





**Explore Hopkins** 2025

# **Location Directory**

Scott-Bates Commons Conference Center, 3rd Floor, Salon C 3301 N. Charles St.

#### The Study Hotel

3215 N Charles Street, Baltimore, Md 21218

#### Colonnade Inn

4 W University Pkwy, Baltimore, Md 21218

#### Clark Hall

Homewood Campus South End

#### Clipper Room, Shriver Hall

Homewood Campus South End

#### **Glass Pavilion**

Homewood Campus South End

#### **Imagine Center**

113 West University Parkway

# **Transportation**

Explore Hopkins (EHOP) Shuttle

- Pick Up At Hotels
- Mason Hall, South End Of Campus



Scan for a detailed campus map.



To help us better understand our effectiveness in achieving our goals, we'd like your feedback.

Please complete this short survey.

# Agenda

Thursday	
9 a.m.	EHOP Cohort Arrival Location: Scott-Bates Commons
9:30 a.m. to Noon	EHOP Welcome And Icebreaker Campus Faculty Meetings (Clark Hall)
Noon to 12:30 p.m.	Lunch Location: Scott-Bates Commons
12:30 to 1 p.m.	Walk To Clark Hall
1 to 4 p.m.	Arrive To Hopkins Campus (Clark Hall Lobby)
	Campus Activities:  Faculty Meetings Graduate Resource Expo (Clipper Hall 1 to 3 p.m.) Campus Tours
4 to 4:15 p.m.	Colonnade Inn—Shuttle Bus From To Mason Hall To Hotel
	The Study—Walk To Hotel (Shuttle Is Available To Reception)
4:30 to 4:45 p.m.	Arrive To Imagine Center
4:45 to 5 p.m.	Check In And Networking
5 to 7:30 p.m.	EHOP Welcome Reception
7:30 to 7:45 p.m.	Shuttle Bus Departs To The Study

Friday	
7:15 to 8:15 a.m.	EHOP Shuttle Bus From Colonnade Inn To Shriver Hall
7:30 a.m.	The Study Guests Meet In Lobby To Walk To Shriver Hall
7:45 a.m.	Arrive To Clipper Room
7:45 to 8:25 a.m.	Breakfast Served
8:30 to 8:35 a.m.	EHOP Opening Remarks
	■ Dr. Darlene Saporu, Associate Dean Of Outreach And Belonging
8:35 to 8:45 a.m.	Welcome Remarks
	■ Ed Schlesinger, Benjamin T. Rome Dean
9 to 10 a.m.	Keynote: Belonging In Innovation: Unlocking Potential Through Research
10 to 10:30 a.m.	Break
10:30 to 11:45 a.m.	Concurrent Sessions: Investing In Your Future: The ROI Of A Master's Degree (Master's Track) Demystifying Doctoral Admissions Faculty Panel (Doctoral Track)
11:45 to Noon	Break
Noon to 12:45 p.m.	Lunch & Networking With Graduate Students
1 to 2 p.m.	Lab Tour – Campus Tour – Faculty Meetings
2 to 2:15 p.m.	Break

Friday	
2:15 to 2:30 p.m.	Return To Clipper Room
2:30 to 4 p.m.	Grand Challenges Seminars (Clipper Room)
	<ul> <li>Engineering Human Resilience: Innovations In Medical Robotics</li> <li>Trustworthy AI: Designing For Human Preferences And Safety</li> </ul>
4 to 4:15 p.m.	Return To Hotels (Shuttle Bus Departs From Mason Hall)
4:30 to 5:15 p.m.	Break
5:15 to 5:30 p.m.	Shuttle Bus Departs From Colonnade Inn
5:30 to 7:30 p.m.	Dinner At Glass Pavilion
8 p.m.	Game Night At The Study Lobby (Optional)

Saturday	
7:45 to 8:15 a.m.	Shuttle Bus Departs From Colonnade Inn To Scott-Bates Commons
8:30 to 9 a.m.	Breakfast Served—Scott-Bates Commons, 3rd Floor, Salon C
9 to 10 a.m.	Graduate Student Panel
10 to 10:15 a.m.	EHOP Closing Remarks
	Hotel Check Out And Departure

# **Keynote**



**Alicia Wilson, Esq.** is the Vice President for Civic Engagement and Opportunity at Johns Hopkins University, where she leads initiatives to foster community partnerships, economic growth, and civic engagement. She plays a key role in strengthening relationships between Johns Hopkins and surrounding communities, overseeing high-impact projects and advising on institutional strategies.

Previously, Alicia was Managing Director and Head of Regional Philanthropy for JPMorgan Chase, guiding philanthropic strategies across 40+ North American markets. She helped steward the firm's \$2 billion Racial Equity Commitment, collaborating with corporate leaders to drive meaningful change.

Before JPMorgan, she served as Vice President of Economic Development for Johns Hopkins University and Health System and was an Associate Professor at the Bloomberg School of Public Health. She led institutional strategies on real estate investments, neighborhood development, healthcare, and education, reinforcing Hopkins' role as a transformative force in the community.

Earlier, Alicia was Senior Vice President of Impact Investments and Senior Legal Counsel for the Port Covington Development Team, managing social impact and financial returns in one of the largest urban revitalization projects in the U.S. She was instrumental in negotiating key community benefit agreements and securing \$660 million in financing.

Alicia began her legal career at Gordon Feinblatt. As a skilled trial attorney and strategic advisor, she specialized in real estate, financial services, and employment law.

Beyond her professional roles, Alicia is deeply engaged in civic and charitable work. She serves on the boards of the University of Maryland School of Law Board of Visitors, the CollegeBound Foundation, the Kennedy Krieger Institute, and the France-Merrick Foundation. She co-founded the Black Philanthropy Circle at the Baltimore Community Foundation and made history as the first alum, first woman, first Black, and youngest Board Chair of the CollegeBound Foundation.

A graduate of UMBC and the University of Maryland Carey School of Law, Alicia has received numerous accolades, including the 2024 Voice of Justice Honoree by the University of Baltimore School of Law, Power 50 Women of Influence by the U.S. Black Chamber of Commerce, and recognition as one of Savoy Magazine's Most Influential Black Executives in Corporate America.

Her leadership, expertise, and commitment to civic engagement and economic empowerment continue to shape Baltimore and beyond, reinforcing her impact as a transformative leader in both private and public sectors.

# **Admissions Panel**



**Feilim Mac Gabhann**, an associate professor of biomedical with a joint appointment in the School of Medicine, is an expert in systems pharmacology—building computational models to simulate different therapies like biologic drugs, cell transplant, and gene therapy—and vascular endothelial growth factor (VEGF), a signal protein released by cells that encourages the formation of blood vessels.

Mac Gabhann's research is supported by the National Institutes of Health and could improve therapies in a broad range of disease areas, including vascular diseases, cancer, HIV, and gynecological disorders. Using computational models of the transport and signaling of VEGF, he tests therapies to inhibit or block the signaling pathways that lead to vascularization of tumors and metastasis in cancer. He also tests therapies to promote or increase signaling that leads to increased perfusion of muscle and other tissues vulnerable to ischemia, or lack of blood.

Mac Gabhann is a core faculty member of the Institute for Computational Medicine and serves as the director of the Biomedical Engineering Doctoral Training Program. He has received several awards, and his work has appeared in more than 70 journals.

Mac Gabhann earned a bachelor's degree in chemical engineering from University College Dublin and a PhD in Biomedical Engineering from Johns Hopkins in 2006. From 2006 to 2009 he was a postdoctoral fellow at the University of Virginia.



**Paulette Clancy**, the Edward J. Schaefer Professor in Engineering, is known for her work in computational materials processing. Clancy is the director of research for the JHU Data Science and AI Initiative, associate director of the Johns Hopkins Center for Integrated Structure-Mechanical Modeling and Simulation, and a fellow of the Hopkins Extreme Materials Institute. She is a Fellow of the Royal Society of Chemistry and the American Institute of Chemical Engineers.

Clancy leads one of the top groups in the country studying atomic- and molecular-scale modeling of semiconductor materials, ranging from traditional silicon-based compounds to all-organic materials. Her lab focuses on studies of advanced materials processing and nucleation, including understanding the links between processing, structure, and function.

A fierce advocate for the increased representation of women in engineering and the physical sciences, she was the founding chair of Women in Science and Engineering faculty in Cornell University's College of Engineering and has received several other diversity-based awards.

Clancy received her bachelor's degree in chemistry from Queen Elizabeth College and a DPhil in physical chemistry from Oxford. She did postdoctoral research at Cornell University and London.



**Dennice F. Gayme** is a professor of mechanical engineering with secondary appointments in the departments of Electrical and Computer Engineering and Applied Mathematics and Statistics.

Her research focuses on modeling, analysis, and control of spatially distributed and large-scale networked systems in applications such as wall-bounded turbulent and transitional flows, wind farms, and power grids. Her lab utilizes computational and theoretical methods from applied mathematics, dynamics, controls, optimization, and fluid mechanics.

Gayme has received several teaching and young investigator awards and was previously a JHU Carol Croft Linde Faculty Scholar. She is a fellow of APS, IEEE, SIAM, and ASME and serves as a faculty representative for the Johns Hopkins undergraduate chapter of the Society of Women Engineers (SWE) and the Hopkins Students Wind Energy Team (HSWET). She is also on the

editorial boards of several scholarly journals.

Gayme received a bachelor's degree in mechanical engineering and society from McMaster University, an MS in mechanical engineering from the University of California at Berkeley, a PhD in control and dynamical systems from California Institute of Technology, and stayed on as a postdoctoral fellow in computing and mathematical sciences.

# **Invest In Your Future Panel**



**Louis Whitcomb**, a professor of mechanical engineering, is renowned for innovative robotics research and development for space, underwater, and other extreme environments, as well as novel systems for medicine and industry. He holds a secondary appointment in the Department of Computer Science.

He founded and directs the Johns Hopkins Dynamical Systems and Control Laboratory (DSCL), leading student researchers in nonlinear and adaptive control of robot systems; robot actuators and sensors; mechanical design; and control systems design for high-performance robot control. Whitcomb's lab has participated in the development of underwater vehicles for oceanographic science missions, including the Nereus hybrid underwater vehicle that dove to the bottom of the Mariana Trench and Nereid Under-Ice (NUI) hybrid underwater vehicle deployed under Arctic sea ice in 2014, 2016, and 2019. Whitcomb was co-PI on these vehicle

development projects with his collaborators at the Woods Hole Oceanographic Institution (WHOI). Whitcomb, a veteran of more than 25 oceanographic expeditions and sea-trials, also develops manipulators for medical robotic arms to correct control algorithms, enable dexterous surgical tasks, and improve upper-limb prosthesis.

From 2013 to 2017, Whitcomb served as chair of the Department of Mechanical Engineering and is the director of the Master of Science in Engineering program for robotics. He was the founding director (2007-2013) of the JHU Laboratory for Computational Sensing and Robotics (LCSR) and presently serves as LCSR's deputy director. An adjunct scientist with WHOI's Department of Applied Ocean Physics and Engineering since 1995, Whitcomb previously served as a research and development engineer with the GMFanuc Robotics Corporation and completed post-doctoral fellowships at the University of Tokyo and WHOI prior to joining the Johns Hopkins faculty in 1995.

Whitcomb, who holds 15 patents, is a sought-after consultant in robotics, dynamics, navigation, control, and real-time control systems. He routinely provides technical reviews for the National Science Foundation, the Office of Naval Research, National Oceanic and Atmospheric Administration, and numerous professional journals, for which he also served as associate editor.

Whitcomb has received numerous best-paper awards for his robotics research and for his teaching. Early in his career, he was recognized with an NSF CAREER Award and Office of Naval Research Young Investigator Award, and in 2011, was named a Fellow with the Institute of Electrical and Electronics Engineers (IEEE) for his contributions to the field. Selected in 2009 as Johns Hopkins' inaugural Louis M. Sardella Faculty Scholar (2009-2011), Whitcomb has been honored with four teaching awards: The Whiting School of Engineering's William H. Huggins Excellence in Teaching Award; the Alumni Excellence in Teaching Award; the George E. Owen Teaching Award; the Student Council Award for Excellence in Teaching; and the 2023 Teaching and Mentorship Award.

A member of IEEE, the Marine Technology Society, the American Society of Mechanical Engineers, the American Geophysical Union, and the Society of Naval Architects and Marine Engineers, among others, Whitcomb presents frequently at robotics conferences worldwide. His 2018 keynote speaker invitations included the IEEE International Conference on Robotics and Automation (ICRA) in Australia, the IEEE Robotics and Automation Society's flagship conference and premier international forum for robotics researchers. Whitcomb has served on numerous conference and editorial committees, including ICRA, the Robotics: Science and Systems Conference, IEEE/RSJ International Conference on Intelligent Robots and Systems, and the International Conference on Medical Image Computing and Computer-Assisted Intervention.

He holds a BS in mechanical engineering (1984), an MS in electrical engineering (1988), an MPhil (1990) in electrical engineering, and a PhD in electrical engineering (1992), all from Yale University.



**Pranay Karkale**, works as a Lecturer at the Center for Leadership Education at Johns Hopkins University, where he teaches courses on innovation, strategy, and business development. He earned his Master of Science in Engineering Management from Johns Hopkins, with a technical track in Mechanical Engineering. His interests focus on project management and how it can drive impact across different engineering fields. In his free time, Pranay enjoys cooking and discovering new parts of Baltimore City.



**Anton "Tony" Dahbura** is the executive director of the Johns Hopkins University Information Security Institute, co-director of the Johns Hopkins Institute of Assured Autonomy, and an associate research professor in the Department of Computer Science. He is additionally affiliated with the Malone Center for Engineering in Healthcare and the Laboratory for Computational Sensing and Robotics and leads the Johns Hopkins University Sports Analytics Research Group. Dahbura is also a member of the Data Science and Al Institute. His research focuses on security, fault-tolerant computing, distributed systems, and testing.

From 1983 until 1996, he was a researcher at AT&T Bell Laboratories, was an invited lecturer in the Department of Computer Science at Princeton University, and served as research director at the Motorola Cambridge Research Center in Cambridge, Massachusetts. Since 1996, he has led several entrepreneurial efforts in the areas of printing, professional baseball operations,

and commercial real estate.

From 2000 to 2002, he served as chair of the Johns Hopkins University Engineering Alumni and, in 2004, was the recipient of the Johns Hopkins Heritage Award for his service to the university. He chaired the Johns Hopkins Computer Science Department Advisory Board from 1998 until 2012, and during that time also served on the Johns Hopkins University Whiting School of Engineering's National Advisory Council. In January 2012, he was named Executive Director of the Johns Hopkins University Information Security Institute. He is a Fellow of the Institute of Electrical and Electronics Engineers and received the IEEE Browder J. Thompson Memorial Prize Paper Award for the most outstanding paper in any IEEE publication by an author under thirty years of age.

Dahbura received his BS, MS, and PhD in electrical engineering and computer science from the Johns Hopkins University in 1981, 1982, and 1984, respectively.

# **Grand Challenges Seminars**

#### Engineering Human Resilience: Innovations in Medical Robotics



**Jeremy D. Brown**, the John C. Malone Associate Professor in the Department of Mechanical Engineering, explores the interface between humans and robotics, with a specific focus on medical applications and haptic feedback.

Brown's research sits at the intersection of engineering, biomechatronics, medicine, perception, and psychophysics, and focuses on the interface between humans and robotics. He develops novel haptic interfaces for upper-limb prostheses, minimally invasive surgical robotics, and rehabilitation robots.

Brown's team in his Haptics and Medical Robotics (HAMR) lab uses methods from human perception, motor control, neurophysiology, and biomechanics to study the human perception of touch, especially as it relates to applications of human-robot interaction and collaboration. Elements of HAMR's research could lead to breakthroughs in additional fields, including

rehabilitation robotics.

Brown has received several awards, including the IEEE RAS Technical Committee on Haptics Early CAREER Award, the NSF CRII Award, the NSF CAREER Award, the Sloan Foundation Fellowship, the Penn Postdoctoral Fellowship for Academic Diversity, and the National Science Foundation (NSF) Graduate Research Fellowship. He was also named a scholar to the NIH funded Interdisciplinary Rehabilitation Engineering Career Development Program (IREK-12).

He is a senior member of the Institute of Electrical and Electronics Engineers (IEEE), and a member of the American Society of Mechanical Engineers (ASME), and National Society of Black Engineers (NSBE). Brown's work has appeared in a number of peer-reviewed journals, including the Journal of Neuroengineering and Rehabilitation, IEEE Transactions on Haptics, IEEE Transactions on Biomedical Engineering, and IEEE Transactions on Neural Systems and Rehabilitation Engineering. His work has also been featured in several news outlets, including Forbes, the New York Times, WMAR (local ABC news channel), the Orthotics and Prosthetics Edge magazine, and Science News.

Brown is a graduate of the Atlanta University Center's Dual Degree Engineering Program, earning bachelor's degrees in applied physics and mechanical engineering from Morehouse College and the University of Michigan, respectively. He received his MSE and PhD in mechanical engineering from the University of Michigan, where he worked on haptic feedback for upper-extremity prosthetic devices. Prior to joining Johns Hopkins in 2017, he was a postdoctoral research fellow at the University of Pennsylvania.

#### Trustworthy AI: Designing for Human Preferences and Safety



Anqi (Angie) Li is an assistant professor in the Department of Computer Science at the Whiting School of Engineering and a member of the Data Science and AI Institute. She is broadly interested in developing principled machine learning algorithms for building more reliable, trustworthy, and human-compatible AI systems in the real world. Her research focuses on enabling the machine learning algorithms to be robust to the changing data and environments, to provide accurate and honest uncertainty estimates, and to consider human preferences and values in AI interactions. She is particularly interested in high-stake applications that concern the safety and societal impact of AI.

Liu develops, analyzes, and applies methods in statistical machine learning, deep learning, and sequential decision-making. One established line of her work is in distributionally robust learning under covariate shift. Her recent projects cover topics in different types of

distribution shifts, active learning, safe exploration, off-policy learning, fair machine learning, semi-supervised learning, cost-sensitive classification, and hierarchical classification.

Liu has won a number of awards, including an Amazon Research Award, a Johns Hopkins University + Amazon Initiative for Artificial Intelligence Faculty Research Award, a Johns Hopkins Discovery Award, and a Johns Hopkins Institute for Assured Autonomy Challenge Grant. She was also selected as one of the 2020 Rising Stars in electrical engineering and computer science, and her publications have appeared in prominent machine learning venues like the Conference on Neural Information Processing Systems, the International Conference on Machine Learning, the International Conference on Learning Representations, the Association for the Advancement of Artificial Intelligence, and the Society for Artificial Intelligence and Statistics.

Her research on applying machine learning to health care has been supported by the National Institute on Aging and the Moore Foundation. Liu is also core faculty in the National Institutes of Health Artificial Intelligence/Machine Learning Consortium to Advance Health Equity and Researcher Diversity Program and serves on program committees and as area chair for several conferences in machine learning.

Liu obtained her PhD in computer science from the University of Illinois Chicago. Prior to joining Johns Hopkins, she completed her postdoctoral research in the Department of Computing + Mathematical Sciences at the California Institute of Technology.

# Dean's Welcome



**Ed Schlesinger** is the Benjamin T. Rome Dean of the Whiting School of Engineering at Johns Hopkins University where he also is a professor in the Department of Electrical and Computer Engineering.

He has served as dean for the past 10 years and has been appointed to a third term through June 30, 2028. During his tenure as dean, the Whiting School's annual research funding and endowments have doubled, while the faculty numbers have grown by more than 50%.

The school is now ranked in the top 15 among both graduate and undergraduate schools of engineering with a number of its online and residential programs in the top 10. He has supported new partnerships across Johns Hopkins and with industry and has helped oversee the launch of major cross-divisional research institutes focused on strategic areas. These include the Malone Center for Engineering in Healthcare, the Institute for Assured Autonomy

with the Applied Physics Laboratory, and the Ralph O'Connor Sustainable Energy Institute.

The Whiting School is also leading the investment in a new Data Science and AI Institute that will be a truly transformational undertaking whose establishment, along with other investments, is set to effectively double the size of the school of engineering at Johns Hopkins.

Other accomplishments include establishing the Department of Environmental Health and Engineering, a partnership between the Whiting School and JHU's Bloomberg School of Public Health; launching the Malone Center for Engineering in Healthcare, a partnership with the School of Medicine, the Applied Physics Laboratory and other JHU divisions aimed at enhancing the efficiency, effectiveness, and consistency of health care; launching the Doctor of Engineering program; and leading a 10-year, multimillion-dollar partnership between the Barclay Elementary/Middle School and JHU, community organizations, and the Baltimore City Schools to created pre-K through eighth-grade school focused on engineering education and computer skills as a means to spark student achievement.

Prior to joining Johns Hopkins in 2014, Schlesinger was the David Edward Schramm Memorial Professor and head of the Department of Electrical and Computer Engineering at Carnegie Mellon University, where he also served as the director of the Data Storage Systems Center, associate department head in ECE, founding co-director of the General Motors Collaborative Research Laboratory, and director the DARPA MISCIC Center.

He has published more than 250 articles and conference proceedings and holds 13 patents. He is a Fellow of the IEEE and the SPIE, was President of the ECE Department Heads' Association and served on its board of directors, was a member of the International Advisory Panel for the A\*STAR Graduate Academy in Singapore, was on the Advisory Board for the ECE Department at Georgia Tech and the Technology Commercialization Advisory Board for Innovation Works. He currently is a member of the Fellowship Evaluation Panel of the National Research Foundation of Singapore.

Schlesinger earned a BSc in physics at the University of Toronto and earned his MS and PhD in applied physics at the California Institute of Technology.

# **Graduate Resource Expo**

#### **Black Graduate Student Association**

The Black Graduate Student Association aims to support the academic, professional, social, and emotional well-being and civic engagement of graduate students on the Homewood Campus.

#### **Center for Educational Outreach**

The Center for Educational Outreach strives to inspire and prepare youth for exciting STEM college majors and meaningful STEM careers. We strive for all students to have a love of science, technology, engineering and math or STEM. We believe STEM education is good for the student, valuable to society, and important for the future. To achieve this goal, we engage JHU faculty, staff, and students in STEM outreach programs with Baltimore City Public School students.

# **Graduate Representative Organization**

The Graduate Representative Organization (GRO) represents the 2,500 graduate students from the School of Engineering (WSE) and the School of Arts and Sciences (KSAS). Serving as a bridge between graduate students and university administration, the GRO organizes social events, voices student concerns, and participates in university committees.

#### Institute for NanoBioTechnology Master's Co-Op Program

To broaden the opportunities for Master of Science in Engineering (MSE) students in the Whiting School of Engineering, the Institute for NanoBioTechnology (INBT) collaborates with major industry partners to offer a credited and paid co-op opportunity in the Chemical and Biomolecular Engineering, Materials Science and Engineering, and Mechanical Engineering programs. MSE students pursuing the essay-based track in these programs can apply to participate in the INBT Master's Co-Op Program as an alternative to conducting research in JHU laboratories.

#### Mechanical Engineering Graduate Student Association

"MEGA," the Mechanical Engineering Graduate Student Association is the organization representing the general interests of and facilitating interaction among the graduate students of the Department of Mechanical Engineering at Johns Hopkins University. All graduate students in the Department of Mechanical Engineering are automatically members of MEGA. All Mechanical Engineering graduate students are welcome to participate in any and all MEGA events.

#### Women of Whiting

Women Of Whiting (WOW) is a group composed of graduate students and postdoctoral fellows, providing women in science, technology, engineering, and math (STEM) fields with community building, networking, mentorship, and professional development opportunities.

#### **WSE Student Affairs**

WSE Student Affairs engages and builds community with students, provides support and advocacy, and provides professional development opportunities in collaboration with Life Design Lab and Studio.

#### **WSE Graduate Admissions**

The Graduate Admissions Office oversees the entire application process for prospective graduate students, ensuring timely and accurate processing. Support is provided to applicants at every stage, answering questions and offering guidance, while collaborating with academic programs to maintain high standards in graduate education. The overall goal for WSE Admissions is to create a smooth and welcoming experience for all applicants.

#### **Explore Hopkins Team**

Darlene F. Saporu, PhD ..Associate Dean for Outreach and Belonging
Stacey Marks ..............Outreach and Belonging Program Manager
Ayana Teal ..................Associate Director of Marketing and Recruitment
Nancy Lippi .....................Senior Administrative Coordinator
Nicole Pulliam .................Senior Administrative Coordinator
Destiny Talley........................Assistant Director of Marketing and Recruitment
Jerrell Bratcher ..................................Sr. Events Coordinator
LaDaisha Thompson..........................OOB Intern and Doctoral Student in Biomedical Engineering

Special acknowledgement to our Whiting School of Engineering Events Planning Team, Marketing and Communications Department and Center for Media and Technology Solutions.





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