetic Field Gradient Coils for Q-Space Nuclear NMR Imaging,"* 9th Annual Science & Engineering Conference at The Graduate Center of CUNY, NY., *2006 (Poster)*
- Steve Greenbaum, Sophia Suarez, J.R. P. Jayakody, **E. S. Mananga**, *"NMR Studies of Mass Transport in Lithium Conducting Polymer Electrolytes,"* 205th Conference of the Electrochemical Society, San Antonio, Texas *2004 (Poster)*

SELECTED PROFESSIONAL AFFILIATIONS

- New York Academy of Sciences (member since 2006)
- CUNY Academy for the Humanities & Sciences (member since 2017)
- Electrochemical Society, ECS (member since 2004)
- American Physical Society, APS (member since 2001)
- National Society of Black Physicists, NSBP (member since 2004)/
- National Society of Black Engineers, NSBE (member since 2013), USA
- Society of Nuclear Medicine & Molecular Imaging, SNMMI (member since 2013)
- American association for the Advancement of Science, AAAS (member since 2022)
- Society for Advancement of Chicanos/Hispanics & Native Americans in Science, SACNAS (member since 2005)
- American Association of Physics Teachers, AAPT (member since 2024)
- American Chemical Society, ACS (member since 2024)