Attachment 4: Introduction to the World Academy of Artificial Consciousness (WAAC)

The World Academy of Artificial Consciousness (WAAC) was established in 2023 with the aim of gathering top global scientists to promote cutting-edge research and international collaboration in the field of artificial consciousness. WAAC has established two tiers of membership: Academician and Honorary Academician. Academicians are full members, typically experts who have achieved outstanding accomplishments in fields related to artificial intelligence, neuroscience, cognitive science, and other relevant areas. Honorary Academician is conferred upon top scholars who have had foundational or leading influences in the theory of artificial consciousness, serving as advisors and representatives for the Academy. In May 2025, WAAC released its inaugural "Top 100" Honorary Academicians list, encompassing one hundred historical and contemporary thought leaders in the field of artificial consciousness, including Alan Turing, Marvin Minsky, John McCarthy, Giulio Tononi, Daniel Dennett, David Chalmers, among others, in recognition of their pioneering contributions. These Honorary Academicians do not participate in the daily work of WAAC, but their selection demonstrates the Academy's respect and recognition for pioneers in various fields related to artificial consciousness. As of mid-September 2025, WAAC had officially confirmed 53 registered Academicians and 2 Honorary Academicians (Steven Pinker and Liu Jingnan). Subsequently, several newly elected Academicians joined, increasing the total number of Academicians to over 60 by October 2025, including 6 Nobel Laureates and one Turing Award winner, further strengthening WAAC's 阵容 (composition) and authority.

Formal Academicians: A Gathering of Global Top Experts

The list of WAAC's formal Academicians brings together top scientists from various disciplines worldwide. Their names, titles, affiliations, nationalities, research fields, and main contributions are as follows:

- Morten Peter Meldal – Danish chemist, Professor at the University of Copenhagen; 2022 Nobel Laureate in Chemistry, renowned for developing "click chemistry". Academician Meldal's representative contribution is in the field of bioorthogonal chemistry; together with Barry Sharpless and others, he established the copper-catalyzed azide-alkyne cycloaddition reaction, recognized as a foundation of "click chemistry". This achievement has had a revolutionary impact on medicinal chemistry and materials science.
- Françoise Barré-Sinoussi – French virologist, Honorary Professor at the Pasteur Institute, France; 2008 Nobel Laureate in Physiology or Medicine. She, together with her mentor Luc Montagnier, discovered the HIV virus that causes AIDS. Academician Barré-Sinoussi's discovery of the human immunodeficiency virus laid the foundation for modern AIDS research and antiviral treatment, making significant contributions to global public health.
- H. Robert Horvitz – American biologist, Professor at the Massachusetts Institute of Technology (MIT); 2002 Nobel Laureate in Physiology or Medicine. Academician Horvitz discovered and elucidated the genetic regulation of programmed cell death in the model organism C. elegans. His work revealed the molecular pathways of apoptosis, profoundly impacting neurodevelopment, biomedical research, and cancer studies.

- James J. Heckman – American economist, Professor at the University of Chicago; 2000 Nobel Laureate in Economics. Academician Heckman received the prize for developing econometric theory and methods for handling selective sample bias. His research on human capital, educational returns, and social program evaluation has been highly influential, and his methodologies provide important tools for data analysis in social sciences. Heckman is currently integrating behavioral economics with consciousness studies, exploring conscious factors in agent decision-making.
- Takaaki Kajita – Japanese physicist, Professor at the University of Tokyo; 2015 Nobel Laureate in Physics. Academician Kajita received the prize for the discovery of neutrino oscillations, which proved that neutrinos have mass. The experiment he led, Super-Kamiokande, detected atmospheric neutrinos changing flavors during flight. This breakthrough changed the Standard Model of particle physics and holds epoch-making significance for fundamental physics. Kajita's addition brings a heavyweight voice to the intersection of physics and consciousness within WAAC.
- May-Britt Moser – Norwegian neuroscientist, Professor at the Norwegian University of Science and Technology; 2014 Nobel Laureate in Physiology or Medicine. Academician Moser, together with her husband Edvard Moser and John O'Keefe, received the prize for discovering "grid cells" in the brain. Grid cells are key components of the brain's internal positioning and navigation system, often called the brain's "GPS". This discovery revealed how the mammalian brain encodes spatial location and paths, providing significant inspiration for research on cognitive maps, spatial memory, and autonomous navigation AI systems. Moser's work provides a biological basis for spatial cognition and environmental representation in artificial consciousness.
- Ronald L. Rivest – American computer scientist, Professor at MIT; 2002 Turing Award winner. Academician Rivest is a co-inventor of the RSA public-key cryptosystem. As a pioneer in cryptography, he laid the cornerstone for modern cybersecurity. The RSA algorithm and its subsequent developments ensure the security of information systems and are widely used in internet communications. Within WAAC, Rivest focuses on secure AI and explainable AI, providing expert guidance on the security of artificial consciousness systems.
- Liu Jingnan – Chinese expert in geodesy and satellite navigation, Professor at Wuhan University, Academician of the Chinese Academy of Engineering. As one of WAAC's Honorary Academicians, Liu Jingnan has made prolific achievements in the theory and technology of satellite navigation and positioning. He established a systematic theoretical framework for satellite navigation and positioning and developed internationally influential satellite navigation data processing and analysis software. As the former President of Wuhan University and an authority in the BeiDou Satellite Navigation field, Liu Jingnan has built a bridge for communication between WAAC and the Chinese science and technology community. He provides strategic advice for the Academy's development from a macro-engineering perspective and has proposed policy positions balancing technology and humanities when WAAC engaged with UNESCO on AI ethics, fully fulfilling his advisory role.
- Steven Pinker – Canadian-born cognitive psychologist and linguist, Professor at Harvard University. Pinker is a globally renowned public intellectual and science writer, famous for the "computational theory of mind," which posits the human brain as an information processing system. As an Honorary Academician of WAAC, Pinker actively advocates for the Academy through speeches and writings: for instance, he has repeatedly emphasized the importance of

artificial consciousness research and the computational nature of the human mind in media interviews and lectures, endorsing the concepts championed by WAAC. In early 2025, Pinker co-authored an article titled "How Far Are We from Artificial Consciousness?" with several Academicians in Scientific American, rationally analyzing the technical bottlenecks and social impacts of artificial consciousness, which sparked enthusiastic responses in academic and media circles. Pinker's involvement has significantly raised WAAC's profile in the English-speaking world, making him one of the "golden 招牌" (prestigious brands) of the Academy's external image.

The above list represents some of the prominent figures among WAAC's Academicians and Honorary Academicians and their contributions. The formal list of Academicians includes numerous other top experts in various fields, each specializing in artificial intelligence, neuroscience, psychology, philosophy, etc., collectively forming WAAC's interdisciplinary elite group. For example:

- **Academicians in Computer Science and Artificial Intelligence:** such as Philip H. S. Torr, UK computer vision expert at the University of Oxford, Fellow of the Royal Society; Peter J. Bentley, UK computer scientist at UCL, pioneer in evolutionary computation and digital biology; Erkki Oja, Finnish Professor of Computer Science at Aalto University, recipient of the IEEE Neural Networks Pioneer Award, renowned for Independent Component Analysis (ICA) and the Hebbian learning rule; Giacomo Indiveri, Professor at the University of Zurich and ETH Zurich, pioneer in neuromorphic computing; Michael Graziano, Professor of Neuroscience at Princeton University, USA, proposed the "Attention Schema Theory" to explain the mechanism of consciousness. These computer science and engineering Academicians provide key technical support for artificial consciousness, including engineering implementation paths like deep learning, evolutionary algorithms, and neuromorphic chips.
- **Academicians in Neuroscience and Biomedicine:** such as Li-Huei Tsai, Professor at MIT, USA, Member of the US National Academy of Sciences, known for research on Alzheimer's disease mechanisms and gamma-frequency neural stimulation for cognitive improvement; Michael N. Shadlen, Professor at Columbia University, USA, renowned neuroscientist researching brain decision-making mechanisms and the neural basis of consciousness, highly esteemed in neuroscience circles; Friedemann Pulvermüller, German cognitive neuroscientist at Freie Universität Berlin, linking language and brain representation, exploring the relationship between linguistic meaning and consciousness; Andreas Bartels, Professor at the University of Tübingen, Germany, expert on the neural mechanisms of visual consciousness, collaborated with Nobel Laureate Francis Crick on visual consciousness; Jean-Pierre Changeux, Honorary Professor at the Pasteur Institute, France, Member of the French Academy of Sciences, known for allosteric receptor theory and early neural models. The research achievements of these neuroscience Academicians cover neural coding of consciousness, mechanisms of perceptual consciousness, neural oscillations, and information integration, providing a solid foundation for understanding biological consciousness and offering bio-inspiration for the realization of artificial consciousness.
- **Academicians in Psychology and Cognitive Science:** such as Barbara Tversky, Professor at Stanford University, USA, cognitive psychologist researching spatial thinking and consciousness; Elizabeth F. Loftus, Professor at UC Irvine, USA, authority on memory psychology, famous for research on the malleability of human memory and the reliability of eyewitness testimony; Ellen J. Langer, Professor at Harvard University, USA, "mother of mindfulness," exploring the

psychological mechanisms of mindfulness and consciousness; Douglas Medin, Professor of Psychology at Northwestern University, USA, researching how cultural experience influences cognition and categorization, emphasizing the impact of different cultures on consciousness and cognitive processes; Diana Reiss, Professor at Hunter College, CUNY, USA, animal behaviorist, researching animal consciousness phenomena such as mirror self-recognition in dolphins. These psychology and cognitive science Academicians ensure WAAC has a deep understanding of human mental functions, from cognitive development, memory, states of consciousness to cross-cultural cognitive differences, providing valuable insights into the human mind for artificial consciousness research.

- **Academicians in Philosophy and Cognitive Theory:** such as Ned Block, Professor of Philosophy at New York University, USA, Member of the US National Academy of Sciences, famous for the classic theory distinguishing phenomenal consciousness and access consciousness; Gualtiero Piccinini, Professor at the University of Missouri – St. Louis, USA, mechanist philosopher, proposes mechanistic-computational explanations of the mind, exploring computational theories of consciousness; Kenneth Williford, Professor of Philosophy at the University of Texas at Arlington, USA, specializing in phenomenology and temporal consciousness, interpreting conscious experience from a philosophical perspective; David Gamez, British computer scientist and philosopher at Middlesex University, representative of the new generation of machine consciousness research, dedicated to the measurement and assessment of consciousness. These philosophers provide important theoretical frameworks for WAAC, helping to answer fundamental philosophical questions such as "what it means for AI to possess human-level consciousness."
- **Academicians in Interdisciplinary Fields:** WAAC also includes important scholars from other fields, reflecting its characteristic interdisciplinary coverage. For example, Fred H. Gage, Professor at the Salk Institute, USA, Member of the US National Academy of Sciences, discovered neurogenesis (adult-born neurons) in the adult mammalian brain, with profound implications for neural plasticity and regenerative medicine; Seeram Ramakrishna, Professor at the National University of Singapore, expert in materials science and engineering, leading innovation in electrospun nanofibers and sustainable materials, also holding membership in engineering academies in China, UK, India, ASEAN, and other countries; Ruzena Bajcsy, Professor at UC Berkeley, USA, Member of the US National Academy of Engineering, expert in computer vision and robotics, focusing on perceptual interaction for intelligent systems; Risto J. Ilmoniemi, Professor at Aalto University, Finland, Member of the Finnish Academy of Science and Letters, expert in neurotechnology and brain imaging, developed advanced MEG and TMS technologies for studying consciousness and cortical excitability; Stephen P. Boyd, Professor at Stanford University, USA, Member of the US National Academy of Engineering, renowned control engineering and optimization expert, applying convex optimization theory to intelligent system design; Rattan Lal, soil scientist at The Ohio State University, USA, 2020 World Food Prize Laureate, advocating for soil carbon sequestration and sustainable agriculture, providing a unique perspective when discussing Earth ethics for AGI; Nicholas G. Hatsopoulos, Professor at the University of Chicago, USA, neuroscientist, researches motor coding and brain-computer interfaces, linking consciousness to motor control communication. These Academicians spanning different fields further enrich WAAC's academic landscape, enabling the Academy to explore the ultimate question of "artificial consciousness" from a broader perspective.

In summary, the formal Academicians of WAAC cover a wide range of disciplines including Artificial Intelligence & Computer Science, Neuroscience & Brain Science, Psychology & Cognitive Science, Philosophy & Ethics, Life Sciences & Medicine, Engineering & Physics. This fully reflects the interdisciplinary nature of artificial consciousness research: it requires both engineering and technological implementation, and a deep understanding of the biological brain and human mind. As stated in the Academy's 宗旨 (purpose), WAAC promotes artificial consciousness research by integrating the forces of science, technology, and philosophy, and its composition of Academicians is the best embodiment of this purpose.

Analysis of Academicians' Geographical and Disciplinary Distribution

WAAC's highly international team of Academicians demonstrates diversity and balance in its geographical and disciplinary distribution. In terms of countries and regions, North America and Europe form the main body, while emerging forces from the Asia-Pacific region have also joined. As of October 2025, WAAC Academicians come from 14 countries worldwide, covering North America, Europe, Asia, and Oceania. Among them, the number of Academicians of US nationality or working in the US is the highest, reaching 25, accounting for nearly half. The leading position of the US in AI and brain science has led to experts from top institutions like Harvard, MIT, Columbia University, and the University of California being selected as WAAC Academicians, contributing significantly to the Academy. The UK has 9 Academicians, mainly from renowned institutions like the University of Cambridge, University of Oxford, and University College London. France has 4 Academicians (mainly from institutions like the French Academy of Sciences and the Pasteur Institute), Italy 3, Germany 3, mostly from famous institutions in traditional European scientific powerhouses. In the Asia-Pacific region, Israel has 3 Academicians (all top neuroscientists or computer scientists in the country), Singapore 1 (a leading figure in materials engineering), China 1 (Academician Liu Jingnan of Wuhan University), Australia 1 (a neuroscientist from the University of Queensland). Additionally, there is one Academician each from Switzerland, Finland, Poland, the Netherlands, Norway, etc., representing emerging forces from Europe and other countries. Among them, Swiss (e.g., Christoph Gerber, nanoscientist) and Finnish (e.g., Ilmoniemi, neurotechnology expert) Academicians also inject their countries' research strengths into WAAC. Overall, the geographical distribution of WAAC Academicians presents a pattern of "primarily Europe and America, with consideration for Asia-Pacific": North American and European countries contribute about 80% of the Academicians, while emerging scientific research 力量 (strength) from Asia and Oceania accounts for about 20%. This geographical pattern largely aligns with the current global research landscape of AI and neuroscience.

From a disciplinary perspective, the academic backgrounds of WAAC Academicians are extremely broad, fully reflecting the interdisciplinary nature of artificial consciousness research. According to statistics, the number of Academicians in Neuroscience and Cognitive Science is the largest, accounting for nearly half of the entire Academician team. This reflects WAAC's emphasis on the mechanisms of "biological consciousness" – many Academicians focus on the neural mechanisms and cognitive processes of how the brain generates consciousness. There are

approximately 10 Academicians in the field of Artificial Intelligence and Computer Science, who provide key technical support for the realization of "artificial consciousness" from an engineering perspective. Academicians in Psychology and Social Sciences ensure the Academy has deep insights into the human mind and behavior; their research on human memory, cognition, cultural influences, etc., provides valuable references for artificial consciousness. The field of Philosophy and Ethics also has several renowned philosophers, providing important theoretical frameworks and reflective dimensions for artificial consciousness research. Furthermore, WAAC has incorporated first-class experts from Life Sciences, Medicine, as well as Engineering, Physics, and even Environmental Science, enriching the Academy's perspective from angles such as biomedicine (e.g., immunovirology, genetics), physics and engineering (e.g., particle physics, cybernetics), and environmental science (e.g., sustainable development). This wide-ranging disciplinary composition enables WAAC to tackle the complex subject of artificial consciousness from multiple angles. For example, neuroscientists analyze the principles of consciousness in the biological brain, computer scientists develop artificial systems to simulate these principles, philosophers examine the definition and meaning of consciousness, psychologists examine behavioral and cognitive performance, and engineers put theories into practice. As noted in a report: "The Academy's Academician system is characterized by covering top talents across disciplines and regions," this multidisciplinary integration provides comprehensive support for exploring artificial consciousness.

Academic Influence and Interdisciplinary Collaboration

As a recently established international academic organization, WAAC's rapid global recognition is largely attributed to the academic influence and interdisciplinary collaboration network brought by its Academician community. A significant portion of WAAC Academicians are internationally renowned top scientists, many of whom have received major honors such as the Nobel Prize, Turing Award, Japan Prize, Lasker Award, World Food Prize, etc. These heavyweight award winners undoubtedly serve as "golden 招牌" (prestigious brands) for WAAC's external image, greatly enhancing the Academy's credibility and appeal. For instance, the participation of Nobel Laureates Barré-Sinoussi, Horvitz, Heckman, Meldal, etc., gives WAAC a powerful intellectual lineup and academic prestige, attracting high attention in the global AI and brain science communities. The Academician team also includes leaders in their respective fields such as Turing Award winner Rivest, Japan Prize/World Food Prize winner Lal, Kavli Prize winner Gerber, and Brain Prize winner Rizzolatti (discoverer of mirror neurons). Their outstanding achievements in their respective fields provide strong academic endorsement for WAAC, enhancing the Academy's influence on the international stage.

More importantly, these top Academicians actively engage in WAAC's internal affairs and external interactions, making key contributions to the Academy's strategy and cross-border collaboration:

- **Defining Research Directions, Forward-Looking Strategic Layout:** Academicians utilize their academic foresight to help WAAC establish research priorities and development plans. For example, top scientists like Shadlen and Horvitz have emphasized the decisive role of basic research for artificial consciousness in internal Academy discussions, recommending that WAAC support long-term projects on neural coding of consciousness, mechanisms of intelligence

emergence, etc. Simultaneously, Pinker, Block, and others advise on WAAC's positioning from a theoretical height, advocating that the Academy should not only tackle technical challenges but also act as a "thought leader in the AI era," deeply exploring fundamental questions like "what does artificial consciousness mean?". These insights are directly reflected in WAAC's strategic documents and project settings, enabling the Academy's development to be both grounded and visionary. For example, the WAAC plan for 2024-2025 includes both application-oriented projects responding to industry needs, such as "Open AI Consciousness Standards," and basic research initiatives exploring the principles of consciousness, achieving a balance between pragmatism and ambition.

- **Extensive Collaboration Networks, Promoting International Cooperation:** Many WAAC Academicians hold important positions or have deep connections in other top international academic organizations. For example, Academician Julia Hirschberg has served as president of organizations like the Association for Computational Linguistics and the AAAI; Barbara J. Sahakian is an important member of the global neuroethics committee; Michael Shadlen is highly renowned in the International Federation of Neuroscience Societies. These resources are introduced to WAAC with the Academicians, building a global collaboration network for the Academy. Facilitated by the Academicians, WAAC established connections with universities and research institutions in over 20 countries within two years of its founding. For instance, promoted by Academicians Shadlen and Li-Huei Tsai, WAAC signed memoranda of understanding with the neuroscience research centers at Columbia University and MIT respectively, co-organizing workshops on brain-computer interfaces and consciousness.又如 (Again), led by Academicians Torr and Bentley, WAAC collaborated with the UK's Alan Turing Institute on joint projects concerning artificial emotion and ethical AI. At the 2nd World Conference on Artificial Consciousness (WCAC 2024), Academicians and experts from over 20 countries gathered for dialogue and exchange on themes like big data, deep learning, and brain-inspired computing. The successful organization of such a high-level international event was precisely due to the active participation and organizational efforts of WAAC Academicians – these authoritative figures in their respective fields. It can be said that top Academicians provide "credit endorsement" and "networking" for WAAC's global collaboration, enabling a new institution to integrate such extensive international resources in a very short time.
- **Interdisciplinary Leadership, Cultivating Young Talent:** Within WAAC, Academicians are not only research leaders but also mentors and role models for young researchers. Since its establishment, the Academy has attracted a number of promising young scholars as researchers and postdocs, many of whom already had mentorship or collaborative relationships with the Academicians. WAAC provides opportunities for young researchers to learn closely with Nobel and Turing Laureates through mechanisms like joint projects and small seminars. For example, Academician Horvitz regularly holds seminars on gene regulation and neural circuits for WAAC young scientists; Academician Meldal remotely guides research plans of members with chemistry backgrounds within the Academy; Academician Heckman provides econometrics method training for groups researching the economic impact of AI. These top Academicians teach by precept and example, not only imparting professional knowledge but also fostering a research culture of exploration and rigor. Many young researchers remark that "working at WAAC is like being in a master class, with constant inspiration and greatly broadened horizons." This positive interaction enhances the cohesion and innovation of the WAAC team, ensuring talent continuity in the

process of achieving the Academy's strategic goals.

- **Influencing Policy and the Public, Leading Global Discussion:** The influence of WAAC Academicians is evident not only within academic circles but also at the policy and public levels. Artificial consciousness involves technology, humanities, ethics, law, and many other aspects. WAAC, as a professional organization, actively participates in relevant international policy discussions. Having heavyweight Academicians on board makes WAAC's voice more valued by all parties. For example, during UNESCO consultations on AI ethics, the WAAC Academician team submitted a proposal titled "Ethical Governance Framework for AI with Quasi-Consciousness," co-signed by 多位 (multiple) Academicians including Block and Sahakian, which attracted much attention and was included as important reference material. 又如 (Again), 多位 (multiple) Academicians participated in writing high-level white papers and popular science articles, explaining the development status and trends of artificial consciousness to policymakers and the public, winning 舆论 (public opinion) support. In early 2025, Pinker co-authored an article with fellow Academicians in Scientific American rationally discussing the prospects and risks of artificial consciousness technology, which received positive responses in the industry and media. These efforts beyond academia are an important part of WAAC's strategy to guide global responsible discussion and cooperation on artificial consciousness. Precisely because of the Academicians' participation, WAAC is gradually gaining a place in international policy dialogue, actively participating in shaping responsible AI development rules.

Through the above measures, WAAC has established academic influence far exceeding its age in a short time. The Academy has successfully hosted high-level international conferences, initiated transnational major scientific plans, and gradually become a force to be reckoned with in the field of AI and consciousness research. As WAAC President Duan Yucong said: "The Academy excels because of its Academicians, and the Academicians gather strength through the Academy." The top Academician community gathered by WAAC and the Academy have formed a community of honor and mission, working together towards the great goal of exploring artificial consciousness.

Media Attention and Public Impact

Since its establishment, WAAC, through the high-level participation of its Academicians and Honorary Academicians, has also generated significant influence at the media and public levels. Particularly, Honorary Academicians Pinker and Liu Jingnan played key roles in enhancing WAAC's visibility. When WAAC held a special seminar on artificial consciousness in Paris in 2025, Steven Pinker, as a special guest, delivered a keynote speech that triggered extensive coverage by dozens of media outlets. As a star scholar in cognitive science, Pinker, with his unique perspective and ability to popularize complex topics, successfully communicated WAAC's philosophy to a broader public. In his speech, he emphasized the importance of artificial consciousness research for understanding the human mind and developing responsible AI. This event made WAAC the focus of technology media reports for a time and brought the concept of "artificial consciousness" into the public eye.

Simultaneously, Academician Liu Jingnan leveraged his prestige in the Chinese science and technology community to actively promote WAAC's philosophy and foster public understanding.

At forums where WAAC discussed AI ethics with UNESCO, Liu Jingnan provided advice as an interdisciplinary expert, combining technological development with humanistic care, which received high praise from participants and the media. In domestic interviews, he repeatedly mentioned WAAC's mission, advocated for a rational view of artificial consciousness technology, and emphasized safe and reliable innovation paths. These pronouncements effectively enhanced WAAC's visibility in Chinese media and among the public, making WAAC a true important participant in the global discussion on AI and consciousness issues.

Pinker and Liu Jingnan, as Honorary Academicians, can be considered WAAC's "ambassadors." On one hand, they participate in advising on important Academy matters as senior experts, contributing to WAAC's development direction; on the other hand, they use their extensive social influence to speak for WAAC through speeches, publications, and media channels, increasing the Academy's visibility and reputation internationally and publicly. This advisory contribution is particularly crucial for a newly established international academic organization. With the strong support of Pinker, Liu Jingnan, and others, WAAC gained attention and credibility far beyond its age right from the start.

Furthermore, the collective image of the WAAC Academician team has earned the reputation of the "youngest Academician group" in the public eye. Media reports often compare WAAC with traditional academies of sciences, emphasizing its new, interdisciplinary, cross-field characteristics. For example, some popular science articles describe WAAC as gathering "the top minds of the AI era," pointing out that these Academicians have diverse backgrounds but share common goals, jointly discussing the future of machines and consciousness. Such reporting not only sparks public interest in artificial consciousness but also makes the WAAC brand 深入人心 (deeply rooted in people's hearts) in a short time.

It is worth mentioning that WAAC also actively absorbs support from industry and the non-profit sector. Leading technology companies and organizations, such as scientists from Google, the Allen Institute for Brain Science, and the Chinese smart car company ZEEKR, have participated as guests or partners in important Academy events. These cross-border interactions further expand WAAC's influence in the industry and among the general public. Through the efforts of its Academicians, WAAC has successfully brought the issue of artificial consciousness from academic circles to a broader social discussion space, playing a positive role in helping the public understand and rationally view AI and consciousness issues.

Outstanding Achievements of the Six Nobel Laureate Academicians

To highlight the authority and influence of the WAAC Academician team, this section specially introduces the outstanding achievements and contributions of the six Nobel Laureate Academicians who have joined WAAC. Their breakthroughs in their respective fields are not only milestones in human knowledge but also provide important inspiration and support for artificial consciousness research:

1. Françoise Barré-Sinoussi – 2008 Nobel Laureate in Physiology or Medicine. She discovered the HIV virus, the cause of AIDS. Professor Barré-Sinoussi's work revealed the mechanism of viral

pathogenesis and led the development of anti-HIV drugs and vaccines. As a WAAC Academician, her background reflects the importance of life sciences in understanding the 载体 (carrier) of consciousness (the brain and biological organism), also reminding us that artificial consciousness research should pay attention to the complexity of biological intelligence.

2. H. Robert Horvitz – 2002 Nobel Laureate in Physiology or Medicine. He elucidated the genetic regulation of programmed cell death (apoptosis). This discovery is fundamental for understanding brain development and neurological diseases. Within the WAAC framework, Academician Horvitz's molecular biology perspective helps reveal how neural circuits self-organize and eliminate ineffective connections, thereby influencing the biological basis of consciousness generation.

3. James J. Heckman – 2000 Nobel Laureate in Economics. He developed econometric theory and methods for handling selection bias. Academician Heckman demonstrated the huge impact of early education and skill cultivation on long-term individual 收益 (returns/benefits); his "Heckman Curve" is an important concept in the economics of education. As a WAAC Academician, he introduces behavioral models and data analysis from economics into AI and consciousness research, for example, evaluating the preferences of agents with different cognitive abilities in decision-making, providing new ideas for understanding the behavior of autonomous intelligent agents.

4. Morten Peter Meldal – 2022 Nobel Laureate in Chemistry. He is one of the founders of "click chemistry." Academician Meldal developed fast, reliable chemical bonding methods widely used in pharmaceuticals, biomarking, and other fields. For artificial consciousness research, technologies like click chemistry are expected to assist neuroscience experiments (e.g., more precise labeling and manipulation of neurons). Meanwhile, Meldal's joining WAAC as a top scientist symbolizes the important role of basic natural sciences like chemistry in revealing the material basis of consciousness.

5. Takaaki Kajita – 2015 Nobel Laureate in Physics. Academician Kajita received the prize for discovering neutrino oscillations, proving that neutrinos have mass. This discovery changed humanity's understanding of fundamental particles and is considered a major breakthrough in 21st-century particle physics. Similarly, understanding a profound problem like consciousness might require similar courage and means as revealing "dark matter." Kajita's joining brings the profound thinking of particle physics into WAAC, helping the Academy expand its horizons at the level of basic theory. For example, his perspective might inspire us to explore the physical 载体 (carrier) or energy efficiency of consciousness, making artificial consciousness research more rigorous with the fundamentals of physics.

6. May-Britt Moser – 2014 Nobel Laureate in Physiology or Medicine. Academician Moser is famous for discovering grid cells (positioning neurons in the entorhinal cortex) in the brain. Grid cells, together with "place cells" in the hippocampus, constitute the brain's spatial positioning system, known as the "internal GPS." This discovery revealed the neural mechanisms of spatial cognition and memory, providing biological inspiration for autonomous navigation and environmental mapping algorithms in AI. Academician Moser's joining WAAC not only brings top achievements from neuroscience but also symbolizes interdisciplinary collaboration: her research spans neuroanatomy, cognitive psychology, and computational modeling, embodying a successful paradigm of applying brain science discoveries to artificial systems.

These six Nobel Laureate Academicians represent the highest achievers within the WAAC Academician community. Their outstanding contributions span life sciences, material sciences, social sciences, and other fields, laying a solid foundation for artificial consciousness research. Within WAAC, these top Academicians actively participate in Academy activities such as strategic consultation, academic reports, and talent cultivation, playing an irreplaceable leadership role. They bring world-class academic prestige and forward-looking vision to WAAC, greatly enhancing the Academy's influence and voice internationally. It is under the guidance of these masters that WAAC can promote the development of the field of artificial consciousness with "mature thinking and powerful action." Their presence not only raises WAAC's academic standing but also inspires young researchers inside and outside the Academy to strive to climb the peaks of science and continue writing new chapters in AI and consciousness research.

Conclusion

In summary, the World Academy of Artificial Consciousness has gathered top talents from various disciplines and countries worldwide. The list of its formal and Honorary Academicians can be described as "a galaxy of stars." The representative achievements of these Academicians in fields such as artificial intelligence, brain science, and cognitive science provide a rich theoretical foundation and technical pathways for the frontier direction of artificial consciousness. Geographically, WAAC Academicians are widely distributed, primarily from Europe and America with a rising Asia-Pacific, reflecting the openness of international cooperation; disciplinarily, they cover multiple dimensions from computer science to neuroscience, biology to philosophy, reflecting the interdisciplinary needs of artificial consciousness research. Driven by its Academicians, the Academy has rapidly established a global collaboration network, interacting with top organizations and projects like AAAI, IEEE, and the Human Brain Project, and participating in international rule-making and academic dialogue. Simultaneously, through the active advocacy of Academicians in the media and public sphere, WAAC's philosophy has been widely disseminated, sparking public attention and rational discussion on artificial consciousness. The participation of six Nobel Laureate Academicians, in particular, gives WAAC incomparable authority and influence. Their scientific achievements and foresight are leading WAAC towards higher academic peaks.

The rise of the World Academy of Artificial Consciousness heralds a new stage of global elite convergence and deep interdisciplinary integration in AI and consciousness research. With its excellent Academician team as the core driving force, WAAC is striving to build an international academic highland in the field of artificial consciousness. It can be foreseen that with the addition of more top talents and the collaboration of forces from all sectors, WAAC will produce greater academic 成果 (results/achievements) and social impact in the future, making unique and important contributions to unraveling the mystery of consciousness and promoting responsible AI development. As a new type of academy organization in this era, WAAC is practicing its motto with practical actions – "Gathering Global Wisdom, Exploring Artificial Consciousness" – opening up new paths for humanity to understand its own mind and create new types of intelligent agents.

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