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Eighth US-China Conference on Arms Control, Disarmament, and Nonproliferation



Eric Scheel

Paul A. (Alex) Kynerd

Ruby Russell

**James Martin Center for
Nonproliferation Studies**

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James Martin Center for Nonproliferation Studies

Middlebury Institute of International Studies at Monterey

460 Pierce Street

Monterey, CA 93940, USA

Tel: +1 (831) 647-4154

Fax: +1 (831) 647-3519

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Editing and production: Rhianna Tyson Kreger

Eighth US-China Conference on Arms Control, Disarmament, and Nonproliferation

Conference Report

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About the Conference

The Eighth US-China Conference on Arms Control, Disarmament, and Nonproliferation was held on April 11-12, 2016, in Monterey, California. This track-one-and-a-half conference was the eighth in a series of bilateral conferences bringing together government officials and nongovernmental experts from the United States and China. The discussions were divided into five panels and covered a wide range of issues including: nuclear security and safeguards; expanding cooperation in arms control and nonproliferation; steps toward nuclear disarmament; improving US-China strategic stability; and trends and future challenges.

Participants in the conference, which was co-hosted by the James Martin Center for Nonproliferation Studies at the Middlebury Institute for International Studies and the China Arms Control and Disarmament Association (CACDA), included senior representatives from the US Departments of State and Energy, the National Security Council, and academics from US military academies, as well as various nongovernmental (NGO) experts. Former US Under Secretary of Defense Walter Slocombe also attended. From the Chinese side, China's Ministries of Foreign Affairs and National Defense were well represented, as were experts from the academic and NGO sectors.

Executive Summary

The Eighth US-China Conference on Arms Control, Disarmament, and Nonproliferation, held April 11-12, 2016, in Monterey, co-hosted by the James Martin Center for Nonproliferation Studies (CNS) at the Middlebury Institute for International Studies and the China Arms Control and Disarmament Association (CACDA). This event was an opportunity for experts and officials from the United States and China to speak candidly about many pressing issues facing international security and nonproliferation. While areas of disagreement were evident, the discussions in this meeting re-launched the cooperative dialogue of the conference series, which aims to find common ground between the United States and China on issues related to arms control, disarmament, and nonproliferation.

In a series of panel discussions, participants addressed a wide range of issues including: nuclear security and safeguards; expanding cooperation in arms control and nonproliferation; nuclear disarmament; the state of US-China strategic stability; and the future challenges facing the United States and China in these areas. The unofficial nature of this “track-one-and-a-half” gathering allowed participants to explore issues in a way not normally available in official dialogues.

The first panel, entitled “Prospects for Nuclear Nonproliferation: On the Road toward the 2010 NPT Review Conference,” saw US and Chinese participants agree on a number of major areas of concern that could act as a solid basis for bilateral cooperation in this field. Panelists highlighted the importance of the newly established Center of Excellence on Nuclear Security in Beijing as a platform for exchanging information on best practices, training, and technological issues between the United States and China, as well as across the broader the Asia-Pacific region. The session’s discussions underscored the importance of continuing to utilize existing mechanisms for bilateral engagement in the field, including under the Peaceful Uses of Nuclear Technology (PUNT) Agreement.

In the second session looking at “Expanding Cooperation in Arms Control and Nonproliferation,” participants focused heavily on the issue of strategic trade controls and how to work bilaterally to curb illicit trafficking. China has been moving forward with the recent creation of the Bureau of Industry, Security, and Import Export Cooperation (BISIEC) under the Ministry of Commerce to manage dual-use control efforts. Much attention was given to the importance of China’s willingness and ability to adopt the most recent UN sanctions on North Korea. Participants also noted the extent to which US controls impact exports to China and China’s continued lack of transparency about export control violations challenge bilateral cooperation.

During the third panel, participants discussed measures both sides could take to foster an international environment conducive to nuclear disarmament. Participants highlighted the ongoing efforts to ratify the Comprehensive Nuclear-Test Ban Treaty and negotiate a Fissile Material Cut-off Treaty, as well as challenges facing the road to nuclear disarmament. Participants highlighted the current challenge between the United States and China on disarmament stemmed from technological developments, postures, and actions taken by both sides. Steps to decrease the risk of misunderstanding and miscalculation could include taking weapons off high-alert and eliminate the first-use option. To pre-empt the emergence of additional risk, one participant suggested that the United States and China consider a moratorium on antisatellite weapon (ASAT) tests and discuss the risk of precision-strike weapons, particularly when used on nuclear facilities.

Participants spoke heatedly about the status and future of strategic stability in the fourth panel. Many participants noted that the two sides continue to debate the definition of “strategic stability” and that these challenges arise from the emergence of new nuclear nations, old and new regional tensions, and new technological developments like cyber, hypersonic, and space-based weapons. Missile defense systems and the lack of mutual trust were noted as serious challenges as well. Current tensions in the South China Sea were noted as one major source of tension in the bilateral relations. One Chinese participant noted that actions by US allies could draw Washington into a conflict in the region. US participants responded that China has a responsibility to refrain from causing unnecessary tension in the region and reminded the gathering that the United States does not control the actions of its allies.

In the fifth panel, participants discussed trends and future challenges in arms control and nonproliferation, with a significant amount of time devoted to the Korean peninsula. North Korean activities and other regional tensions have made strategic stability much more difficult to achieve. Pointing to areas where the Chinese government are particularly concerned, one expert noted that the further development of US BMD would likely result in a system ten times larger by the 2030s, which would neutralize China’s retaliatory capability. This expert and others emphasized the consequences of BMD and warned the continued development could result in a larger Chinese arsenal. Partially in response to these concerns, US participants noted the importance of discussing BMD deployment vis-à-vis North Korea, noting the system is not directed at China.

The meeting concluded with comments from the organizers noting the overall success of the event. Both sides agreed that all efforts should be made to continue the conference series in a timely manner, and suggested the ninth conference be held in Beijing in 2017.

Report on Conference Proceedings

Opening Remarks

The Eighth US-China Conference on Arms Control, Disarmament, and Nonproliferation opened with a series of spirited and substantive remarks on the state of the nonproliferation and disarmament regime today.

Both Chinese and American speakers addressed a breadth of nonproliferation challenges facing the international community, ranging from North Korean nuclear brinkmanship and the nuclear arms race in Southeast Asia, to emerging threats posed by non-state actors and disruptive technologies such as cyber technologies and additive manufacturing. Some of these challenges, one speaker argued, have been largely self-induced, including the decline in cooperation among the five permanent members of the Security Council (the P5: United States, United Kingdom, France, Russia, China) as well as the continued pursuit of policies that undermine the Treaty on the Non-proliferation of Nuclear Weapons (NPT). The speaker pointed specifically to the US-India nuclear deal as another example. Moving forward, speakers insisted that enhanced transparency and cooperation among nuclear weapon states are essential for securing strategic stability in a multipolar, post-Cold War environment and in combating emerging threats such as nuclear terrorism.

Speakers highlighted the importance of US-China relations, pointing to this conference series as an important mechanism for improving cooperation and dialogue, as well as resolving misunderstandings between the two countries. This is particularly vital on North Korea issue, where criticism and suspicion continue to hinder US and Chinese cooperation in resolving this critical matter. The speakers acknowledged that only through frank and honest discussion on areas of disagreement could the two countries adequately address nonproliferation issues and broader threats to international peace and stability.

In addition to assessing the scope of challenges, the speakers also pointed to international progress in the nonproliferation regime resulting from increased engagement among critical actors. Achievements such as the Joint Comprehensive Plan of Action,¹ the fourth Nuclear Security Summit (NSS)² meeting, and the 2016 adoption of UN Security Council Resolution 2270

¹ The Joint Comprehensive Plan of Action (JCPOA) was an agreement reached in June 2015 by the permanent five

² The nuclear security summit (NSS) was a Barack Obama administration initiative that brought together world leaders to focus on nuclear security and the prevention of nuclear terrorism. They were held in Washington, DC, in 2010, Seoul, South Korea, in 2012, The Hague, Netherlands, in 2014, with the last held also in Washington, DC, in 2016.

condemning North Korea's nuclear and missile tests³ underscore the potential for establishing enduring nonproliferation policies, not only through multilateral frameworks, but also strong bilateral US-China cooperation.

The speakers stressed the need for new and fresh ideas to overcome current challenges in the field of disarmament and nonproliferation as well as other areas of mutual interest, including combating climate change and the spread of infectious diseases. Speakers emphasized the value of US-Chinese cooperation in addressing these critical issues, and called for establishing greater transparency and trust between the two countries. Overall, the speakers agreed that with the participation of distinguished policy makers and experts, the US-China Conference provides a critical forum for identifying creative and practical means to enhance US-Chinese cooperation on arms control, disarmament, and nonproliferation.

Panel I: Nuclear Security and Safeguards: Prospects of Greater Cooperation in the Region

Discussion in the first panel focused largely on recent advances in policies directed toward improving nuclear security and safety globally, as well as the convergence of US-Chinese interests on these issues.

Participants from both countries remarked on the recent improvement in US-China cooperation on nuclear security and safety. Chinese participants pointed to the accelerated global collaboration in this area since 2010 and the success of the Nuclear Security Summits (NSS) in bringing these issues to the forefront of the nonproliferation agenda. A Chinese participant noted how initiatives including the implementation of the Yangshan Port Pilot Program in Shanghai under the US-China "Megaport Initiative," the joint publication of the "Technical Guidance on Nuclear Export Control List," the US-China Joint Statement on Nuclear Security Cooperation at the 2016 NSS, and the newly established Center of Excellence on Nuclear Security in Beijing all demonstrate increasing bilateral cooperation on nuclear security issues. US participants noted a positive shift in Chinese attitudes toward engagement at both official and unofficial levels, praised Beijing's active role in the most recent NSS, and noted the success of current US-Chinese cooperation in the field. US participants pointed specifically to the US-China Peaceful Uses of Nuclear Technology (PUNT) Agreement as an effective, collaborative framework for addressing issues related to nuclear security. Under the PUNT agreement, US and

³ UNSC Resolution 2270 imposes legally binding sanctions on North Korea (DPRK) in response to its fourth nuclear test in January 2016 and ballistic missile launch in February 2016. The resolution tightens the arms embargo on North Korea (the DPRK) and includes mandatory inspections of cargo to and from the DPRK.

Chinese officials meet every year to present ideas, approve projects, and cooperate at the lab-to-lab level regardless of challenges facing the broader bilateral relationship. The five PUNT working groups include: (1) Nuclear Energy Technologies; (2) Safeguards and Security; (3) Environment and Waste Management; (4) Nuclear Emergency Management; and (5) Radiological Source Security. US panelists expressed optimism over the current state of affairs on bilateral nuclear security and safety cooperation, especially from a technical implementation standpoint.

Participants on both sides discussed possibilities for furthering cooperation on the issues of nuclear security and safety. One Chinese panelist emphasized that the newly established Center of Excellence should serve as a platform for exchanging information on best practices, training, and technological issues both between the United States and China, as well as across the broader Asia-Pacific region. The panelist suggested that the United States and China continue to work together on the minimization of highly enriched uranium, including through converting the Miniature Neutron Source Reactor to use a lower, non-weapon-usable grade of enriched uranium.

Chinese participants encouraged greater cooperation in the field of nuclear forensics and radioactive source detection. Areas where cooperation could be improved included: intelligence sharing on radioactive material trafficking; coordinating national mechanisms dedicated to emergency response and crisis management; and facilitating the establishment of robust international standards on nuclear security and safety. Chinese panelists also pointed to the Radiation Detection Training Center in Qinhuangdao (in China's Hebei province) as an excellent platform to facilitate coordination. Combating the illicit trade of radiological materials was also cited as an area for increasing US-Chinese cooperation and coordination.

The US panelists made a series of recommendations for improving nuclear security and safety standards in China's facilities as well as for accelerating bilateral cooperation on these issues. One panelist recommended incorporating stronger standards for securing nuclear facilities into Chinese guidelines and laws. To improve regional security and transparency, the panelist also recommended greater multilateral cooperation on developing safety and security standards for the nuclear fuel cycle, as well as bilateral collaboration on ideas relating to spent fuel and "take-back services."⁴ Another US panelist underscored the importance of continuing to utilize existing mechanisms for bilateral engagement in the field, including under the PUNT Agreement. Finally, like their Chinese counterparts, the US panelists emphasized the need for increased coordination and transparency on national emergency response plans.

⁴ "Take-back services" entail moving nuclear fuel from consumer states to either (1) states that can provide fuel services or (2) states that will store used nuclear fuel.

In discussing mechanisms for future engagement, one US participant flagged the first US-China bilateral nuclear security dialogue held on sidelines of a February 2016 NSS Sherpa meeting.⁵ Future meetings will be held on an annual basis, focusing on bilateral cooperation and potential avenues for working with regional countries on the issue of nuclear security. Another US participant recommended using regional bodies like the Association of Southeast Asian Nations (ASEAN) Regional Forum (ARF) as a mechanism through which the two countries could pursue collaborative engagement with regional actors on nuclear security issues. The ARF meetings on nonproliferation and disarmament provide a particularly effective venue for such engagement.

US panelists highlighted a series of mutual interests maintained by the two countries, including: the commitment to developing civil nuclear energy; facilitating peaceful uses cooperation; and combating climate change. One US panelist pointed out that China, as the country with the fastest growing civil nuclear energy program in the world, requires reliable partners to ensure the program's continual success. In this context, the United States represents a source of expertise capable of playing a positive role in the development of China's civil nuclear program.

Speakers also noted the role of NGOs in facilitating deeper US-China cooperation on nuclear security and safety. Such engagement has ranged from technical discussions at China's premier national lab and the conduct of table-top exercises to active debates over the future of the nuclear fuel cycle. The utility of the Nuclear Threat Initiative's Nuclear Security Index was also noted for its role in notifying states of areas needing improvement. Through these activities, US participants observed China's growing acceptance of nuclear security as a regional and international issue extending beyond its national agenda.

During the general discussion for this session, participants voiced concerns over current issues and future trends related to nuclear security and safety, including the rise of the Islamic State of Iraq and the Levant, illicit trafficking of radioactive materials, cyber terrorism, and emerging technologies such as additive manufacturing. In the wake of the final NSS, Chinese participants expressed concern over how these trends will develop in the future. It was said that the rising threat of nuclear and radiological terrorism makes such concern all the more pertinent. Another Chinese participant noted that, while the 2016 NSS Communiqué was successful in confirming the central role of the International Atomic Energy Agency in supporting and strengthening future nuclear security initiatives, experts are concerned that the agency—with its core mandate as a safeguards enforcement body—has neither the capacity nor resources to adequately address nuclear security challenges.

⁵ In February 2016, China Vice Foreign Minister Li Baodong and US Senior Director for Weapons of Mass Destruction, Terrorism, and Threat Reduction Laura Holgate—who also served as US “sherpa,” or head of delegation to the NSS—co-chaired the first US-China nuclear security dialogue. Both sides discussed furthering cooperation in the area of nuclear security and the necessary preparations for the upcoming NSS meeting.

Participants also debated the potential for improved information sharing on nuclear forensics. One US participant suggested that while more research and development would be required prior to increased information sharing, the issue is currently being examined in the PUNT process. A Chinese participant suggested that although there may be potential for basic information sharing on nuclear forensics, given the broader political tensions between the two countries, some information might be too sensitive.

In their closing remarks, panelists emphasized that from a technical standpoint, there is good reason to be optimistic over the potential for fruitful bilateral cooperation on mutual nonproliferation interests. Panelists noted the value of track one-and-a-half negotiations in this regard, and concluded that US-China cooperation on nonproliferation is comprehensive and profound, acting as a force to propel the two countries forward as partners. Participants agreed that the United States and China have a shared responsibility to address future challenges posed by nuclear security and safety, and for facilitating the establishment of global standards on these critical international security issues. Both Chinese and American participants underscored the need to follow through on existing commitments.

Panel II: Expanding Cooperation in Arms Control and Nonproliferation

In the second panel of this conference, participants discussed recent efforts toward expanding cooperation in arms control and nonproliferation. Chinese participants outlined the principles of the Chinese export control system, China's participation in relevant international treaties and conventions, and the revision of China's export control system.

Chinese panelists emphasized the steps China has taken to improve cooperation and strengthen its export control system. One speaker noted that China has signed and ratified international treaties and legislation (such as the NPT and the treaties banning the use and stockpiling of chemical and biological weapons), developed its own control lists based on those of the Missile Technology Control Regime and Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods, participated in UN resolutions to reduce regional conflict, and participated in Arms Trade Treaty discussions in 2012 and 2013 with hopes of ratifying the treaty and effectively controlling the proliferation of conventional weapons. The speaker observed China's transition from an administrative export control system to one based on the rule of law. Participants also noted the recent creation of China's Bureau of Industry, Security, Import and Export Control (BISIEC). Another Chinese panelist highlighted the three principles of Chinese export controls system which aim to facilitate better relations with other countries, including through (1) helping

countries establish legitimate self-defense capacity; (2) contributing to peace, security, and stability; and (3) noninterference in the internal affairs of recipients.

Participants remarked on recent efforts to improve US-China cooperation in arms control and nonproliferation. A Chinese participant commended US-China efforts in establishing the Radiation Detection Training Center (RDTC) in 2012. It was noted that the center has served as an excellent platform for sharing technical information and conducting training such as commodity identification.

Both sides discussed ways for expanding cooperation and improving upon existing export control systems. One US expert pointed to a number of potential areas for improving US-Chinese cooperation on export controls, including increased information sharing on best practices and trafficking trends, as well enhanced collaboration through the establishment of collaborative educational programs through CNS and CACDA, as well as the CNS Asian Export Fellows Program. Increasing cooperation through the establishment of community-building institutions such as ASEAN, the ASEAN Regional Forum, the Asia-Pacific Economic Cooperation, and ASEAN+3 was also highlighted as critical to reinforcing effective management of export controls systems.⁶

In addition to agreeing on the need to improve compliance culture through industry outreach, both US and Chinese panelists highlighted the importance of NGO involvement, noting the critical roles CACDA and CNS have played in facilitating Chinese compliance programs. One speaker highlighted the role of industry as the first line of defense, specifically in terms of strong internal compliance programs. In this context, another Chinese speaker mentioned the need to place greater attention on local government efforts to support industry export control programs.

Participants discussed ongoing concerns and challenges to cooperation and effective arms control. One Chinese participant expressed concern that, through its use of sanctions, the United States places China on the same level as Sudan, North Korea, and Iran, and that this kind of discrimination, coupled with the current US arms embargo on China, hinders cooperation. One Chinese participant noted that while UNSC Resolution 2270 demonstrates the capacity for agreement between the US and China on nonproliferation and denuclearization on the Korean peninsula, sanctions are only a method and that diplomacy is the ultimate solution to the North Korean problem.

⁶ In addition to the ten members of ASEAN (Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam), the ASEAN+3 includes China, Japan, and the Republic of Korea.

One US participant noted two main challenges to cooperation on export controls, notably US controls related to national security and China's lack of transparency on trade control violations. US export controls restrict not only items of nonproliferation concern, but also extend to other goods of national security concern. These additional controls on technology, which often target Chinese industries, have resulted in bilateral friction. At the same time, China lacks transparency on export controls in terms of violations and licensing decisions.

One US speaker pointed out that a number of factors have prompted growing concern over the proliferation risks associated with China's shipping industry. First, China is a major shipping point, housing twenty of the world's largest container ports. Second, the sheer volume of trade passing through these ports and China's capacity to manufacture or procure items of proliferation value raises concern. In this context, it was also noted that China is a major supplier of commodities with dual-use applications. One Chinese panelist responded that since arms exports are handled by only twelve companies in China, these transactions are more heavily scrutinized by Chinese authorities than by US counterparts.

In this session, conference participants debated the impact of recent export control reform in China. One US participant asked whether years of efforts to revise China's legal export control framework have had any measurable impact, specifically on preventing proliferation by entities intending to undermine the system. In response, a US panelist noted that while the laws have not changed substantially, the communication and interfacing between responsible organizations in China has increased in the last three to four years. A Chinese panelist pushed back on the perception that efforts to revise Chinese export controls have had little impact, arguing Chinese economic growth in the last decade has allowed for greater focus on export controls, especially in terms of improving capacity of relevant agencies including the Ministry of Foreign Trade and Economic Co-operation. A US panelist also noted that continual efforts on the Chinese side to review its export controls should be viewed positively, and that difficulty in export control reform is evidenced by on-going reforms within the United States.

Another participant asked how the recent Chinese military reorganization will impact those agencies in charge of export control enforcement, including the Central Military Commission that oversees licensing for military goods. In response, a Chinese panelist pointed out that those agencies in charge of arms exports remain few in number (twelve), and are therefore relatively easy to regulate, regardless of governmental reforms.

In their concluding comments, both American and Chinese panelists emphasized that, while export controls represent an important area in which the US and China can continue to work together, both countries need to find a way to balance these mutual interests with other

competing interests within the broader bilateral relationship. Moving forward, participants emphasized the need to determine common standards for balancing national security interests with proliferation issues.

Panel III: Steps toward Nuclear Disarmament

During the third panel, participants discussed measures both sides could take to foster an international environment conducive to nuclear disarmament. Participants highlighted challenges for entry-into-force of the Comprehensive Nuclear-Test Ban Treaty (CTBT), the ongoing negotiations of a Fissile Material Cut-off Treaty (FMCT), and current impediments to nuclear disarmament.

Both sides first discussed the status of the CTBT and the likelihood of its entry-into-force. While pointing to the negotiation of the CTBT as a major achievement of the post-Cold War era, one Chinese panelist noted that the United States and China both have yet to ratify the treaty, and are two of six remaining “Annex II states” whose ratification is required for the treaty’s entry-into-force. The participant stated that although China was one of the first countries to sign the CTBT, China still needs to invest more in alternative methods of testing to ensure its stockpile is safe, secure, and survivable. Even so, the participant underscored the importance China places on the CTBT, noting Beijing’s continued commitment to a moratorium on nuclear testing, its participation in CTBT Organization-sponsored activities, and its submission of the treaty for ratification to the National People’s Congress in 2000. The Chinese participant recommended that both China and the United States ratify the treaty to establish the moral ground necessary to convince other remaining Annex II states to do the same. The Chinese panelists agreed that ratification should occur sooner rather than later, especially given the number of the CTBT negotiators set to retire in the near future and expected erosion of institutional memory.

One US panelist emphasized their country’s firm commitment to pursuing ratification and rapid entry-into-force of the CTBT, while also noting that no Annex II state, including China, needs to wait on the United States to pursue ratification. Discussing US efforts to move the issue forward on Capitol Hill, the panelist highlighted the State Department’s outreach activities to secure grassroots support for CTBT ratification, including in US states that have suffered from US nuclear testing in the past. Overall, US panelists expressed optimism over the potential for ratification, noting that earlier congressional concerns over the National Nuclear Security Administration’s ability to maintain a safe, secure, and effective stockpile without testing have largely dissipated with the success of the Stockpile Stewardship Program. Continuing to emphasize the program’s success will be essential to future efforts promoting ratification.

To further US-Chinese progress on CTBT ratification, one US participant suggested that both countries send their top foreign and energy ministry officials to the June 2016 CTBT ministerial meeting marking the twentieth anniversary of the treaty's signing. One Chinese participant noted the potential for US-China cooperation in monitoring North Korean nuclear testing, including through joint seismic calibration experiments near the Chinese-North Korean border.

Participants also discussed efforts to move forward on the negotiation of an FMCT. In comparison to the prospects for CTBT ratification, Chinese panelists expressed less optimism for the potential to negotiate such a treaty, especially given the twenty-year deadlock currently immobilizing the Conference on Disarmament (CD). One Chinese participant noted Chinese concerns that the country's current fissile material stockpile is inadequate, especially if the United States continues to develop its conventional strategic capabilities. Despite this, China appeared ready to join negotiations on an FMCT.

While acknowledging the problematic state of the CD, one US panelist emphasized that body remained the ideal forum for negotiating an FMCT. In an effort to break the deadlock, the United States has proposed a "clean" negotiating mandate for a treaty on fissile materials that makes clear all options remain on the table. This proposal does not, however, alter the US position that such a treaty should only apply to existing nuclear material stockpiles.

Both sides acknowledged the critical role that both China and the United States would have to play to bring Pakistan to the negotiating table.⁷ One US participant asked how the two can work together to convince Pakistan that a fissile material treaty is in its best interest. In response, one Chinese participant emphasized the need to recognize Pakistan's security concerns vis-à-vis India, noting that the United States would have a lot of work to do with its strategic partner in assuaging Pakistan's concerns on this front.

The session included significant debate about the current obstacles associated with nuclear disarmament. In order to move beyond bilateral US-Russian disarmament efforts, one Chinese panelist called for redefining the concept of disarmament, especially as the current focus on ready-to-launch weapons does not apply to other nuclear weapon states (NWS). The Chinese participant noted that the focus should lie first on lowering the total number of nuclear weapons in all NWS, and then reducing the role of nuclear weapons in national security strategies. Regarding force level, one US participant asked what position China would need to be in, relative to the United States and Russia, before China could commence with

⁷ Pakistan has continued to veto Fissile Material Cut-Off Treaty negotiations at the Conference on Disarmament while expressing opposition to its scope, definitions, verification, and entry-into-force.

disarmament. In response, the Chinese panelist indicated that China—which maintains it does not keep nuclear weapons on high-alert status—would become involved in disarmament negotiations only when the United States and Russia began discussing reductions in terms of total numbers of nuclear weapons.

US and Chinese officials acknowledged the challenges posed by countries outside the NPT that possess nuclear weapons, as well as the current low state of P5 cooperation on this issue. Panelists recognized, however, that a P5 process would have significant potential to develop multilateral solutions for nonproliferation and disarmament. Regarding P5 engagement with non-nuclear weapon states (NNWS), one US participant emphasized that P5 states should refrain from boycotting open-ended working groups and nuclear disarmament sessions, as this behavior is hindering the disarmament process.⁸

Regarding China's view on Russian violations of the 1987 Intermediate-range Nuclear Forces Treaty and its implications for future arms control, a Chinese participant stated such actions reflect a broader attitude in both the United States and Russia that prioritizes military expansion over nuclear disarmament. The 2002 US withdrawal from the 1972 Anti-Ballistic Missile Treaty was also cited in this context. US panelists pointed to continual progress on implementation of the 2010 New Strategic Arms Reduction Treaty (New START), noting President Barack Obama's standing offer to pursue reductions up to one-third below those levels currently designated in New START, as well as willingness to discuss tactical weapons, so long as it has a ready and willing partner. The importance of the US-led International Partnership for Nuclear Disarmament Verification was also emphasized, especially given its role in bringing together technical experts from NWS and NNWS to tackle challenges posed by verifying disarmament.

One US participant highlighted the current tensions between the United States and China stemming from certain technological developments, postures, and actions taken by both sides. The participant referred to recent developments in ASAT and cyber technology, US BMD and prompt global strike, and China's military modernization and developments in hypersonic glide vehicles and multiple independently targetable re-entry vehicle technology. The participant suggested several ways of decreasing the risk of misunderstanding and miscalculation. For actions by the United States, recommendations included, (1) eliminate rapid launch option, (2) take silo-based missiles off high alert, and (3) eliminate the first-use option. The participant

⁸ For example, the United Kingdom and United States did not participate in the first two conferences on the humanitarian consequences of nuclear weapons held in Oslo, Norway, in 2013 and Nayarit, Mexico, in 2014. More recently, NWS have refused to participate in the second Open-Ended Working Group of the United Nations to address concrete effective legal measures, legal provisions, and norms needed to achieve a world without nuclear weapons (see UN General Assembly Resolution 70/33).

further suggested that China should reject a policy move toward launch-on-warning. To pre-empt the emergence of additional risk, the participant suggested that the United States and China consider a moratorium on ASAT tests and discuss precision-strike weapons usable on nuclear facilities. One US participant mentioned the recapitalization of strategic delivery systems, specifically the Long-Range Strike Bomber and China's perception that these constitute new capabilities.⁹ One US participant inquired about the added-value of the Terminal High-Altitude Air Defense (THAAD) system beyond current missile warning systems. Another US participant noted that land-based THAAD radars would provide daily coverage of North Korean *and* Chinese missile trajectories at a higher resolution. One participant noted that ASAT interceptors and midcourse missile interceptors are technologically equivalent.

Panel IV: Improving US-China Strategic Stability

In the fourth panel, speakers discussed the concepts of strategic stability and mutual vulnerability. Participants examined challenges to redefining strategic stability in a multipolar, post-Cold War world as well as ways to improve strategic stability between the United States and China.

Both sides acknowledged a lack of consensus on the definition of strategic stability. One US participant highlighted challenges to defining strategic stability, stating that Cold War-era concepts such as mutually assured destruction and second-strike capabilities are fundamentally different in today's world. The participant noted challenges to the contemporary definition arise from factors including the emergence of new nuclear nations like North Korea, regional tensions in Southeast Asia, and new technological developments like cyber, hypersonic, and space-based weapons. One Chinese participant stated that a definition of strategic stability based on Cold War concepts is not ideal but is the best model at present.

Participants from both sides highlighted the current challenges facing US-China strategic stability. One Chinese participant purported there were two competing schools of thought both inside and outside of the US government. The first school recognizes that mutual vulnerability is simply a "fact of life," and believes China's modernization increases mobility, stealth, and hardening of China's deterrence capabilities. The other school rejects this deterrence capability and does not believe in recognizing mutual vulnerability, partly out of fear of abandoning US

⁹ The long-range strike bomber is the US Air Force's air-refuelable, highly survivable next-generation bomber. Northrop Grumman has received an \$80 billion contract to develop and build 100 new bombers. The Air Force has stated it will be used for nuclear missions. See <www.af.mil/News/ArticleDisplay/tabid/223/Article/486167/af-moves-forward-with-future-bomber.aspx>.

allies. According to another Chinese participant, three factors affect US-China strategic stability, including a lack of mutual trust, US ballistic missile defense, and third-party actions by US allies, specifically in the South China Sea. The participant warned that the United States could be dragged into war due to the actions of one of its allies, to which one US participant retorted that the United States does not control its allies any more than China controls its allies. A Chinese participant acknowledged that China does not control North Korea, as it is a sovereign state. One Chinese participant stated that US military behavior, specifically US reconnaissance in the waters surrounding China, is inconsistent with US policy.

One US participant noted that, despite US capabilities, analysts often miss the political implications behind decision making. The speaker attributed this to the opacity of Chinese politics. In the past, analysts have looked for military and strategic rationales to explain decisions and policies that are fundamentally political in nature, overlooking the impact of domestic issues. For example, contrary to US intelligence assessments, China sped up its nuclear program after the Soviet advisors to China's nuclear program returned to the USSR in 1961. In the 1980s, China slowed its nuclear development process, which was difficult for the US intelligence community to comprehend, as they did not understand the political leader, Deng Xiaoping. One US participant noted that anti-access/area-denial (A2/AD) is one of most serious threats to the relationship between the US and China. Another US participant said A2/AD complicates the conventional picture and makes the nuclear "red line" less clear.

Participants discussed how technological developments, including cyber capabilities, conventional strike, ballistic missile defense and ASAT weapons are complicating views on strategic stability and affecting the US-China relationship. One Chinese participant stated that cyber weapons can be more dangerous than nuclear weapons, and noted that cyberattacks are immediate and incapable of interception. The participant cautioned that cyber weapons could replace nuclear weapons in strategic stability, due to their lower threshold for technical expertise. Another participant noted the potential for disruptive cyber capabilities to erode second-strike capabilities and disrupt communications infrastructure, given that they undermine confidence in use of weapons systems. One US participant brought up artificial intelligence and autonomous weapons, which are being developed in private communities while the government is falling behind. The participant stated that mutual vulnerability or mutually assured destruction can no longer be viewed solely in a nuclear context.

A US panelist highlighted the destabilizing effects of US conventional strike and ballistic missile developments as well as China's ASAT tests. These developments were said to be decreasing the amount of time in which decisions can be made. The speaker highlighted China's transition from an entirely nuclear force twenty years ago to one that is mostly conventional today. A

Chinese participant acknowledged technical challenges arising from ASAT and hypersonic weapons, but noted that China's possession of these capabilities does not mean that they will be deployed. A US participant stated that was no indication that China has an operational unit dedicated to ASAT weapons.

US participants deliberated China's recent reorganization of its military, particularly its Rocket Force, and implications for strategic stability. One US participant inquired about how the Chinese military reorganization would affect the status of China's weapons, nuclear doctrine, and the role of the Chinese Navy. US participants thought it unlikely that the Rocket Force would take command of China's submarines.

Participants from both sides discussed China's nuclear policy and the lack of transparency in China's nuclear posture. Although both sides agreed that China's opacity stemmed from national security concerns, the US side noted that the lack of knowledge could result in misunderstandings with serious consequences. One US speaker commented on the secrecy of China's command-and-control system for its nuclear forces, noting that there was a contradiction and inherent risk in using these weapons to send signals when these signals cannot be clearly interpreted by Washington. A Chinese official stated that China's no-first-use policy is based on cultural heritage and there was need for a large nuclear arsenal. A US participant cautioned that China's no-first-use policy does not prevent it from threatening other NWS.

Both sides discussed ways of improving strategic stability between the United States and China. A Chinese participant said the United States should recognize China's second-strike capability, and that the United States should not neutralize it if it wants to achieve stability. One Chinese individual suggested the United States could decrease hostilities against China, claiming China is not a competing power. Another Chinese participant stated that strategic stability required political stability, mutual trust cooperation, transparency in the nuclear arena, and sustainable discussions for bilateral stability.

One Chinese participant noted the purpose of strategic stability is to reduce the motives to use nuclear weapons. The participant encouraged both sides to work together in better understanding core issues and cultural heritage, which play a role addressing strategic stability. Another Chinese participant said that in recent years military exchanges between the two countries have improved crisis stability and management. The participant cited the memorandum of understanding on early notification of major maritime and air activity as an example of recent improvement. One US participant suggested that Washington strengthen its reassurances to Japan and other partners, as well as bolster its NATO Article V commitments. The participant added that the United States should keep aspirant countries from going

nuclear, and cautioned that the United States cannot solve regional tensions alone. One US participant suggested setting up a working group to discuss and define strategic stability since neither the US nor China have clear definitions.

The discussion ended with several comments on the relationship between high-level rhetoric and policy. In response to the concerns of one Chinese participant over US rhetoric from high-level officials, an American participant said we should not focus on individual views about nuclear weapons, as what organizations and individuals say and do is often inconsistent, such as the Air Force's claims about giving the LRSB/B-21 bomber nuclear capabilities despite delays. The speaker suggested that budget analysis is a form of revealed preference regarding commitment to modernization programs. One US participant cautioned that aggressive rhetoric by high-level figures could place China in the same group of revisionist countries like Iran and Russia.

Panel V: Trends and Future Challenges

In the fifth and final panel, participants discussed trends and future challenges in arms control and nonproliferation. Topics of discussion included the challenges in resolving the North Korea nuclear issue and the deployment of THAAD in South Korea.

One Chinese participant said that regional tensions have made strategic stability much more difficult to achieve, and that the situation on the Korean peninsula will be the most serious nonproliferation issue in the next decade. The fundamental barrier to this, according to one Chinese participant, is US-China competition on the Korean peninsula. The speaker said that China prefers softer methods for resolving the current tensions, such as negotiations, while the United States appears to prefer harder methods, including threats of the use of force and sanctions. One Chinese official asserted that President Obama lacks the political will to continue the six-party talks—among the United States, North Korea, South Korea, China, Russia, and Japan—which are unpopular in both the United States and China. According to one Chinese participant, THAAD deployment in South Korea may cause China to elevate the penetrating capabilities of its missiles and increase its cyberspace capabilities. The speaker cautioned that the United States is making unwise decisions that will alarm China and Russia at the expense of future arms control. Although one US participant said it was important to discuss THAAD deployment vis-à-vis North Korea and emphasize that the system is not directed at China, another US expert noted that Chinese leaders have not accepted Washington's proposal to discuss BMD deployments and share relevant information.

One US participant said that since the 1993-2000 Bill Clinton administration, the US has preferred a diplomatic resolution to the Korean nuclear issue, which has not changed. The

American said it was hard to see a future with a diplomatic outcome, and that success relies on how the sanctions in UNSCR 2270¹⁰ are implemented and how Kim Jong Un reacts. A US participant said that if China does not enforce sanctions robustly, it may increase the potential for military conflict.

Participants also discussed ways in which to resolve the Korean nuclear issue. One Chinese participant said there are three possible paths to resolving the issue: 1) conflict in the form of surgical strikes on nuclear sites or military invasion by the United States and allies to topple regime; 2) peaceful negotiation through multilateral talks; and 3) recognition of the possession of nuclear weapons by Pyongyang. The speaker noted that all states are opposed to the third option.

One Chinese participant proposed two measures for easing tensions on the Korean peninsula. The first measure called on more coordination among members of the six-party talks regardless of whether talks continue or not. The speaker noted that although North Korea has previously leveraged differences between the other parties, there is still time to cooperate in stopping Pyongyang's progress on its nuclear program without military means. The second measure required the United States and South Korea to take Russian and Chinese security interests seriously, particularly the implications of THAAD deployment. The speaker highlighted BMD deployment in Europe during the George W. Bush administration (Poland and Czech Republic) and the tension it caused with Russia. The speaker said it paralleled possible tension between the US and China arising from THAAD deployment in South Korea.

Moving forward, one Chinese expert discussed the future of US BMD deployment, its impact on China, and China's response. The expert said that US BMD in the future will be much larger, more accurate, and capable of discriminating real warheads from decoys. The next generation kill vehicle will be able to communicate with ground stations and include one interceptor with multiple object kill vehicles. In terms of radar, the United States is building a new long-range discrimination radar in Alaska and putting a new radar in the Philippines. Airborne lasers based on unmanned aerial vehicles will enable better discrimination of real warheads and decoys. The expert also estimated the US BMD system will be ten times larger by the 2030s. In terms of the impact of US BMD on China, the Chinese expert said it would neutralize China's retaliatory capability, given that China's DF-5s are in silos, the DF-4 mobile missiles are de-alerted and separated, and China's submarines are too noisy and will not improve significantly in that area by the 2030s. The Chinese expert also indicated that China's response will be to build more missiles, including as many as 200 intercontinental ballistic missiles, and to change its force posture to increase readiness. The expert emphasized the consequences of missile defense and said the United States should not be surprised to see a bigger Chinese arsenal as a result.

¹⁰ United Nations Security Council Resolution 2270, S/RES/2270, March 2, 2016.

Participants emphasized how the ongoing development of various weapon systems, cyber capabilities, and conventional weaponry will play a significant role in the security considerations among major powers in the region. One Chinese expert said that new technologies such as hypersonic glide vehicles could neutralize BMD assets and cruise missiles and be used to destroy such systems.

Lastly, experts commented on other future challenges and trends inside and outside of the region. One American expert asserted that issues over BMD and land-attack cruise missiles will play out in the Taiwan Strait, and that therefore the best solution is to address underlying political tensions over Taiwan by recognizing the two legitimate governments. One Chinese participant stated that neither Japan nor South Korea are aspiring nuclear nations, because they enjoy the nuclear commitments of the US, face domestic opposition to developing nuclear weapons, and have demographic challenges to overcome. The participant also noted that with the Iran agreement coming into force, other states in the Middle East will have fewer reasons to pursue nuclear weapons.

In their closing statements, speakers of both sides commented on the overall success of the conference. The two sides emphasized the importance in continuing to hold this conference and similar meetings in the future. The US speaker emphasized that seven years was too long to wait in between conferences, given the significance of the issues at hand. While the Chinese speaker commended the participants on a frank and candid dialogue, the US speaker felt that the overall level of dialogue between the two states is inadequate given the importance of the US-China relationship.

Closing Remarks

In closing the conference, the organizers thanked those who had helped make this event possible, including many of the officials around the room. One closing speaker noted that while many disagreements between the United States and China remain, it is clearly worthwhile to have frank discussions between experts and officials to try to meet the numerous challenges facing the international community. It was noted that seven years had passed since the last meeting, which indicates that the bilateral dialogue is not as robust as it needs to be, particularly given the importance of the relationship. The closing panel agreed that it was important that both sides build on the momentum from this meeting's discussion and to once again have this conference series on a more routinized basis. The meeting closed with a proposal from both CNS and CACDA to resume the discussion at the Ninth US-China Conference in Beijing before the end of 2017.

Conference Agenda

EIGHTH US-CHINA CONFERENCE ON ARMS CONTROL, DISARMAMENT AND NONPROLIFERATION

April 11-12, 2016

*Co-organized by the Middlebury Institute's James Martin Center for Nonproliferation Studies and
the China Arms Control and Disarmament Association*

Monday, April 11

9:15 Opening Session

Welcoming Remarks: Dr. William Potter, James Martin Center for
Nonproliferation Studies (CNS)
Mr. Chen Kai, China Arms Control and Disarmament
Association (CACDA)

Opening Remarks: Dr. Amy Sands, Middlebury Institute of International
Studies at Monterey (MIIIS)

10:00 Coffee Break

10:15 Panel I: Nuclear Security and Safeguards: Prospects of Greater Cooperation in the Region

- What progress has been made by the United States, China and other Asia-Pacific countries in the area of nuclear security? How can the US and China contribute to meeting the goals set forth by the Nuclear Security Summit meetings?
- In what areas can the US and China work bilaterally to move forward the goal of securing nuclear materials globally and better implementing nuclear safeguards?
- How can nuclear exporters, including China and the United States, use their role as suppliers to improve nuclear nonproliferation, security and safeguard efforts?

Chair/Discussant: Dr. William Potter, CNS

Panelists: Mr. Li Sui, China Ministry of Foreign Affairs (MFA)
Mr. Wayne Mei, US Department of Energy
Mr. Liu Chong, China Institutes of Contemporary
International Relations (CICIR)
Ms. Deborah Rosenblum, Nuclear Threat Initiative

1:15 Panel II: Expanding Cooperation in Arms Control and Nonproliferation

- What collaborative efforts should be made to help strengthen domestic strategic trade controls in China, the United States and throughout the Asian region?
- How can China and the US work together to avoid domestic entities being involved with the trafficking of controlled commodities to countries under sanctions by the UN Security Council?
- What efforts can be made to expand regional cooperation on nonproliferation, particularly with regards to hindering illicit trafficking activities in the region?

Chair/Discussant: Dr. Li Bin, Tsinghua University (THU)

Panelists: Dr. Randy Beatty, Oak Ridge National Laboratory
 Ms. Shi Ying, China Ministry of Defense (MOD)
 Ms. Stephanie Lieggi, CNS
 Mr. Wu Jinhuai, CACDA

3:00 Panel III: Steps toward Nuclear Disarmament

- How should the US and China approach de facto nuclear weapons states that are not members of the NPT?
- What are each country's respective positions on the CTBT and FMCT and how do they propose to move forward on these treaties?
- When and how should nuclear arms reduction expand beyond the United States and Russia? When should this process engage other nuclear weapons states?

Chair/Discussant: Mr. Benjamin Rusek, US National Academy of Science

Panelists: Mr. Zhai Yucheng, MOD
 Ms. Alexandra Bell, US Department of State (DOS)
 Dr. Li Bin, THU
 Dr. Laura Grego, Union of Concerned Scientists

Tuesday, April 12

9:30 Panel IV: Improving US-China Strategic Stability

- What are the most effective fora and formats for US-China discussions on strategic stability?
- How does each side conceive of “strategic stability” and “deterrence”?
- What role should bilateral security assurances and discussions on the alert status of nuclear arsenals play?
- How does US-China strategic stability impact regional security?
- How does each side view transparency in terms of its impact on stability?

Chair/Discussant: Dr. Wu Riqiang, Renmin University

Panelists: Ms. Jessica Cox, US National Security Council
 Ms. Lu Yin, China National Defense University
 Dr. Jeffrey Lewis, CNS
 Mr. Hu Gaochen, THU

1:00 Panel V: Trends and Future Challenges

- What does arms control and nonproliferation look like in a post-JCPOA world?
- What are the top priorities for arms control and nonproliferation in the next decade?
- What are the trends in ballistic missile development in the East Asia and what is the impact on regional stability and nonproliferation efforts?

Co-Chairs: Ms. Melissa Hanham, CNS / Mr. Chen Kai, CACDA

Panelists: Mr. Cui Lei, China Institute of International Studies
 Mr. Erik Quam, DOS
 Dr. Wu Riqiang, RUC
 Mr. Mark Stokes, Project 2049 Institute

3:00 Closing Session

Closing remarks: Mr. Chen Kai, CACDA
 Dr. Jeffrey Lewis, CNS

List of Participants

Mr. Brandon Babin, Department of State (DOS), *Analyst, Bureau of Intelligence and Research*

Dr. Randy Beatty, Oak Ridge National Laboratory, *Distinguished Research & Development Staff Member, Nuclear Security and Isotopes Division*

Ms. Alexandra Bell, DOS, *Director for Strategic Outreach, Office of the Under Secretary for Arms Control & International Security*

Mr. Chen Kai, China Arms Control and Disarmament Association (CACDA), *Vice President and Secretary-General*

Ms. Jessica Cox, National Security Council, *Director for Arms Control*

Mr. Cui Lei, China Institute of International Studies, *Associate Research Fellow, Department of US Studies*

Ms. Catherine Dill, Middlebury Institute's James Martin Center for Nonproliferation Studies (CNS), *Research Associate, Export Control and Nonproliferation Program*

Dr. Michael Glosny, Naval Postgraduate School (NPS), *Assistant Professor, Department of National Security Affairs*. Dr. Laura Grego, Union of Concerned Scientist (UCS), *Senior Scientist, Global Security Program*

Ms. Melissa Hanham, CNS, *Senior Research Associate, East Asia Nonproliferation Program (EANP)*

Mr. Hu Gaochen, Tsinghua University, *PhD candidate, Tsinghua University*

Ms. Huang Wenwen, China Ministry of Foreign Affairs (MFA), *Second Secretary, Department of Arms Control*

Ms. Elena Hushbeck, Argonne National Lab, *Group Leader, Nonproliferation Engagement and Capacity Building*

Dr. Gregory Kulacki, UCS, *China Project Manager*

Mr. Ryan Jacobs, DOS, *Foreign Affairs Officer, Bureau of Arms Control and Verification*

Dr. Jeffrey Lewis, CNS, *Director, East Asia Nonproliferation Program*. Dr. Lewis is the founding publisher of *Arms Control Wonk*

Dr. Li Bin, Tsinghua University, *Professor, Tsinghua University's Department of International Relations & Senior Associate, Carnegie Endowment for International Peace*

Mr. Li Sui, MFA, *Deputy Director, Department of Arms Control*

Ms. Stephanie Lieggi, CNS, *Senior Research Associate, East Asia Nonproliferation Program & Senior Advisor, Export Control and Nonproliferation Program*

Mr. Liu Chong, China Institutes of Contemporary International Relations (CICIR), *Deputy Director, Institute of Arms Control and Security Studies*

Mr. Lu Difan, CNS Fellow / MFA , *Attaché, Department of Arms Control*

Ms. Lu Yin, China National Defence University, *Colonel & Associate Researcher, Institute for Strategic Studies (ISS)*

Mr. Charles Mahaffey, DOS, *Deputy Office Director, Bureau of International Security and Nonproliferation's Regional Affairs Office*

Mr. Wayne Mei, US Department of Energy, *Foreign Affairs Specialist, US National Nuclear Security Administration's Office of Nonproliferation and Arms Control (NPAC)*

Dr. William Potter, CNS, *Founding Director*

Mr. Erik Quam, DOS, *Acting-Team Chief for East Asia, Bureau of International Security and Nonproliferation's Regional Affairs Office*

Ms. Deborah Rosenblum, Nuclear Threat Initiative, *Executive Vice President*

Mr. Benjamin Rusek, United States National Academy of Science, *Senior Program Officer, Committee on International Security and Arms Control (CISAC)*

Dr. Lora Saalman, Daniel K. Inouye Asia Pacific Center for Security Studies, *Associate Professor*

Dr. Amy Sands, Middlebury Institute of International Studies at Monterey (MIIS), *Executive Director, Research Centers & Initiatives*

Ms. Shi Ying, China Ministry of Defense, *Expert*

Mr. Walter Slocombe, former US Under Secretary of Defense

Mr. Mark Stokes, Project 2049 Institute, *Executive Director*

Dr. Christopher Twomey, NPS, *Associate Professor, National Security Affairs*

Ms. Kathleen (Kate) Walsh, US Naval War College, *Associate Professor, National Security Affairs & Affiliate with the China Maritime Studies Institute (CMSI)*

Mr. Wang Xinan, CACDA, *Intern*

Mr. Wu Jinhuai, CACDA, *Director, Export Control Program*

Dr. Wu Riqiang, Renmin University, *Associate Professor, School of International Studies*

Mr. Zhai Yucheng, MOD, *Research Fellow*

Rapporteurs

Mr. Eric Scheel, CNS, *Graduate Research Assistant*

Mr. Paul A. (Alex) Kynerd, CNS, *Graduate Research Assistant*

Ms. Ruby Russell, CNS, *Graduate Research Assistant*

