

Frontier Assessments Unit

Research Report

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The Next Phase of U.S.-China Rivalry in the Era of Strategic Dual-Use Talent Acquisition and Technological Advancement: The Eastern Institute of Technology and Eastern Institute of Advanced Study

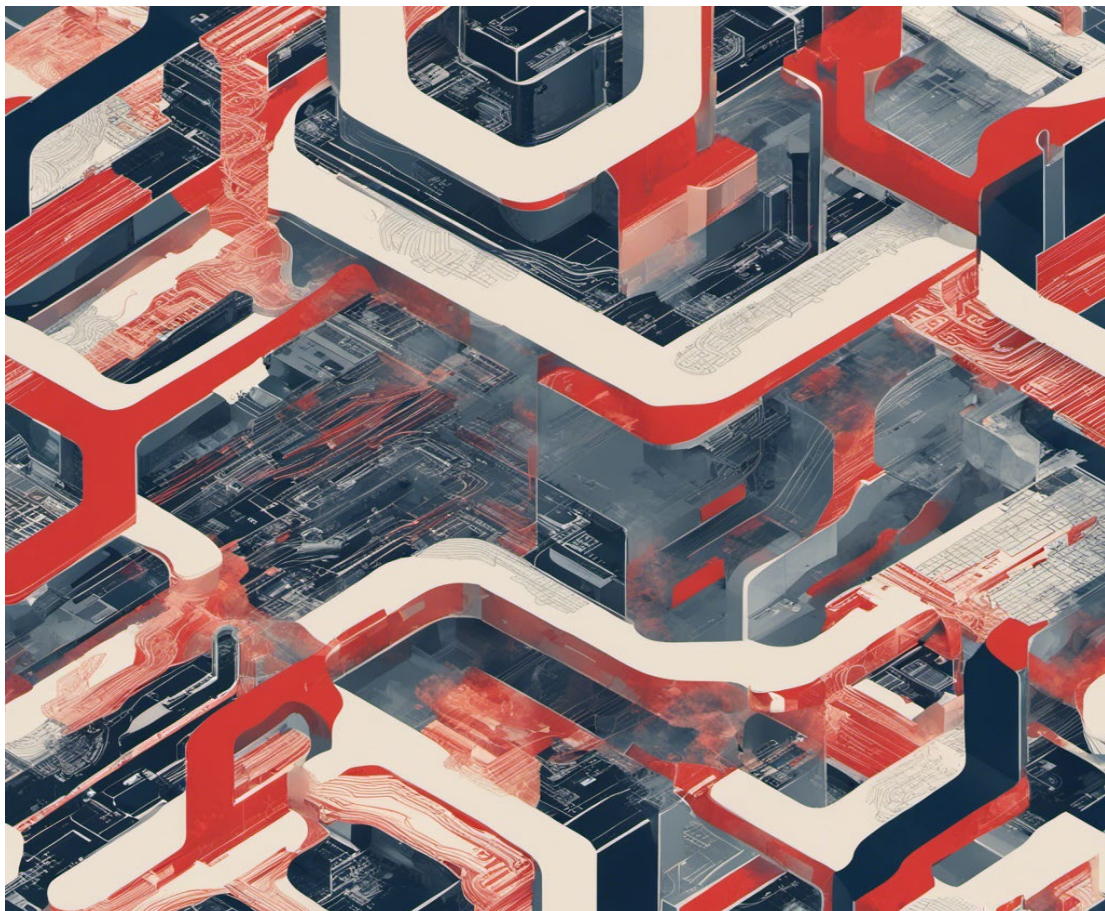


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Executive Summary

- 1. Recruitment of High-Profile Experts:** EIT's **strategic recruitment** of individuals with ties to major U.S. research entities emphasizes its focus on influential research and innovation.
- 2. Intensified Global Tech Rivalry:** Heightened tensions mark the global technological landscape, particularly between the U.S. and China. Strategic acquisitions of key companies and IP, especially in sectors like **semiconductors, AI, and next generation energy**, characterize this escalating standoff.
- 3. China's Strategic Educational Initiatives:** China is strategically advancing in tech education and talent acquisition through entities like **Eastern Institute of Technology (EIT)** and its affiliate, the **Eastern Institute of Advanced Study (EIAS)**. The increasingly higher-profile **Ningbo Oriental University of Science and Technology** exemplifies this, with significant state support and governmental collaboration.
- 4. Kunpeng Plan's Ambitious Talent Drive:** Central to China's talent strategy is the **'Kunpeng Plan' and 'KP Action Plan'**, offering lucrative incentives to attract the world's best tech experts such as Nobel Prize laureate, with significant progress already made by mid-2022.
- 5. Heavy Financial Backing for Talent:** Chinese local governments are heavily financing talent acquisition, with **individual investments** reaching up to 200 million yuan (**\$27M USD**), highlighting the seriousness of China's talent initiatives.
- 6. OmniVision Acquisition: Tech Transfer Concerns:** The significant **acquisition of OmniVision Technology by Will Semiconductor**, notable for its advanced imaging technologies, raises concerns over IP security and potential dual-use applications, underscoring the need for robust legal safeguards.
- 7. China's Answer to the U.S. CHIPS and Science Act:** China's expansive research labs and initiatives at Ningbo Oriental University of Science and Technology represent a **counterstrategy to the U.S. CHIPS and Science Act**, emphasizing its resolve to secure a technological stronghold.
- 8. Diverse Research Endeavors:** China's research spans various critical fields, emphasizing **high-performance computing and AI**, signaling its ambition for global technological leadership.
- 9. Expansive Talent and Research Goals:** China plans significant talent growth and the establishment of international research centers by 2025, **aiming for major technological breakthroughs by 2030.**

10. **Threat to U.S. Technological Leadership:** China's aggressive talent strategy and rapid scientific advancement present a **direct challenge to U.S. dominance**, necessitating a strategic U.S. reassessment to maintain its global attractiveness.
11. **Massive Science and Tech Investments:** China's enormous funding in science and tech, particularly in projects like the **Yongjiang Science and Technology Innovation Zone**, indicates its ambition to lead global innovation, posing a formidable challenge to U.S. supremacy.
12. **Sophisticated Talent Strategies:** Chinese labs employ sophisticated, **multi-tiered talent recruitment strategies**, emphasizing China's aspiration to become a global innovation hub.
13. **Philanthropy Driving Tech Independence:** Amidst U.S.-China tensions, significant **philanthropic investments by Chinese industrialists in education and research institutions** highlight a strategic push for technological independence and growth.
14. **Urgency for U.S. Strategic Adaptation:** The scale of China's initiatives necessitates an **urgent U.S. response**, requiring policy and strategic adaptations to retain its position as a leader in global tech innovation.
15. **EIT's Global Talent Attraction:** EIT focuses on attracting top-tier global talent, particularly in pivotal tech sectors, **aiming to consolidate knowledge** and foster innovation.
16. **Comprehensive Tech Advancement at EIT:** EIT's recruitment across diverse tech fields, including **semiconductors and nanotechnology**, positions it as a comprehensive leader in technological advancement.
17. **In response to China's aggressive tech investments, the U.S. must urgently reevaluate its CHIPS strategy, focusing on securing intellectual property, retaining top talent, and bolstering R&D efforts. This critical reassessment will safeguard U.S. technological leadership and address the pressing need to counterbalance China's rapid advancements before it's too late.**

Eastern Ascent: China's Strategic Talent Acquisition and the Escalating Tech Supremacy Stakes^{1 2}

The global technological landscape is witnessing an unprecedented level of competition, especially between the United States and China, as both vie for dominance in critical sectors such as semiconductors, artificial intelligence, and next-generation energy. Central to this contest is the strategic acquisition of companies and intellectual property (IP), a tactic that has been brought into sharp focus with the emergence of the **Eastern Institute of Technology (EIT)** and its affiliate, the **Eastern Institute of Advanced Study (EIAS)**.

The Eastern Institute of Advanced Study is currently establishing the development of **The Ningbo Oriental University of Science and Technology (宁波东方理工大学)**, still in its provisional naming stage, which will stand as a nascent research-intensive university. The Ningbo Oriental University of Science and Technology is embarking on a major campus development, spanning approximately 378 acres with an anticipated construction space of around 1.5 million square meters. The project, estimated to cost around 10 billion yuan (\$1.4B USD) for its initial two phases (excluding land expenses), aims for completion of its Phase 1-1 segment by September 2025. Located between major roads and a railway line, this ambitious endeavor marks a significant expansion and investment in the institution's future.³ This institution, characterized by its lofty inception, elite standards, and global outlook, is the brainchild of the **Yu Renrong Education Foundation** who will invest 10 billion yuan (\$1.4B USD) on campus construction and another 20 billion yuan (\$2.8B USD) on operation, covering basic expenses on training, scientific research, and international exchanges. It operates with substantial backing from national authorities and is a collaborative venture involving both provincial and municipal administrations. The university's inaugural principal is **Chen Shiyi**, a globally esteemed educator and member of the Chinese Academy of Sciences, and prior **Los Alamos National Laboratory employee**. Currently, the academic roster comprises 52 principal professors (also known as independent PIs), featuring 7 academicians, 22 talents of national acclaim, and 35 individuals who have honed their expertise at universities ranked in the



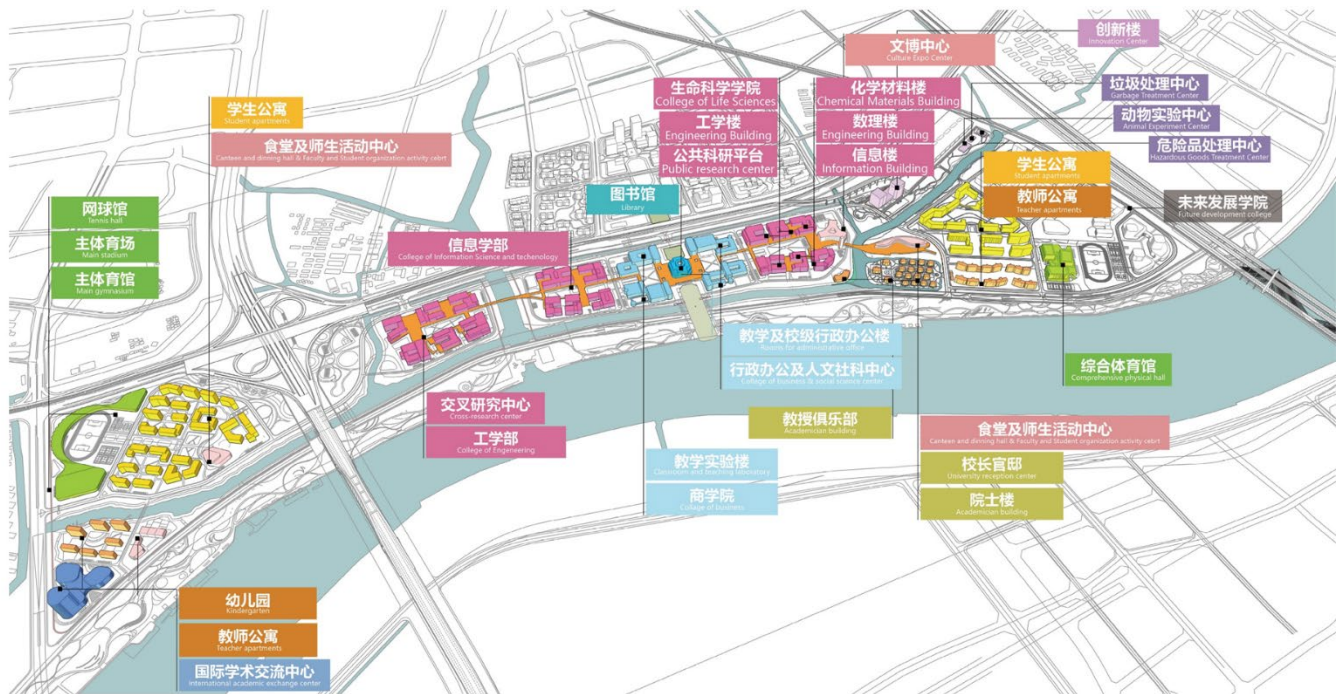
On December 29, 2022, the launch ceremony of Yongjiang Science and Technology Innovation Zone and the groundbreaking event of Ningbo Oriental University of Science and Technology (tentative name) were held. Peng Jiaxue (center, front row), member of the Standing Committee of the Zhejiang Provincial Party Committee and Secretary of the Ningbo Municipal Party Committee, attended and delivered a speech.

¹ Eastern Institute of Advanced Study – Teachers List.
https://www.eias.ac.cn/?teachers_category=teachers-list

² ‘Report Claims To Detail China’s Decades-Long Recruitment Of Leading LANL Scientists’, Los Alamos Reporter, 2022-09-22.
<https://losalamosreporter.com/2022/09/22/report-claims-to-detail-chinas-decades-long-recruitment-of-leading-lanl-scientists/>

³ EIT School Planning and Preparation Progress (EIT 办学规划及筹建进展), EIT 办学规划及筹建进展.pptx, accessed 2023-10-30

global top 200.⁴ The year 2025 stands as a pivotal point in the global technological race, marking a critical deadline for significant projects and initiatives, particularly in China with the completion of **The Ningbo Oriental University of Science and Technology**. This period is characterized by intense competition between the United States and China, as both nations strive to secure their positions as world leaders in innovation, technological advancement, and economic influence, making strategic decisions that will have lasting impacts on their respective futures and the global balance of power.



Overview and functional divisions of the permanent campus of the Ningbo Oriental University of Science and Technology (宁波东方理工大学)

At the heart of the **Eastern Institute of Technology Global Recruitment Program** is the ‘**Kunpeng Plan**’, a new growing talent recruitment program with similarities to the infamous **Thousand Talents Program**. In an ambitious stride toward academic and technological supremacy, various regions across China are vigorously executing talent acquisition strategies, with Zhejiang and Ningbo taking the lead through their progressive talent policies. The cornerstone **Kunpeng Plan**, an initiative by Zhejiang Province, designed to rope in globally influential trailblazers. Complementing this, Ningbo City has tailored its policies, offering a suite of incentives such as settlement subsidies, personal tax rebates, living allowances, healthcare benefits, and educational provisions for children, all structured to rival the most competitive domestic talent introduction schemes.⁵

⁴ ‘Standing tall in the town, Ningbo stands at the head of the tide | The groundbreaking ceremony of the core block project of Ningbo Oriental University of Science and Technology (tentative name) was successfully held’, <https://www.eias.ac.cn/?p=1463>

⁵ Eastern Institute of Advanced Study – Global Faculty Recruitment.

This nationwide campaign is not just a promise but is backed by substantial financial commitments. For instance, the Kunpeng Plan, spotlighted in the state media since its inception in 2019, has an ambitious target to onboard 200 technology virtuosos over five years. As of mid-2022, the plan had already welcomed 48 experts. In Wenzhou, a city in the same province, the local government's investment in each talent under the Kunpeng umbrella can skyrocket to an astounding 200 million yuan (\$28M USD), encompassing personal rewards, initial research funding, and accommodation facilities.⁶

The financial muscle doesn't end there. The Wenzhou faction of the Communist Party's Organization Department disclosed a nearly 50% budget surge in 2022, with a staggering 85 million yuan (\$12M USD) allocation for the Kunpeng and affiliated initiatives. One of the luminaries benefiting from this program is Dawei Di, a Cambridge alumnus and now a luminary at Zhejiang University, specializing in semiconductor optoelectronic devices.⁷

Further sweetening the deal, in Huzhou, another city in Zhejiang, the local authorities have incentivized talent recommendations. Employers who propose successful candidates to their 'Qiming' program can receive up to 1.5 million yuan (\$200K USD) in rewards from the municipal or district governments. This strategic financial outlay underscores China's determination to fast-track its dominance in the global scientific and technological arenas by magnetizing world-class talent.⁸

Bridging the Technological Frontier: Ningbo Oriental University's Counter to the U.S. CHIPS and Science Act^{9 10 11}

The **CHIPS and Science Act** is a U.S. federal statute enacted by the 117th United States Congress and signed into law by President Joe Biden on August 9, 2022. The Act is a \$53 billion American investment in the U.S. semiconductor industry to strengthen supply chains, enhance domestic research and development capabilities, and bolsters national security. China's creation of the **Ningbo Oriental University of Science and Technology** represents a calculated move to counter the U.S. CHIPS initiative by transforming the institution into a hub for tech innovation and talent, with the clear goal of challenging and achieving parity with global leaders in the semiconductor and high-tech industries. Under the auspices of the ambitious talent recruitment

<https://www.eitech.edu.cn/?p=139>, accessed 2023-10-30

⁶ Julie Zhu, Fanny Potkin, Eduardo Baptista and Michael Martina, 'Insight: China quietly recruits overseas chip talent as US tightens curbs', Reuters, 2023-08-24.

<https://www.reuters.com/technology/china-quietly-recruits-overseas-chip-talent-us-tightens-curbs-2023-08-24/>,
⁷ Ibid.

⁸ Ibid.

⁹ FACT SHEET: CHIPS and Science Act Will Lower Costs, Create Jobs, Strengthen Supply Chains, and Counter China, The White House Briefing Room, 2022-08-09

¹⁰Ningbo Oriental University of Science and Technology-Baidu Page-

<https://baike.baidu.com/item/%E5%AE%81%E6%B3%A2%E4%B8%9C%E6%96%B9%E7%90%86%E5%B7%A5%E5%A4%A7%E5%AD%A6/62541771#reference-24>

¹¹ 'The Yongjiang laboratory start-up area has officially started construction and will be completed and put into use in 2024', 2021-12-20.

<https://www.ylab.ac.cn/Content/2022/02-28/2236431167.html>

program, the **Kunpeng Plan**, the university is not merely an academic institution but a crucible for technological innovation, aimed directly at countering burgeoning international competition.

A testament to this is the construction of a colossal engineering verification center and scientific research buildings under the **Yongjiang Laboratory's** banner. By early 2024, the university's campus will witness the rise of an architectural behemoth, a complex sprawling across approximately 122 acres, dedicated to cutting-edge research and development. This state-of-the-art facility, covering roughly 110,000 square meters, isn't a standalone structure but a part of an extensive network of laboratories symbolizing China's commitment to becoming a titan in global technology.

The laboratories being developed are not limited to a single discipline but span across various fields critical to technological supremacy. For instance, the **Ningbo Digital Twin Oriental Institute of Technology**, slated for completion in 2022, and the **Ningbo Key Laboratory of Advanced Manufacturing Industrial Simulation**, expected by 2023, are municipal-level scientific research platforms focusing on digital simulations and advanced manufacturing, both crucial for innovations in sectors such as AI, robotics, and high-performance computing.



The Yongjiang Laboratory under construction early 2023.

Furthermore, the university-level research platforms, anticipated to be operational by 2023, are a conglomerate of specialized labs. These include the **Electrochemistry Platform**, the **Micro-nano Platform**, and the **Imaging Platform**, each diving deep into its niche area. However, what stands out is the **High-Performance Computing Platform** and the **AI Research Institute**. These centers are China's direct challenge to the **U.S. CHIPS and Science Act**, aiming to reduce reliance on foreign technology and establish sovereignty in AI and semiconductor production.

This labyrinth of laboratories isn't just a response to international policies; it's a bold statement. It's China laying the groundwork for a future where it doesn't just compete but leads the charge in the global technological arena. The **Ningbo Oriental University of Science and Technology**, with its massive complexes and a diverse array of research platforms, is poised to be a linchpin in this grand vision, powered by the nation's brightest minds.

By 2025, the lab aims to expand its talent pool to 800 individuals and establish 8 international-level new material research centers, setting the stage for a decade of growth that aspires to see

the talent scale soar to 3,000 by 2030, all while consistently yielding world-class, systematic, and significant innovative breakthroughs.¹²

The Rapid Ascendancy of Chinese Talent Recruitment Programs: A Challenge for U.S. Oversight

In an era where global technological supremacy is increasingly pivotal, China's multifaceted approach to talent acquisition, particularly in its burgeoning tech sector, presents a multi-faceted challenge for the United States, especially in terms of monitoring and counterbalancing these initiatives. A prime illustration of this is visible in the comprehensive talent recruitment strategies employed by China's state-of-the-art laboratories, each wielding its unique set of programs designed to attract a broad spectrum of experts from across the scientific community.

Take, for instance, the **Yongjiang Laboratory**. This institution has unfurled a suite of talent plans, each tailored to a specific echelon of scientific expertise and potential. These initiatives include the **Yongjiang Lighthouse Plan, Yongjiang Pilot Plan, Yongjiang Helmsman Plan, Yongjiang Leaders Plan, and the Yongjiang Rookie Plan**. These programs are meticulously crafted to entice everyone from strategic scientists and academic luminaries to key technological talents, emerging young minds, and exceptional doctoral graduates. Furthermore, the laboratory has instituted strategies for attracting high-caliber entrepreneurial and managerial talents, reinforcing its commitment to building a robust, multi-tiered team of professionals.¹³

This systematic and aggressive approach to talent recruitment isn't confined to a single institution but is a widespread phenomenon across various Chinese laboratories and research entities. Each facility not only seeks to advance its research capabilities but also to contribute to China's overarching ambition of becoming a global nexus of scientific innovation and technological advancement.

“KP Action Plan” (KP 行动计划)¹⁴

The **Eastern Institute for Advanced Study** has introduced an ambitious talent recruitment plan as part of its "**Kunpeng Action Plan**" aiming to attract top-tier scientific experts from around the world to commit to long-term positions in Zhejiang. The plan is seeking individuals who are willing to resign from their current positions and dedicate at least five years to full-time work in the region, with an emphasis on those who have not been in Zhejiang for more than two years at the time of application.

Targeting a global pool of candidates, the plan is interested in scientists and researchers from developed countries such as the **United States, Britain, Germany, France, Japan, Canada,**

¹² Yongjiang Laboratory, About Us Page.
https://www.ylab.ac.cn/about_us/

¹³ Yongjiang Laboratory, Careers Page.
<https://www.ylab.ac.cn/careers/>

¹⁴ Summary of relevant recruitment policies in Zhejiang Province and Ningbo City (浙江省、宁波市相关 RC 政策汇总), Talent Project PowerPoint by Eastern Institute of Advanced Study dated 2022-07, accessed 2023-10-30

and Australia. The targeted include winners of the Nobel Prize, Fields Medal, Turing Prize, Wolf Prize, Lasker Prize, Abel Prize, Taylor Prize, Crafford Prize, Graf Prize, Scientific Breakthrough Prize, Future Science Prize and other international awards recipients under the age of 65, world-renowned scientists and tech company executives, individuals who have mastered core key technologies, young talents from top overseas universities, and those recognized as outstanding young scientists.

The support policy is comprehensive, offering up to 100 million yuan (\$14M USD) in project funding over a five-year period, with additional leader reward funds and team member reward funds available. There are also a variety of other support policies in place, including assistance with housing, children's education, and healthcare, ensuring that the recruited talents and their teams have everything they need to thrive in their new roles.

Imagine a scenario where **John B. Goodenough**, the esteemed **American Nobel laureate** renowned for his pivotal role in the development of lithium-ion batteries, was enticed by the lucrative and comprehensive incentives of China's "**Kunpeng Action Plan**" and decided to relocate his research endeavors to Zhejiang.

The ripple effects of such a move would extend far beyond the boundaries of a single laboratory. Goodenough's profound expertise and innovative spirit have been integral to the U.S.'s leadership in lithium-ion battery technology—a field crucial for everything from portable electronics to electric vehicles and renewable energy storage. His departure to China would signify not just a loss of talent but a potential shift in technological dominance.

In the U.S., this could lead to a stagnation of progress in battery technology, as the void left by Goodenough's absence would be challenging to fill. Young scientists and researchers, who would have benefited from his mentorship, might find themselves lacking the guidance needed to reach their full potential. Meanwhile, China, armed with Goodenough's knowledge and experience, could accelerate its progress in battery technology, leading to breakthroughs that could give Chinese companies a significant competitive advantage in the global market.

The national security implications for the U.S. are profound. With lithium-ion batteries playing a crucial role in military applications, from portable electronics for soldiers to energy storage for advanced weapon systems, losing a leading expert in this field to China could potentially compromise the U.S.'s technological edge and military readiness.

This hypothetical story illustrates the potential consequences of China's aggressive talent recruitment strategy. By successfully attracting world-class scientists like Goodenough, China could not only bolster its own technological capabilities but also weaken the U.S.'s economic and national security standing, underscoring the need for the U.S. to reevaluate and strengthen its strategies for talent retention and technological development.

“YC Plan” (YC 计划)¹⁵

The "YC Plan" is a comprehensive talent recruitment initiative aimed at attracting top-tier professionals and academics from around the world to Zhejiang, China. The plan has various categories, each with specific eligibility requirements, but generally targets individuals with a doctoral degree, holding senior positions in academia or industry, and who are ready to commit to working full-time in Zhejiang for no less than three years.

- **Innovative Talents:** This category is for individuals with a doctorate and equivalent to an associate professor or above, including those in senior positions in globally recognized enterprises and financial institutions. Applicants should not have returned to China or come to Zhejiang before May 31, 2021, and must commit to working in Zhejiang full-time for no less than three years upon being selected. Selected talents will receive an incentive fund of 1 million yuan (\$140K USD), with young talents receiving 500,000 yuan (\$70K USD).
- **Young Talents:** Targeting overseas Ph.D. holders under 40 years of age, this category focuses on those holding formal positions in renowned universities, research institutions, or corporate R&D institutions. Similar to the Innovative Talents category, applicants should not have returned to China or come to Zhejiang before May 31, 2021, and are required to commit to a full-time position in Zhejiang for no less than three years.
- **Direct Recognition:** This category is for talents who have been selected into the YC program through other provincial platforms, are no older than 58, and have returned to China for no more than six years. Applicants must have resigned from their original employer and have been working full-time in Zhejiang for more than three months, committing to at least three years.
- **Deliberation and Identification:** Aimed at individuals no older than 58 who have held associate professor or higher positions in top-ranking universities worldwide within the last three years. Applicants must have returned to China for less than a year and committed to working full-time in Zhejiang for more than three months.

“DJ Talent Project” (DJ 人才项目)¹⁶

The "DJ Talent Project" in Ningbo is a strategic initiative aimed at attracting top-tier innovators and professionals, emphasizing a commitment to full-time innovation and part-time consultancy roles. Applicants, preferably below the age of 65, are expected to bind themselves legally to a minimum five-year stint in Ningbo, ensuring their focus and dedication to substantial projects already underway. The program targets distinguished individuals, including winners of internationally recognized awards and academicians from prestigious institutions, offering extensive financial support. The full-time innovation category promises up to 100 million yuan

¹⁵ Ibid.

¹⁶ Ibid.

(\$13.7M USD) in project funding and up to 8 million yuan (\$1.1M USD) in personal rewards, while the part-time innovation category provides substantial annual salary subsidies, covering 30% of the annual labor remuneration up to 2 million yuan (\$280K USD) per person. This initiative underscores Ningbo's commitment to fostering a vibrant ecosystem of innovation and excellence, aiming to attract and retain the world's brightest minds in various fields.

Ningbo Talent Classification and Recognition (宁波市人才分类认定)¹⁷

The **inclusive talent policy in Ningbo** outlines various awards and funding opportunities aimed at attracting and retaining a diverse array of talents, categorized from top talent to senior talents.

Top talents are eligible for a relocation subsidy of 8 million yuan (\$1.1M USD) at the municipal level, provided they are selected into the city's **DJ talent project**. Additionally, they can receive home purchase subsidies equivalent to 20% of the actual total purchase price, capped at 20%, and a scientific and technological contribution reward, which is a full reimbursement of 15% of their personal income tax rate, up to 2 million yuan (\$280K USD) per year. These financial incentives are complemented by service guarantees that include access to high-quality public education resources for their children, comprehensive medical care, and other miscellaneous services such as VIP access to transportation hubs and recreational facilities.

Exceptional, leading, top, and senior talents receive varying levels of support, with decreasing relocation subsidies ranging from 1 million (\$140K) to 150,000 yuan (\$21K USD), and home purchase subsidies and scientific contributions proportional to their categorization. Service guarantees, particularly in children's education and medical security, are also extended to these talent categories, ensuring a holistic approach to talent attraction and retention.

In essence, this policy aims to create a conducive environment for talents at different levels, providing them with financial incentives, service guarantees, and an inclusive community that values their contributions to the city's development.

A Call for Strategic Action in U.S. Talent Acquisition and Technological Leadership

Given the comprehensive and aggressive nature of China's talent recruitment programs, the United States is at a crucial juncture and must urgently reassess its strategies to maintain its allure for global talent. The all-encompassing approach of programs such as the "**Kunpeng Action Plan**," "**YC Plan**," and "**DJ Talent Project**" in China highlights the country's unwavering commitment to attracting and nurturing top-tier professionals across various fields.

These programs, marked by substantial financial incentives, robust support policies, and significant investment in research and development, demonstrate China's strategic intent to become a global leader in technology and innovation. In the face of such a formidable challenge, the U.S. can no longer afford to remain on the sidelines. There is an acute need for proactive engagement and a reevaluation of existing policies to ensure that the U.S. continues to be a top choice for outstanding talents worldwide.

¹⁷ Ibid.

Failure to act swiftly and decisively may result in a dramatic shift in the global balance of technological prowess, with China poised to take the lead. The United States must reinvigorate its efforts to secure and retain top talents, safeguard intellectual property, and bolster research and development initiatives to secure its position as a global innovation hub. This is not just a matter of national pride; it is a strategic imperative for maintaining technological superiority and ensuring long-term economic and security interests.

Institutional Setup and High-Profile Recruitment^{18 19 20}

EIT's establishment is not an isolated event but part of a broader, more systematic effort. The institution's leadership and faculty comprise individuals with deep ties to U.S. research entities and significant expertise in sectors critical to technological advancement. These include figures like **Chen Shiyi** and **Dongxiao Zhang**, both of whom have histories at **Los Alamos National Laboratory**, and professors recruited from prestigious universities specializing in areas ranging from semiconductor testing and computer architecture to next-generation batteries and nano-technology. This concerted recruitment points to a strategic consolidation of knowledge and skills, positioning EIT at the forefront of technological research and potential IP appropriation.²¹

Dr. Chen Shiyi, a prominent figure in the scientific community, currently holds a position as chair professor at the **Institute for Advanced Study of Eastern Institute of Technology**, and his career is a testament to the impactful collaboration and talent exchange between the U.S. and China. Notable among his contributions is his work with **Dr. He Guowei** on submarine noise reduction during their time at **Los Alamos National Laboratory**, which has significantly influenced the development of stealthier submarines within the People's Republic of China. Furthermore, Dr. Chen's strategic recruitment, exemplified by bringing **Dr. Shan Xiaowen** to the **Southern University of Science and Technology (SUSTech)**, has catalyzed advancements in unmanned aerial vehicles (UAVs), particularly in the development of prototypes with dual-use potential. While UAVs are predominantly viewed as tactical assets in contemporary military strategies, the rapid advancements in UAV technology are poised to transform them into strategic game changers, potentially reshaping the landscape of modern warfare and defense capabilities.

In the realm of hypersonic and aerodynamics, Dr. Chen's expertise, honed during his tenure at **Los Alamos and later as President of SUSTech**, has been instrumental in China's technological advancements in these sectors. His work in fluid dynamics and turbulence, coupled with his ability to attract scientists with critical experience, has significantly contributed to China's aerospace and defense capabilities. However, his pivotal role in these developments also brings

¹⁸ Eastern Institute of Advanced Study – Teachers List.

https://www.eias.ac.cn/?teachers_category=teachers-list

¹⁹ Los Alamos Reporter, 'Report Claims To Detail China's Decades-Long Recruitment Of Leading LANL Scientists', Los Alamos Reporter, 2022-09-22.

<https://losalamosreporter.com/2022/09/22/report-claims-to-detail-chinas-decades-long-recruitment-of-leading-lanl-scientists/>

²⁰ Ningbo Oriental University of Science and Technology, Teachers List.

https://www.eitech.edu.cn/?teachers_category=teachers-list

²¹ The Los Alamos Club, Strider Intelligence, 2022-09-22

<https://www.striderintel.com/resources/the-los-alamos-club/>

to the forefront complex discussions regarding intellectual property security, ethical implications of dual-use technology, and the dynamics of international scientific collaboration amid the escalating U.S.-China tech competition.

David Clark Keezer, a distinguished figure in the realm of electronics and electrical engineering, currently serves as a **Chair Professor** at the **Institute for Advanced Study of Eastern Institute of Technology**. With an academic background that includes a PhD from **Carnegie Mellon University** and positions at the **Georgia Institute of Technology**, Dr. Keezer's expertise lies in integrated circuit design and testing. His prolific academic contributions include 269 papers in international journals and conferences and a significant role in guiding graduate students and participating in doctoral committees. Dr. Keezer has previously received funding for his work performing 'Hardware-Based Run-Time Code Integrity in Embedded Devices' from the **Cisco University Research Program Fund** as a part of the **Silicon Valley Community Foundation**. Given David Clark Keezer's extensive affiliations with both Chinese and U.S. institutions, as well as his history of receiving funding from U.S. sources closely tied to Silicon Valley, one must ponder if his dual connections raise any legal concerns regarding the U.S. research security provisions and potential violations related to the safeguarding of critical semiconductor technologies.²²

In the specialized field of multi-GHz high-frequency logic system development, Dr. Keezer has been instrumental in advancing global integrated circuit electrical testing technology. Notably, his innovative approach to utilizing smart load boards has markedly enhanced the functionality of automatic test equipment (ATE), optimizing performance while reducing costs. His illustrious career is further highlighted by numerous awards, including being elected an IEEE Fellow, receiving the IEEE International Test Conference Contribution Award multiple times, and earning the IEEE Computer Society Gold Core Award. His extensive work in academia and research, coupled with his commitment to innovation and education, underscores his position as a leading figure in the field of electronics and electrical engineering.

Bodong Shang, a rising figure in the realm of electrical and computer engineering, transitioned from an illustrious academic background to a significant role as **Assistant Professor at the College of Information Science and Technology, Eastern Institute for Advanced Study, Eastern Institute of Technology**. With a Ph.D. from **Virginia Tech** and a post-doctoral tenure at **Carnegie Mellon University's Department of Engineering and Public Policy**, Shang's expertise spans crucial areas like vehicle-to-everything communications, non-terrestrial networks, and edge computing, fields integral to modern tech infrastructure and defense systems.²³

Notably, during his time at **Carnegie Mellon University**, Shang engaged in research funded by the **U.S. Air Force Research Laboratory (AFRL)** and the **National Science Foundation (NSF)**, under grant numbers **FA8750-18-1-0175** and **CNS-1811720**, respectively. These associations with U.S. defense and national research entities underscore the high caliber and

²² Wehbe, Taimour & Mooney, Vincent & Keezer, D.C. (2018). 'Hardware-Based Run-Time Code Integrity in Embedded Devices', *Cryptography*. 2. 20. 10.3390/cryptography2030020.

²³ Bodong Shang 尚博东 <https://shangbodong.github.io/home.html>

strategic importance of his work. His move to **EIT**, a key player in China's ambitious tech landscape, therefore, represents more than a career shift. Given the sensitive nature of his research areas, especially those funded by the **U.S. AFRL** and **NSF**, Shang's relocation raises crucial questions about international research collaborations, potential technology transfer, and the broader implications for U.S.-China relations in the ongoing technological race. His trajectory is emblematic of the complex interplay between individual careers, institutional ambitions, and national interests in the global tech arena.²⁴

Michele Lancia, an accomplished **Research Associate Professor** currently affiliated with the **Ningbo Oriental University of Science and Technology**, brings an impressive academic and professional background in earth sciences and engineering. With foundational education from the **University of Rome** and a doctorate in civil and mechanical engineering from the **University of Cassino-Lazio Sud, Italy**, Lancia's expertise lies in the nuanced study of hydrogeology. His research ambit encompasses the local and regional hydrogeological characterization through numerical analysis, assessment of complex geological conditions, urban water management practices, and the study of microplastic dynamics in groundwater. This comprehensive approach to hydrogeology has positioned him as a respected figure in environmental science and engineering circles.

With an illustrious career that bridges both academia and industry, **Dr. Wenjun Zeng** stands out as a pivotal figure in the realms of artificial intelligence, computer vision, multimedia analysis, and security. A Tsinghua University alumnus, Dr. Zeng furthered his education in the United States, earning advanced degrees from the **University of Notre Dame** and **Princeton University**. His journey is marked by significant stints at global tech giant Microsoft, as a member of the Senior Leadership Team at **Microsoft Research Asia**, and academia, with his current role as **Vice President** and **Chair Professor** at the **Institute for Advanced Study of Eastern Institute of Technology**. Dr. Zeng's research has garnered international acclaim, with an extensive portfolio of published work cited over 17,000 times, and a notable H-index of 61.

Dr. Zeng's career is highlighted by his profound impact on the field of computer science, particularly through his roles at the **University of Missouri-Columbia** and his various positions within **Microsoft**. His contributions to academia extend beyond his own research, as evidenced by his extensive mentorship roles at several universities and his involvement with numerous IEEE journals and conferences. His recognition as an IEEE Fellow in 2012 underscores his substantial contributions to multimedia communications and security. Furthermore, his inclusion in Stanford University's list of the top 2% of scientists for lifelong scientific impact in 2020 speaks volumes about his enduring influence in the field.

Beyond his academic achievements, Dr. Zeng has significantly influenced industry practices, particularly during his tenure at **Microsoft Research Asia** and his involvement with **Huawei Technologies Co., Ltd.** His work has not only pushed the boundaries of understanding in his field but also applied this knowledge to practical, industry-shaping initiatives. This balance of

²⁴ B. Shang, E. S. Bentley and L. Liu, "UAV Swarm-Enabled Aerial Reconfigurable Intelligent Surface: Modeling, Analysis, and Optimization," in *IEEE Transactions on Communications*, vol. 71, no. 6, pp. 3621-3636, June 2023, doi: 10.1109/TCOMM.2022.3173369.

theoretical insight and practical application characterizes Dr. Zeng's career, marking him as a leader in both academic and industrial spheres within the technological world.

Lei He's distinguished career, marked by significant contributions to computer science and engineering, places him at the epicenter of potential intellectual property (IP) concerns amidst the escalating U.S.-China tech rivalry. Currently holding positions as a **Professor at the University of California, Los Angeles (UCLA)**, and a **Guest Chair Professor at Fudan University in China**, and recently announced **Chair Professor at Eastern Institute for Advanced Study** which presents a complex scenario.

Dr. He even maintains dual email access between UCLA and EIAS. His extensive collaborative endeavors, which include consulting roles with U.S. tech giants like Intel, known for its seminal contributions to the CHIPS initiative, raise questions about the potential for IP transfer or even inadvertent leakage. This concern is further compounded by his co-authorship of over 200 technical papers and direct involvement in cutting-edge research areas such as very-large-scale integration (VLSI) circuits, the Internet of Things (IoT), and artificial intelligence. Dr. He's multifaceted engagements across academia and industry, spanning both sides of the Pacific, underscore the delicate and often precarious balance of knowledge exchange in the current global tech landscape. While his work is undoubtedly influential and contributes to the advancement of technology, it also necessitates cautious navigation of the IP terrain amidst heightened scrutiny in the U.S.-China tech space.^{25 26 27}

Under the **Kunpeng Plan** which is leveraged by the **Eastern Institute of Technology Global Recruitment Program**. The Plan is run by authorities in eastern Zhejiang province, whose 2019 launch was covered in state media. The Zhejiang Daily reported in June 2022 that the program aimed to attract 200 tech experts in five years, with 48 already recruited. This is just the beginning of the **Kunpeng Plan** and will consume further US tech experts.²⁸

The Semiconductor Stakes: U.S.-China Rivalry in Talent Acquisition^{29 30}

In the high-stakes realm of semiconductor technology, a field crucial to everything from national security to global economic hegemony, the battle for talent between the U.S. and China

²⁵ Lei He IEEE Author Page, <https://ieeexplore.ieee.org/author/37269852200>

²⁶ X. Hao et al., "Lasa: Abstraction and Specialization for Productive and Performant Linear Algebra on FPGAs," 2023 IEEE 31st Annual International Symposium on Field-Programmable Custom Computing Machines (FCCM), Marina Del Rey, CA, USA, 2023, pp. 34-40, doi: 10.1109/FCCM57271.2023.00013.

²⁷ Tiandong Zhao et al., Towards A Reconfigurable Systolic Array with Multi-Level Packing for Transformers, Architecture and System Support for Transformer Models (ASSYST), ISCA, 2023, <https://openreview.net/references/pdf?id=wrBYq25nD>

²⁸ Julie Zhu, Fanny Potkin, Eduardo Baptista and Michael Martina, 'Insight: China quietly recruits overseas chip talent as US tightens curbs', Reuters, 2023-08-24. <https://www.reuters.com/technology/china-quietly-recruits-overseas-chip-talent-us-tightens-curbs-2023-08-24/>

²⁹ Yongjiang Laboratory Media Center, 'Yongjiang Laboratory recruits talents from all over the world', 2022-07-18. https://www.ylab.ac.cn/news/yJ_news/07-18/1013462224.html

³⁰ Yongjiang Laboratory Job Search Tool,

<https://recruitment.ylab.ac.cn/system/userInfo/positionSearchByCondition?pageIndex=1&queryKey=&park=%E7%94%AC%E6%B1%9F%E5%AE%9E%E9%AA%8C%E5%AE%A4&employType=>

underscores a pivotal frontier in their ongoing technological cold war. The **Yongjiang Laboratory's** broad recruitment strategy illustrates China's ambitious agenda to achieve self-sufficiency and global leadership in critical tech domains, encompassing areas such as new energy materials, polymers, high-end alloys, electronic information materials and devices (a category that notably includes semiconductors), and advanced manufacturing technologies, among others.

This sweeping approach signifies more than an expansive research agenda; it's a strategic gambit in the international talent competition, directly impacting the semiconductor arena.

Semiconductors, the essential components in a plethora of devices from smartphones to military hardware, are a critical leverage point in U.S.-China relations. With the Chinese government's robust backing, initiatives like those at **Yongjiang Laboratory** signal a determined bid to lure top-tier talent, potentially including experts from the U.S., with promises of ample funding, state-of-the-art facilities, and a high degree of research autonomy.

For the U.S., the risks of this talent diversion are manifold. First, the loss of top minds in the semiconductor field could lead to a decrease in domestic innovation, hindering the development of new technologies and the improvement of existing ones. Second, as talent migrates, so might intellectual property and proprietary knowledge, potentially giving Chinese companies and research institutions a shortcut to advancements that took U.S. entities years of work and investment to achieve. This not only accelerates China's progress but may also compromise U.S. trade secrets and national security.

Moreover, the potential national security risks associated with this talent migration are substantial. The transfer of experts in cutting-edge technologies to China could enable the development of advanced military capabilities, potentially eroding the U.S.'s technological advantage in defense. Furthermore, the integration of former U.S. researchers into China's military-industrial complex could lead to the U.S. losing its edge in critical areas such as cybersecurity, artificial intelligence, and quantum computing, all of which have significant national security implications.

Additionally, as the semiconductor supply chain is globally integrated, leadership in this domain grants significant geopolitical leverage. Should China succeed in attracting a critical mass of top talent in semiconductor research and development, it could eventually achieve an autarky in this sector. This development would profoundly alter the geopolitical landscape, potentially destabilizing the U.S.'s position as a technological superpower and upending the global supply chain.

Given these stakes, it's imperative for the U.S. to reassess its talent retention strategies, invest in education and research, and perhaps most crucially, enhance the appeal for top talent to pursue and sustain their careers within its borders. The semiconductor sector, a linchpin of modern technology, represents a critical arena where the broader U.S.-China rivalry for technological supremacy will play out, with global implications hinging on the talents of those leading the charge in innovation.

Strategic Acquisitions: The Case of OmniVision Technology

One of the pivotal moves underscoring this strategy was the acquisition of U.S.-based **OmniVision Technology Inc.**, a leading provider of advanced image sensors, by **Will Semiconductor**, a company headed by China's richest chip man, **Yu Renrong**, and listed on the Shanghai Stock Exchange. Facilitated by individuals like **Datong Chen**, who relinquished his U.S. citizenship, this acquisition represents a significant transfer of technological advantage. It is further bolstered by financial support from the **China National Integrated Circuit Industry Investment Fund**, indicating state-level backing and strategic intent. OmniVision designs and develops digital imaging products for use in mobile phones, laptops, netbooks and webcams, security and surveillance cameras, entertainment, automotive and medical imaging systems.

OmniVision in 2019 achieved Guinness World Record for world's smallest commercially available sensor for **OV6948** used as the **CameraCubeChip**. This sensor and lens manufacturing process is combined using semiconductor stacking methodology. Wafer-level optical elements are fabricated in a single step by combining CMOS image sensors, chip scale packaging processes, (CSP) and wafer-level optics (WLO). These fully integrated chip products have camera functionality and are intended to produce thin, compact devices.³¹

Other technology like the **OmniBSI-2** was developed in cooperation with **Taiwan Semiconductor Manufacturing Company Limited (TSMC)**, is built using custom 65 nm design rules and 300mm copper processes. These technology changes were made to improve low-light sensitivity, dark current, and full-well capacity and provide a sharper image.³²

However, the acquisition of OmniVision by **Will Semiconductor**, a Chinese company, raises significant national security concerns. OmniVision's advanced imaging technologies, particularly those with potential military applications, are now under the control of a foreign entity, potentially giving the Chinese government access to critical U.S. technological advancements. This is exacerbated by the involvement of individuals like Datong Chen, who has ties to both the U.S. and China, creating a complex web of allegiances and potential conflicts of interest. The U.S. must urgently address these issues, reassessing its policies on technology transfers and international collaborations to protect its technological assets and national security.

The **OS02H10** from OmniVision is a 2 Megapixel Color CMOS Digital Image Sensor is advertised as '**ideal for security surveillance systems**'. The OS02H10's high performance in varying light conditions, particularly its ability to capture detailed images in ultra-low light and its efficient detection of both visible and NIR wavelengths, makes it a valuable asset for military and surveillance applications.³³

The implications of these developments are manifold. Firstly, there's an elevated concern regarding IP security, raising questions about the adequacy of current legal frameworks

³¹ OmniVision Wikipedia page, https://en.wikipedia.org/wiki/OmniVision_Technologies#CameraCubeChip

³² Ibid.

³³ OS02H10, CMOS Image Sensor by OmniVision Technologies.

<https://www.gophotonics.com/products/cmos-image-sensors/omnivision-technologies/21-118-os02h10>

governing tech transfers and global collaboration. Secondly, given the backgrounds of the recruited individuals and their areas of expertise, there's potential for dual-use applications of the research outputs, applicable to both civilian and defense sectors. This blurring of lines complicates the ethical landscape professionals must navigate, particularly those moving between nations with contentious diplomatic relations.

The emergence of entities like **EIT** underscores the urgent need for robust legal structures that safeguard intellectual property while fostering fair competition. It also brings to the fore ethical considerations about the role of researchers and business leaders in this fraught international tech landscape with many and proliferating dual-use grey zones. Diplomatically, these developments necessitate a reevaluation of policies governing international collaboration in science and technology, factoring in the strategic interests of nations and internationally shared benefits.

The U.S.-China tech war, characterized by strategic acquisitions and alleged IP appropriation efforts by institutions like **EIT**, represents a new frontier in international relations. It highlights the complexities of technological competition in the modern era — a realm where academic institutions, private companies, and state actors converge. As this landscape continues to evolve, there will be an imperative for multifaceted responses that balance competitive interests, ethical standards, and the collective push for human advancement. The developments at **EIT** serve as a microcosm of this larger dynamic, symbolizing the challenges and opportunities inherent in global technological progression.

Strategic Education Investments in China's Tech Future³⁴

Yu Renrong, ranked 197th on the 2022 Forbes rich list and noted as China's richest chip man with a net worth of US\$10 billion, has initiated the construction of **Ningbo Oriental University of Science and Technology under the development of the Eastern Institute of Advanced Study**, supported by a massive investment from both himself and the Ningbo Municipal Government. This university aims to be a world-class institution with a primary focus on research, innovation, and internationalization. Several other prominent entrepreneurs have also shown a trend of investing in education, signifying a shift in Chinese industrial capital.

Promoting Strategic Leverage Against the US-China Tech War

Significant Investment in Education: Yu Renrong's massive investment into the Ningbo Oriental University of Science and Technology, to the tune of 30 billion yuan (\$4.1B USD), showcases China's intensified focus on strengthening its technological and scientific research capabilities. This move can potentially churn out a significant number of experts and innovators in the chip industry, challenging American dominance in the sector.

Research and International Collaboration: The university emphasizes both basic and applied research and stresses the importance of cross-disciplinary integration. Furthermore, they plan to

³⁴ 'Construction of "Oriental University of Science and Technology" begins! The richest man in China's chip industry donated 30 billion yuan, aiming to have 10,000 students on campus within ten years...', Securities Times, 2022-12-29.

<https://www.163.com/dy/article/HPPLVTS0053469RG.html>, 2022-12-29

collaborate with well-known universities globally, indicating a move towards international knowledge-sharing and collaboration, potentially bridging gaps in the semiconductor industry.

Trend of Industrial Capital in Education: The fact that several other entrepreneurs, such as **Ma Huateng** and **Wang Jianlin**, are investing in education suggests that there's a broader movement in China of industrial capital flowing into educational initiatives. This can lead to an acceleration in research and innovation, challenging the technological hegemony of the U.S.

Development of Science and Tech Innovation Zones: The construction of the **Yongjiang Science and Technology Innovation Zone**, aiming to be a world-class innovation center, indicates China's ambition to create hubs of technological innovation. Such zones can foster environments conducive to semiconductor advancements.

Yu Renrong's Background: Yu's background in the semiconductor industry, with his establishment of **Weir Co., Ltd.**, and its transition into a company focusing on semiconductor design, provides the university with leadership deeply rooted in the chip industry. This can steer the institution's focus towards semiconductor research, directly challenging the US in the chip war.

High-Quality Infrastructure and Innovation Park: The university's planned infrastructure, including high-quality technology platforms and an innovation park, suggests a holistic approach to research, development, and commercialization of technological advancements, which can accelerate China's growth in the chip sector.

Talent Production: With plans to produce a student population of 10,000 within ten years and a significant focus on graduate and doctoral programs, the university will be generating a substantial number of experts in the field, further bolstering China's position in the global chip industry.

In conclusion, the establishment and funding of institutions like the **Ningbo Oriental University of Science and Technology** indicate China's strategic move to bolster its position in the global semiconductor industry, directly challenging the U.S.'s dominance.

China's Accelerated Science and Technology Advancement: A New Epoch in the Global Innovation Landscape³⁵

China is aggressively propelling itself to the forefront of global science and technology innovation, leveraging vast investments and strategic planning in a bid to establish itself as a world leader in this arena. **The Yongjiang Science and Technology Innovation Zone** exemplifies this ambition, with a total land area of 197 square kilometers, and a sweeping portfolio of 166 key projects demanding a colossal investment of **230.2 billion yuan (\$31.4B USD)**. **The Ningbo Oriental University of Science and Technology** construction project is just one of the notable projects. These projects span a wide spectrum, including scientific and technological innovation, infrastructure, public services, and comprehensive development, all aiming to cement Yongjiang's status as a global epicenter of scientific advancement.

In a strategic push to achieve world-class status, Yongjiang is focusing on major science and technology platforms, with a goal for R&D expenditures to comprise over 8% of its regional GDP by 2025. Plans are in place to cultivate national strategic scientific and technological prowess, with initiatives such as the construction of world-class laboratories, the development of large scientific facilities, and the establishment of national innovation platforms. There's a clear emphasis on upgrading existing 'Guozihao' innovation platforms, expanding research universities, and fostering collaborations with high-level domestic and international institutions. Furthermore, there's a thrust to build high-level industrial technology research institutes in cutting-edge fields and to expedite the construction of an R&D headquarters cluster in the Yongjiang Zone. This comprehensive approach is indicative of a larger national trend, where public and private sectors coalesce to drive forward scientific and technological innovation at an unprecedented pace.

This surge in scientific and technological investment and development in China poses a significant challenge to the United States' long-standing global leadership in these domains. The extensive funding, the rapid establishment of research centers, and the strategic focus on future-oriented technologies signify China's commitment to reducing its reliance on foreign technology and establishing itself as a global innovator. This could potentially disrupt the global innovation landscape, shift the balance in tech trade and intellectual property, and challenge the U.S.'s predominance in shaping the future of technology. Moreover, China's approach of closely



Photo provided by Ningbo Municipal Bureau of Natural Resources and Planning) Planning spatial structure diagram of Ningbo Yongjiang Science and Technology Innovation Zone

³⁵ 'Ningbo accelerates the construction of a world-class science and technology innovation center in Yongjiang Science and Technology Innovation District and will build it like this in the future (宁波加快建设甬江科创区世界一流科创策源中心以后这样打造)', Ningbo Communication 2023 Issue 4, 2023-04-06. <https://www.dataabyss.ai/web/2023%2F0406%2F21481903.html>

integrating industry, academia, and government strategies stands in stark contrast to the more compartmentalized system in the U.S., potentially giving China a more streamlined path to rapid advancement. The speed and scale of these developments underscore the urgency with which China is seeking to ascend the global ranks of science and technology, marking a pivotal moment in the U.S.-China tech race.

Industrial Titans Fueling Technological Sovereignty: The Rise of Philanthropic Education Investment Amidst the US-China Tech Standoff³⁶

Amidst the escalating US-China tech war, a new trend is gaining momentum within China: industrial magnates are channeling substantial capital into the education sector, particularly in technology and research institutions. This movement underscores an urgent push to foster homegrown talent and innovation, especially significant considering the ongoing geopolitical tensions that threaten the usual cross-border flow of knowledge and expertise.

Yu Renrong, notably recognized in the tech industry, joins the ranks of prominent entrepreneurs like **Ma Huateng**, **Gong Hongjia**, **Wang Jianlin**, and **Zhang Lei**, who have collectively backed the establishment of **Westlake University**. This institution, birthed from the intellectual consortium of respected scientists including **Professor Shi Yigong** of Tsinghua University and Professor **Chen Shiyi** of Southern University of Science and Technology, was greenlit by the Ministry of Education in 2018. Positioned in Zhejiang Province, **Westlake University** operates as a non-profit institution, steered by the **Hangzhou West Lake Education Foundation**, with a clear mandate to propel forward-thinking research and technology. Recently, 'Genius' biochemist **Kunliang Guan** returned to China from the U.S. to head a new laboratory to continue his world-leading research on cell signaling pathways at Westlake University after working in the United States for more than 30 years in aftermath of a National Institutes of Health investigation.³⁷ The successful recruitment of 'Genius' biochemist Kunliang Guan to Westlake University, along with the backing of tech moguls and the intellectual prowess of esteemed professors, has transformed this institution into a burgeoning hotbed for talent transfer, further emphasizing the strategic significance of this university in China's broader talent acquisition endeavors. Its worth noting that on October 28, 2022, **Westlake University** and the **Eastern Institute for Advanced Study** formally signed a strategic cooperation agreement. According to the agreement, the two parties will jointly strategize talent recruitment initiatives and scientific research.³⁸

Parallel to this, the first edifice of **Fuyao University of Science and Technology**, financed by philanthropist and industrialist **Cao Dewang**, is underway, with expectations to commence full operations by fall 2024. This project, bearing an ambitious initial endowment of 10 billion yuan

³⁶ Securities Times, 'Construction of "Oriental University of Science and Technology" begins! The richest man in China's chip industry donated 30 billion yuan, aiming to have 10,000 students on campus within ten years... ', Securities Times, 2022-12-29.

<https://www.163.com/dy/article/HPPLVTS0053469RG.html>

³⁷ Ling Xin, 'Genius' biochemist Kunliang Guan returns to China from US to head new lab, South China Morning Post, 2023-08-15

³⁸ The Eastern Institute for Advanced Study and Westlake University Sign Strategic Cooperation Agreement, EIAS Latest News. 2022-10-28

<https://www.eias.ac.cn/?p=664&lang=en>

(\$1.4B USD) from **Cao's Heren Charitable Foundation**, is envisaged as a cutting-edge research university established in partnership with the Fuzhou Municipal People's Government. **Cao Dewang** envisions the institution to transcend conventional academia, embodying the ethos 'Ending with perfection'—signifying a perpetual pursuit of knowledge and innovation. His aspiration is to forge an inclusive, open, and distinctive global university, pioneering a novel paradigm of educational excellence funded through philanthropy.

This surge in educational investment by industry leaders signifies a strategic pivot within China, underscoring a resolve to independently cultivate technological advancement amidst the complexities of the international tech landscape. It's a testament to the nation's commitment to sustaining its technological growth and competitiveness, even as global political dynamics grow increasingly fraught.

Strategic Implications

As we navigate the precipice of this intensified global tech rivalry, it's clear that the current era is characterized by strategic maneuvering, significant financial investments, and a fierce battle for intellectual property supremacy, particularly between the U.S. and China. The battleground spans several critical sectors, from semiconductors to AI, and involves not only corporate acquisitions but also the shaping of future minds through educational initiatives.

China's ambitious strides, embodied by the advancements of institutions like **EIT** and **EIAS**, and initiatives such as the **Kunpeng Plan, KP Action Plan, YC Plan, and the DJ Talent Project** demonstrate a concerted effort to pivot the epicenter of technological innovation eastward. These efforts are not just aspirational; they are backed by substantial financial muscle, with investments in technology procurement sometimes soaring as high as \$2.178 billion. This aggressive strategy is further highlighted by the strategic acquisition of tech companies like OmniVision Technology, signaling China's readiness to expedite its technological agenda, even if it means navigating the complex waters of IP and dual-use technologies.

Moreover, China's comprehensive response to the U.S. CHIPS and Science Act, its diverse technological research endeavors, and its ambitious talent and research expansion goals underscore its resolve to not just participate in but to lead the next chapter of global technological innovation. The multifaceted approach, extending from sophisticated talent strategies in labs to significant philanthropic investments by industrial magnates, is recalibrating the global tech landscape.

However, this seismic shift doesn't just represent a challenge for the U.S.; it also embodies an opportunity. It's a clarion call for the U.S. to introspect and adapt its strategies, to reimagine its policies to ensure it continues to be a cradle of innovation and a desirable destination for the brightest minds. The current landscape underscores the urgency for the U.S. to foster an environment that not only nurtures homegrown talent but also continues to attract global intellectuals and innovators.

Institutions like **EIT**, with their global talent attraction strategies and focus on comprehensive tech advancement, are setting a new standard in the technological race. The recruitment of high-

profile experts and the emphasis on diverse tech fields is a testament to the holistic approach required to lead in this arena.

In conclusion, as we stand at this critical juncture, the path forward involves more than competition; it requires a recommitment to the core values of innovation, collaboration, and ethical responsibility. It necessitates a balance between national interests and global good, between securing our technological futures and ensuring we don't compromise the principles that underpin scientific advancement. This era of strategic talent acquisition and technological advancement isn't just about a rivalry between the U.S. and China; it's about shaping the future of humanity.