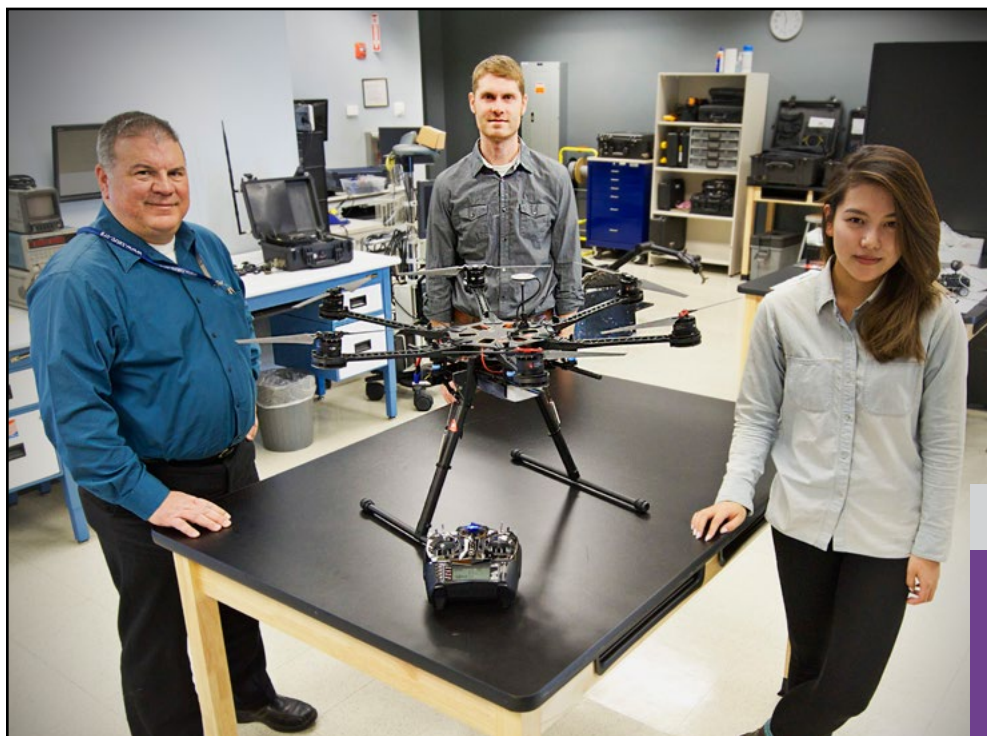




TATRC's Operational Telemedicine Staff Receives Hands-On Training for Unmanned Aerial System



Carl Manemeit, Nate Fisher and Rebecca Lee with TATRC's Unmanned Aerial System (UAS)

As part of the TATRC's ongoing research in the area of leveraging emerging tactical communications systems to support Role I telemedicine, the TATRC Operational Telemedicine Lab purchased a hexarotor Unmanned Aerial System (UAS) for simulating medical information exchange from ground medics to flight medics on board MEDEVAC aircraft.

On 15 December 2014, Nate Fisher, Carl Manemeit and Rebecca Lee received hands-on training on the newly purchased DJI Spread Wings S800 multi-rotor UAS at the Drag-onfly Pictures, Inc. (DPI) facility in Essington, PA, one of TATRC's long standing Small Business Innovative

Research (SBIR) contractors. DPI has made extensive enhancements to the DJI S800 UAS which include a new laptop preloaded with custom designed ground control software.

Additionally, the UAS was configured with a preloaded autopilot assistant utilizing a ground control system (GCS) which provides safe control over the UAS during demonstrations. Each UAS mission plan is able to be loaded with flight speeds, altitudes, hold times, waypoint turning types (bank, stop, etc.), continuous route, start-to-finish, etc. The user interface is a clickable Google Earth Map. The user is able to view a three-dimensional view of the flight plan and is able to simulate the flight.

Full flight control, from takeoff to landing, is possible with the GCS.

Additionally, the mission plan enables the Operator to monitor health and usage of the critical subsystems, such as GPS, attitude, and battery voltage. UAS control is performed either via the GCS or the simple transmitter (JR XG8). In the event of a loss-of-link from either radio, the UAS is pre-programmed to fly to its original takeoff location.

Continued on page 2

IN THIS ISSUE

TATRC'S OP-TMED STAFF RECEIVES TRAINING FOR UAS
Page 1

TATRC's mHIC TEAM LEVERAGES WIFI AND MOBILE HEALTH
Page 2

EMPLOYEE OF THE QUARTER: LARRY MARKINS
Page 3

TATRC OFFICIALLY LAUNCHES ITS NEW WEBSITE
Page 4

AAMTI: COMMITTED TO INNOVATION
Page 5

CONGRATULATIONS TO DR. TALBOT
Page 6

TATRC'S AFSIM LAB PARTICIPATES IN IMSH CONFERENCE
Page 7

APPRAISE: AN INTELLIGENT ALERT SYSTEM
Page 8

TATRC VISITS IBM LABS
Page 9

TATRC'S EMPLOYEE SPOTLIGHT
Page 10

SMALL BUSINESS APPRECIATION AWARD
Page 11

UPCOMING EVENTS
Page 11

mHIC DIABETIC STUDY MARKETING
Page 12

Continued from page 1



JR XG8 Transmitter



S800 Multirotor

This technology increases TATRC's capability to understand and manage the UAS/UAV projects by allowing our own staff to have hands-on training and experience as well as enable more efficient

ground to air telemedicine and enroute care medical information exchange research without requiring a manned MEDEVAC helicopter. 

TATRC's MHIC Team Leverages WiFi and Mobile Health in a Combat Operations Setting

Imagine arriving at a major medical center with a life threatening medical condition. Imagine now that this facility has no paging or cellular phone capability. How will the right doctor be alerted that you need treatment to save your life?

The Telemedicine & Advanced Technology Research Center's Mobile Health Innovation Team (TATRC's MHIC Team) brought together distinguished guests and visitors to Fort A.P. Hill, VA on

Friday, 23 January for a technology demonstration that focused on "Addressing Documented Gaps in Internal CSH Communication & Recall with a Garrison Optimized COTS Solution Leveraging Wi-Fi & Vocera Mobile Health."

The event demonstrated how the insertion of a commercially available technology can solve an enduring gap in the ability to recall specialized clinical providers within an austere environment. The expected end result of the exercise was to show an improvement of patient outcomes by optimizing the use of the limited personnel within a deployed Combat Support Hospital (CSH) utilizing the technology displayed at the demonstration.

In order to improve outcomes in the austere environment of combat operations, there is a recognized need to improve communication within a deployed hospital. TATRC, along with Cyber Center of Excellence Experimental Division (CDID-ED), Regional Training Site-Medical, Ft. Gordon (RTS-MED), and the 75th CSH collaboratively partnered together to demonstrate a commercial digital voice over Internet Protocol badge combined with the enabling NSA approved, wireless capabilities for the tactical environment. This technology will ensure that the appropriate personnel are available to address

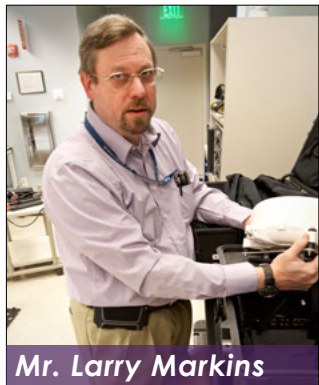


The Director of TATRC, COL Dan Kral, met with the Commander of the 75th Combat Support Hospital, COL Marc Duchette at the recent WAREX exercise at AP Hill, VA during a demonstration of a wireless recall capability within a deployed hospital. Pictured also in the rear (left to right are Ms. Jeanette Little, Director of the TATRC MHIC field office, Mr. Edward Kensinger, Project Manager for the event, and Mr. Donald Choate from the MEDEVAC Proponency Directorate AMEDD C&S.)

Continued on page 3

Employee of the Quarter: Mr. Larry Markins

It is with great pleasure that The Telemedicine and Advanced Technology Research Center (TATRC) announces that Mr. Larry Markins is TATRC's Employee of the Quarter, for 3rd quarter, FY2015!



Mr. Larry Markins

Mr. Larry Markins has distinguished himself throughout this period with his continual multi-faceted efforts supporting TATRC's Operational Telemedicine Laboratory and the Specialized MEDCOM Response Capability (SMRC) Teams. His technical skills in commercial and military tactical networking has enabled him to not only provide the critical daily audio and video tele-

communications support to the TATRC as a whole, but his in-depth tactical communications skills have proven critical in the planning, integration and execution of the CERDEC C4ISR Ground Activities Communications Exercises at Range 1, Fort Dix, NJ, during a demonstration in November 2014. During that C4ISR exercise, he was at times, the sole technician able to resolve problems encountered during integration efforts. As has always been the case for Mr. Markins, he demonstrated outstanding management and technical abilities in coordinating between several private companies and the CERDEC, to repeatedly test a new multi-security domain Android product prior to operational field testing at Fort Dix. Additionally, he worked closely with the Fort Gordon Battle Lab to ensure proper con-

TATRC TIMES

figuration and testing of a tactical network Cross Domain Solution (CDS) was adequate before field testing. This ensured that the CDS was able to transmit electronic patient Tactical Combat Casualty Care Card medical information from an Android smartphone to a notional Battalion Aid Station, over both a Soldier Radio Waveform tactical network, and the Army's experimental 4G LTE classified network. He also had to ensure the success of a subsequent transfer by the CDS to an unclassified network where the electronic medical record system resided.

Also during this quarter, Mr. Markins was integral in the training of the SMRC Burn Team at the Brooke Army Medical Center in San Antonio, TX. The purpose of this training was to ensure that the team was fully aware of the Telemedicine capabilities available if and when they would deploy and that their equipment was updated and ready for deployment. Over the years, Larry has updated, re-configured and maintained the SMRC's technological equipment sets, so that it possesses today's cutting-edge functional capabilities. Mr. Markins has supported all of the SMRC Teams world-wide for over a decade by developing, equipping, maintaining, leading and serving as the point person for the TATRC SMRC Command, Control, and Communications-Telemedicine Team. Suffice to say that Larry is the 'heart and soul' of TATRC's SMRC Team which is prepared today more than ever, to respond to worldwide missions.

The entire TATRC team would like to thank Mr. Markins for all that he has done and his unwavering support of TATRC's critical mission in the Military Health System. ❧

mHIC

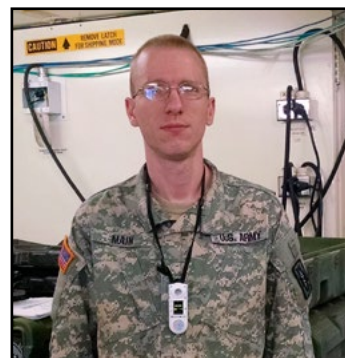
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emerging issues both clinically and operationally. TATRC's MHIC Lab Director, Ms. Jeanette Little said, "We are pleased to have strong partnerships with the U.S. Army Cyber Command, U.S. Army Reserve Medical Training Site and the 75th CSH that affords us the opportunity to conduct evaluations like this in an operational setting."

Attendees at this technology demonstration saw the wireless network in an operational setting, which has been cleared for combat operations in theater. Attendees were also able view the voice activated, digital paging device system in use, which

allows for hands free communications from throughout the geographical footprint of the hospital.

The TATRC MHIC team's hypothesis is that this capability will reduce or eliminate the need for a member of the clinical team to be taken away from providing care to retrieve another care provider on the CSH compound. Mr. Edward Kensinger, TATRC MHIC Project Manager said, "With the assistance of the Cyber Center of Excellence, Experimentation Division, we continue to seek technical solutions to answer real world medical needs." By providing a recall capability, clinical providers will be available wherever and whenever the need for their specialty is required. ❧



1LT Jonathan Main, a Health Services Systems Officer (70D), assigned to the 75th Combat Support Hospital, demonstrates the proper wearing of the wireless recall badge manufactured by the Vocera company, during the recent WAREX exercise at Fort AP Hill, VA.

TATRC Officially Launches its New Website

It gives us great pleasure to announce the long awaited re-launch of TATRC's newly designed and renovated website.

After careful review, several months of team planning, and an enterprise wide "group vote" on the design, the new TATRC Website has been given the Command's "Stamp of approval" and is now launched and "live!" When you have a few minutes, we invite you to visit the new and improved www.tatrc.org, and to share this new tool with extramural partners and colleagues outside of TATRC.

Thanks to many months of careful content planning, in depth dialogue, PAO committee implementation meetings, many e-mail suggestions, a small, but "mighty" group of "technical wizards," all in accordance with DoD regulations and policy, the NEW TATRC.

ORG is easy to use, simple to navigate and loads quickly. Along with a fresh, innovative, high-tech streamlined front page and overall design, you will find plenty of updated and relevant content provided by TATRC staff and senior leadership including:

Organizational charts; Laboratory descriptions and missions; a new, super slick "NEWS" section that will rotate out with new articles and images; a new "Events" calendar, with a window for the events where TATRC will have a presence or scientific role at that particular meeting; a new "Locations" button, that features our off site field office locations; links to our Social Media platforms; a "Partnering with TATRC" section; and a page devoted to the AAMTI program. Based on the suggestions and feedback from the group meetings and

the Command staff, some old buttons that were no longer relevant, were removed and replaced with new ones, and some of the previous buttons that were still meaningful, were updated and are available for your use and information.

This site is and should be, "a work in progress," changing as needed to reflect the ever changing, ever-evolving TATRC mission. As such, if you have specific recommendations, questions, or comments send them via e-mail to marketingdirector@tatrc.org and those inquiries will be addressed.

We will continue to develop and improve this informational and interactive tool with your help and insights.

We hope you find this new tool to be beneficial and useful in your daily business functions and hope you will share this with others! 





Committed to Innovation: The AMEDD Advanced Medical Technology Initiative (AAMTI)

"The enterprise that does not innovate, ages and declines, and in a period of rapid change such as the present, the decline will be fast."

- Peter Drucker, Renowned
Management Theorist

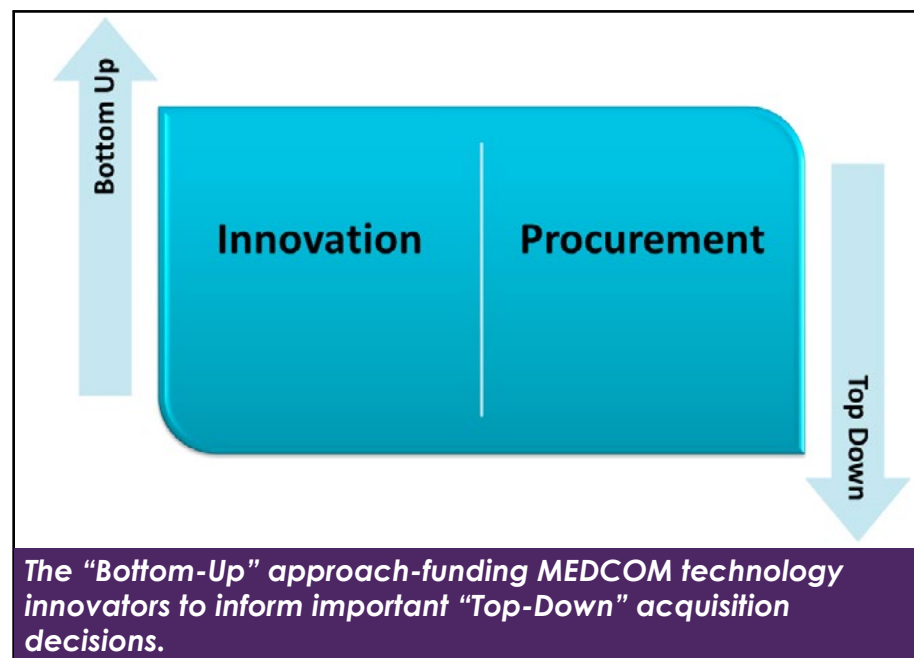
The Army Medical Command (MEDCOM) has many unique missions that differentiate it from the civilian medical sector such as, rapid mobilization of military medical personnel, providing emergency care on the battlefield, and providing rehabilitation to Soldiers recovering from multiple, devastating injuries. When the requirements of providing retiree and beneficiary care are added to the Soldier-specific medical mission, a daunting undertaking becomes almost herculean. The imperative to meet military mission requirements while providing quality care to Soldiers, retirees, and beneficiaries demands the demonstration and adoption of innovative solutions. As the intersection of technology and medicine broadens at ever-increasing speed, a nimble and focused method of identifying and demonstrating technologies and their impact on cost, access, quality, and safety of care (and medical readiness) becomes imperative.

The Army Surgeon General, through the Telemedicine and Advanced Technology Research Center (TATRC) provides a special Defense Health Program, Operations and Maintenance (DHP O&M) appropriation to enable technology proofs of concept/demonstrations throughout the MEDCOM.

TATRC created the AAMTI to solicit and fund these projects. The fundamental goals of the AAMTI are: to demonstrate medical technologies and their impact on cost, access, quality, and safety of care, and medical readiness; to provide senior MEDCOM leadership with medical tech-watch capabilities; and, to encourage medical technology entrepreneurship by funding MEDCOM technology innovators through a bottom-up (provider/Medical Treatment Facility level) approach. These goals support the program's scope, namely, the identification, exploration, and demonstration of key technologies and enabling biomedical principles required to overcome technological barriers that are medically and militarily unique.

AAMTI projects demonstrate primarily Commercial off the Shelf and emerging technologies and systems, some of which evolved from projects funded through Congressional Special

Interest, Small Business Innovative Research, Defense Health Program, core medical research programs, and other DoD and Government sources. These small-scale proofs of concept and technology demonstrations can augment existing, larger investments, or provide data to support future technology/systems development planning and investment. The modestly-priced projects (<\$250K) offer the potential of a high return on investment particularly when compared to larger, more expensive Research Development Test and Evaluation (RDT&E) hypothesis-driven research projects. Being an Intramural program, AAMTI projects enable the Enterprise to control for environment, study design, metrics identification, reporting criteria, etc. The bulk of AAMTI projects require partnering with industry and/or academia, but the relationship is driven by a "pull" from the Enterprise, rather than a



Continued on page 6

AAMTI

Continued from page 5

“push” from industry/academia (as is the case with Broad Agency Announcements, Program Announcements, and other RDT&E award mechanisms where the government is, in essence, purchasing a proposal, with limited shaping capabilities). Analysis of AAMTI project data against the cost, access, quality, safety of care, and medical readiness metrics often results in identification of the underlying clinical, business, and cultural practices that retard adoption and/or use of new technologies, systems, and protocols. Ultimately, AAMTI proofs of concept/demonstrations can inform important acquisition decisions by providing input from disparate stakeholders and end-users in Army medical facilities and environments. The results of AAMTI demonstration projects are expected to either directly result in, or support, efforts to:

- A. Provide technologies needed to enhance full spectrum force health protection and readiness;
- B. Reduce the cost of delivering care;
- C. Reduce the time it takes to access care and critical specialty intervention;
- D. Improve the skills and efficiency of care providers; and

E. Improve the quality and safety of care throughout the TRICARE healthcare continuum.

The AAMTI is an annual program with a two-tiered submission (pre-proposal and full proposal) and evaluation process; it is open to Army Medical Department (AMEDD) personnel only. Collaboration with industry, academia and other military services is permitted and encouraged, however the submitter must be employed in the AMEDD and the funding must go to an AMEDD facility or command for execution. Pre-proposals are submitted via a secure TATRC web site. Pre-proposals may be submitted by any AMEDD employee (one who is employed at, or through, an AMEDD facility/activity) who is Active Duty, Government Civilian, or IPA. Full proposal submission is by invitation only.

Through its “bottom-up” approach to technology demonstration, the AAMTI reaches out to those on the front lines of Army medicine to identify and demonstrate technologies and systems that support and advance the Surgeon General’s vision while informing important acquisition decisions.

The FY16 AAMTI is currently open for pre-proposal submissions until 3 June 2015, the submission system and detailed program documentation can be found at www.tatrc.org. For more information, please contact the AAMTI Program Manager, Mr. John Winston (john.p.winston2.ctr@mail.mil, 301-619-7674).

Congratulations to AFSIM’s Chief Scientist

TATRC’s Dr. Thomas “Brett” Talbot, (AFSIM’s Chief Scientist and Principal Medical Expert at the University of Southern California (USC)’s Institute for Creative Medical Technologies), along with his colleagues at USC, received an award on January 13, 2015 at the International Meeting on Simulation in Healthcare (IMSH). USC’s Virtual Standardized Patient was announced as the winner of the “Serious Games and Virtual Environments Contest”. They were recognized as the best new innovation of 2015! Mr. Eric Forbell, lead ICT programmer for MedVR, accepted the award for the group.

The SimCoach Standard Patient Studio (SSPS) project is a sizable effort, funded by the

Department of Defense, to research and prove out technologies to create a viable, Virtual Standardized Patient (VSP). The SSPS project has successfully created a working prototype, called USC’s Standard Patient (USP /Standard Patient).

USP is both a VSP experience and authoring tool that functions through regular web browsers as it is cloud based. USP is modular and capable of multiple types of interactions, including:

- Natural Language Random Access (NLRA) Interviews
- Structured Virtual Human Encounters (Select-a-Chat)
- Simple Physical Exam
- Tests (Labs, Radiology)
- Multimedia Display
- Interactive After Action Re-

port (AAR)

Currently, the VSP is planned for routine use at the USUHS



Dr. Brett Talbot

Continued on page 7

National Capital Simulation Center and at the Independent Duty Corpsman School in San Diego, CA. Additionally, the prototype will be freely available to the public. It has already received a very enthusiastic reception by the medical educational community with nearly one hundred

organizations expressing interest in the technology.

Dr. Talbot has noted that this technology has the potential to proliferate the use of standardized patient training, expand to allied health professionals, serve to check decay in competency, power verbally

interactive manikins, improve physical diagnostic skills (with expansion), enable better interactions in virtual environments and games, and hopefully advance diagnostic interviewing skills for all medical learners.

Congratulations, Dr. Talbot and the USC / ICT / USU Team! 

TATRC's AFSIM Lab Team Participates at International Simulation Conference

The Telemedicine & Advanced Technology Research Center (TATRC)'s Armed Forces Simulation Institute for Medicine (AFSIM) actively participated in the 2015 International Meeting on Simulation in Healthcare (IMSH) Conference 11-14 January, 2015 in New Orleans, LA.

Not only did the members of the AFSIM Lab attend, but they also played a prominent role in the conference overall. Dr. Thomas "Brett" Talbot, AFSIM's Chief Scientist, was one of the IMSH Keynote Plenary Speakers. His presentation focused on the Virtual Standardized Patient research project. Not only was Dr. Talbot a plenary presenter, but he, along with his colleagues at the University of Southern California Institute for Creative Technologies (ICT), also received the "Serious Games & Virtual Environments Contest" award for the Best New Innovation of 2015 for his work on the Virtual Standardized Patient. Mr. Harvey Magee, Director of AFSIM, chaired two panels dealing with critical issues of cognitive and psychomotor training and skills decay.

In addition, Mr. Magee, Dr. Talbot, and Dr. Kevin Kunkler, the Portfolio Manager for Medical Simulation and Training technologies with Joint Program Committee-1, planned and facilitated both a DoD-delivered academic program as well as a 12-partner "Interactive Hands-on Demonstration Exhibit" as part of the IMSH's Exhibit Area. There were four DoD presentation sessions and one individual presentation, involving 13 DoD session chairs and presenters. Dr. Kunkler planned and chaired a DoD Special Presentation and Panel, "Research and Development Contributions of Department of Defense within Medical Modeling, Simulation, and Training", with additional presentations from Army, Navy, Air Force, and DoD representatives.

Mr. Harvey Magee spearheaded the Interactive Techni-

cal Demonstration that highlighted twelve active projects funded and managed by DoD medical agencies. Mr. Magee said, "This demonstration was a highlight of the conference because it provided a riveting opportunity for attendees and Principal Investigators to have direct dialogue about medical training needs and technology-based solutions for them."

The IMSH Conference is one of the largest and most prominent main educational events for the Medical Modeling and Simulation industry. It's one of the largest events of its kind and allows the DoD's strategic plan to improve education and training technologies for healthcare. It is critical for the DoD to protect its investments in this area and continue striving for more knowledge and innovation since medical simulation research is now used in Combat Medical Training, Medical Student Education, Graduate Medical Education, Pre-Deployment Training, Chemical-Biological Training and Behavioral Health (specifically Post Traumatic Stress Disorder) research.

The interactions and information gathered at this conference were essential to maintain the DoD's leadership role in the MedSim community. These face-to-face interactions with leaders in healthcare delivery, healthcare training, and science and technology fields provided valuable insights on execution of future healthcare training and delivery strategies such as, updated needs/requirements gathering, creating relevant goals and objectives, and recognizing potential challenges for healthcare organizations in various sectors.

Mr. Magee concluded that, "For TATRC, the IMSH conference is unmistakably THE place to be to acquire and maintain an understanding of simulation-based training, especially for training delivered through medical simulation centers around the world." 

An Intelligent Alert System to Identify Patients with Substantial Bleeding during Transport to a Trauma Center

Did you know that the majority of casualties that die on the battlefield, die from uncontrolled bleeding? Analysis of data from the conflicts in Iraq and Afghanistan indicates that approximately 22% of bleeding Service Members could have potentially been saved. This means that controlling severe hemorrhaging early on is the key to preventing death after injury.

Experts in the Combat Casualty Care community believe that the opportunity to save casualties is in the pre-hospital environment. Saving a life does not just happen once you get to the hospital, it happens when you can manage hemorrhage at the point of injury, or in transit to a medical treatment facility.

Given this information, how would one go about handling, or even recognizing the need for blood transfusion? The Biotechnology High Performance Computing Software Applications Institute (BHSI), one of Telemedicine & Advanced Technology Research Center (TATRC)'s key labs, has helped to advance the field in the right direction with the development of the Automated Processing of the Physiologic Registry for Assessment of Injury Severity (APPRAISE) system.

Dr. Jaques Reifman, PhD, BHSI Director, and members of his team, Mr. Maxim Khitrov and Jianbo Liu, PhD, along with Andrew T. Reisner, MD, an investigator with BHSI at the time of development, and an emergency room doctor at Massachusetts General Hospital, collaborated to develop the APPRAISE system. APPRAISE is an artificial intelligence-based system that can automati-

cally, with no human intervention, alert medics when trauma patients are in need of massive blood transfusions. Essentially, the APPRAISE system collects and analyzes in real time vital sign information from the patient during pre-hospital transport. It then uses the results of that analysis to determine if the patient will need a massive blood transfusion, all before the patient ever arrives at the hospital.

The mathematical models and algorithms that were developed at BHSI were tested and validated in a prospective study in collaboration with Boston MedFlight, a not-for-profit organization in the Boston / New England area that served as the equivalent to a shock trauma medevac.

The APPRAISE system was used in the Boston MedFlight helicopters and trauma patients were monitored during emergency transports for a period of almost two years. All patients monitored were transported to one of three hospital partners, which included Massachusetts General Hospital, Brigham and Women's Hospital, and Beth Israel Deaconess Medical Center.

By comparing clinical and trauma registry data with the computer predictions, the BHSI scientists found that the APPRAISE system was able to automatically identify casualties in need of massive blood transfusions with 78% sensitivity and 90% specificity within 10 minutes of the start of transport to the trauma center. This was the first time ever that anyone, not just the Army, had been able to collect and analyze data in real time as patients were being transported.

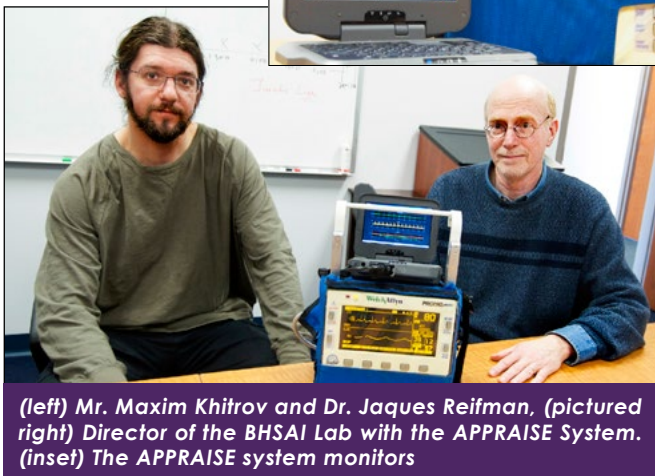
APPRAISE consists of an off-the-shelf vital signs monitor connected to a ruggedized PC running Microsoft Windows. The great thing about APPRAISE operating on off-the-shelf vital signs monitors is that there is no further education needed for the system to be used by medical staff. Dr. Jaques Reifman stated, "A benefit of the system is that it uses standard vital signs, such as EKG, Heart Rate, and Blood Pressure, which caregivers are already familiar with.

There is no need for training caregivers to new sensor modalities, so APPRAISE can be easily disseminated throughout the healthcare system."

The APPRAISE system has been a great success story. The system is a clinically validated platform for automated, pre-hospital, real-time collection and analysis of vital sign data and has received two U.S. patents. BHSI has a validated algorithm for identifying patients with substantial bleeding, and there is a pending license agreement for APPRAISE with a commercial partner. So what's next?

The next step is to use the APPRAISE system in a prospective field study to test the hypothesis that early identification of hemorrhage results in improved patient outcomes.

Continued on page 9



(left) Mr. Maxim Khitrov and Dr. Jaques Reifman, (pictured right) Director of the BHSI Lab with the APPRAISE System. (inset) The APPRAISE system monitors

APPRAISE:

Continued from page 8

BHSAI is also pursuing FDA approval of the APPRAISE system.

Dr. Reifman is excited about the results and what this technology could mean for Warfighters in the future. He concluded that “[The] bottom line is that the majority of the casualties on the battlefield are due to uncontrollable bleeding. Here, we

TATRC TIMES

deployed in the civilian setting a technology that demonstrates how we can identify bleeding patients pre-hospital, in real time, and in a fully automated fashion in a prospective trial.”

More information about the APPRAISE system trial will be documented in the Journal of Shock coming up in May 2015.



TATRC Leadership along with HTIC Staff Scientists Visit IBM Labs

Colonel Dan Kral, TATRC's Director, and Dr. Francis McVeigh, TATRC Chief Scientist, along with Ms. Ollie Gray and Mr. Robert Connors, members of the TATRC Health Technology Innovation Center (HTIC), travelled to Yorktown Heights, NY on 25 March 2015 to tour the Thomas J. Watson Research Center. TATRC personnel engaged in fruitful scientific discussions with IBM scientists, regarding new ideas for health information technology research, and how IBM and TATRC might collaborate on submitting joint research proposals to a variety of funding sources.

As a matter of background, Thomas J. Watson Research Center is IBM's research headquarters. It conducts basic science research improving hardware (physical sciences and semiconductors research), services (business modelling, consulting, and operations research), software (programming languages, security, speech recognition, data management, and collaboration tools), and systems (operating systems and server design), as well as to extend the mathematics and science that support the information technology industry.

Colonel Kral provided an overview of the TATRC evolution and current mission, with a focus on activities of the HTIC and Early Stage Platform (ESP) lab for development, integration, and testing of novel software with DOD clinical systems. The HTIC conducts applied research and risk mitigation activities in advance of larger DOD procurements, involving new ways to acquire, visualize, use, analyze, and make health data mobile and interoperable. All of these TATRC applied research projects have the potential to improve health access, availability, acceptability, cost-effectiveness, continuity, and quality.

Dr. Bob Stackhouse, Director of the IBM Research THINKLab, Healthcare and Life Sciences Lead; Dr. Jane Snowden, Chief Innovation Officer, IBM Federal; and Dr. Joseph Jasinski, IBM Distinguished Engineer and Global Industry Executive, Smarter Healthcare and Life Sciences, provided an overview of ongoing IBM health research, with a focus on Data Driven Analytics for Personalized Care, Streaming Analytics for Healthcare, and Mobile Health and Wellness Applications. Considerable time was also spent on discussing the cur-

rent status of the Watson Engagement Advisor product which can help clinicians ask the right questions leading to improved diagnosis and evidence-based treatments.

Dr. Christine Kretz, IBM Research Industry Specialist, and Dr. Ruhong Zhou, IBM Distinguished RSM and Manager, Soft Matter Science Group, spoke about the Watson Genomics and Computational Biology Center research on DNA Sequencing, neural tissue stimulation, cardiac modeling, and HIV vaccine development. Dr. Zhou's work is creating nanomedicine agents to combat citrus greening disease. Dr. Kretz also briefed an interesting project which uses deep analytics on speech word order to help predict PTSD diagnoses with a reported 97% accuracy.

During lunch, Mr. Dave Balsillie, IBM Research Business Development Executive for Government Programs; Ms. Maryann Picone, IBM Client Manager for Military Health System and Health and Human Services; and Mr. David Parramore, newly appointed IBM proponent for “Rescuing Healthcare from Pills, Procedures, and Price through Insight Driven Solutions,” discussed ways of working with TATRC in the future, using the MRMCM Broad Agency Announcement, JPC Program Announcements; pairing with smaller business on SBIRs/STTRs, and through Technology Investment Agreements and CRADAs. This site visit proved to be very informative and beneficial and as such, resulted in TATRC's HTIC team to have a follow-on meeting with IBM client managers next week to learn more about existing IBM products that might be piloted and evaluated for specific military medicine specific use cases.



From left, Ms. Ollie Gray, Mr. Robert Connors, COL Dan Kral receive briefing from Dr. Christine Kretz, IBM Research Industry Specialist

Employee Spotlight

Mr. Charles Orr

Mr. Charles Orr joined the Ke'Aki / LauLima team as a contractor working as a Technical Project Manager in support of the HTIC Lab's ESP initiative and will work directly with Ollie Gray and the rest of the ESP team. He lives in Hagerstown with his wife and has 3 children, and 3 grandchildren, two of which are 1.5 year old twins! He and his wife are the proud new parents of 2 english Bulldogs, "Peaches" and "Cream." His hobbies are computers and he's a serious jazz lover. On the side, for fun, Charles runs a jazz booking agency and has enjoyed booking international and local jazz artists in the area and has booked Diana Reeves and Steve Cole, to name just a few! His other hobbies are listening and playing jazz music,

of course, and he is enjoys playing bass guitar. Before getting here to Detrick, he previously served as a Program / Project lead for the Washington Metro Transit Authority. After commuting from Hagerstown to D.C., he began looking for opportunities that were closer to home and found his current employer (Ke'Aki/ LauLima). ❧❧❧



Mr. Charles Orr

Mr. Erik Grolton



Mr. Erik Grolton

We have a new addition to the TATRC Family. Mr. Erik Grolton joins the Universal Consulting Services (UCS) team as a contractor working as a Senior Systems Engineer in support of TATRC's RDT & E center. He lives in Frederick with his wife and 3 children. His hobbies are technology and he's a self admitted "golf addict" (5 HDCP). Erik's early professional career began working for a small real estate consulting firm based out of

Rockville. He left that company to begin a career in IT on a contract at the National Science Foundation in Arlington. He started as an eBusiness analyst assisting in every aspect of the grant proposal submission and awarding process. He was then moved into a dual Tier 1/eBusiness role and shortly thereafter, was moved into a Desktop Support position. After 3 years of commuting from Frederick to Arlington, he began looking for opportunities that were closer to home and found his current employer (UCS). He has led the MRMC HQ tech team for 2.5 years, and was recently provided with the opportunity to join TATRC in a Systems Administrator role to learn and continue down his desired IT career path. ❧❧❧

TATRC Recognized by USAMRAA's Small Business Office

TATRC was recognized and awarded a plaque of appreciation on the morning of 20 January, from USAMRAA's Small Business Office in support of contracts awarded to small businesses. TATRC, along with 7 other MRMC organizations received this appreciation plaque which was presented by MRMC Deputy Commander, RADM Bruce Doll and Mr. Jerome Maultsby of the Small Business Office. Based on metrics compiled through the Federal Procurement Data System-Next Generation, reports indicated that MRMC met and far exceeded its small business goals and targets in 4 out of 5 categories, while achieving 98.6 percent in the 5th category!

RADM Doll wanted to personally visit and present the plaques to each organization/directorate/office and during his visit, RADM Doll provided brief remarks which coincided with MG Lein's signed memo dated 22 December 2014. COL Dan Kral accepted the award on behalf of TATRC. 



RADM Bruce Doll, COL Dan Kral, and Mr. Jerome Maultsby

TATRC TRIVIA...

?

Under the new construct and reorganization of TATRC, how many labs and key programs does TATRC have?

Stay tuned for the answer in our next issue!

TATRC *TIMES*

On the Horizon...



Upcoming Events:

1 May: NCI's Annual Spring Research Festival at Ft. Detrick

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3-5 May: ATA Annual Telemedicine Conference & Symposium; Los Angeles, CA

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15 May: Bike to Work Day

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16 May: Armed Forces Day

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13-17 July: C4ISR Event -15 Live Demonstration; Ft. Dix, NJ

Don't Miss an Issue!



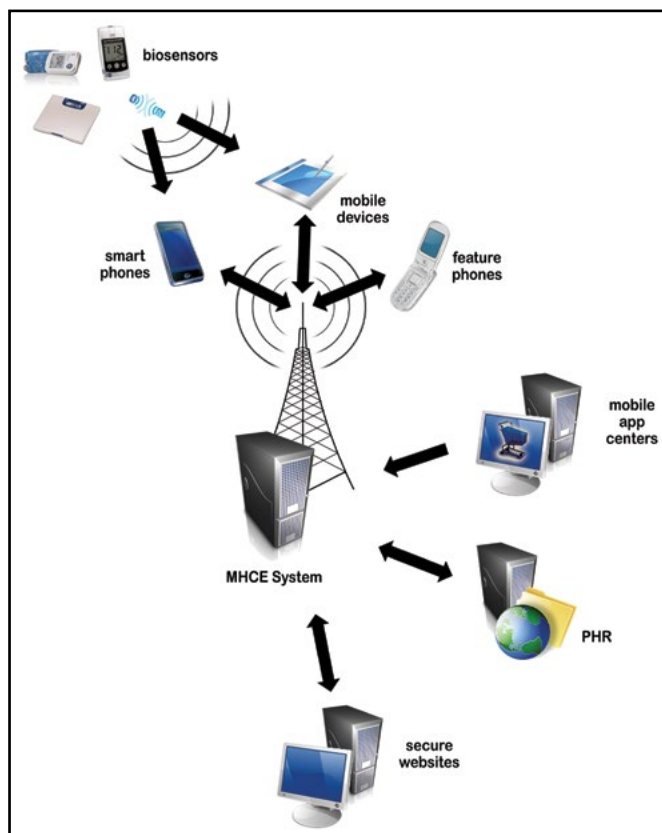
and get TATRC Times every quarter!

Q2 2015 | V1N1

Diabetic Study Marketing

Presently, the Telemedicine and Advanced Technology Research Center (TATRC) is hard at work planning for an upcoming research project to monitor diabetic patients in their homes through their personal cell phones. This research project will be done in partnership with leaders from Patient Centered Medical Home (PCMH) and an extramural partner, the Clemson University Department of Public Health Services. The research effort is funded by the Joint Program Committee (JPC- 1).

This research endeavor is unique because the diabetic patients will use home monitoring devices from a variety of credentialed manufacturers, including activity monitors, weight scales, blood pressure cuffs and glucometers that will all transmit data automatically to a secure mobile health system, known as the Mobile Health Care Environment (MHCE). The patient's will never have to manually record the readings from these devices, thereby eliminating some opportunities for data errors.



The image is depicting the interoperability of MHCE/mCare with mobile devices and tablets, biosensors, mobile phones and tablets, mobile app centers, Patient Health Records, and secure websites.

The patients will never have to manually record the readings from these devices, thereby eliminating some opportunities for data errors.

The diabetic patients will be able to track their own personal data through a secure application on their mobile phone, known as mCare. In addition, the data from these devices will be transmitted back to the MHCE secure system, and made available to their assigned PCMH case manager and primary care physician through a secure web portal interface, that will aggregate each patient's information and show trends about the patient's health in a meaningful way to their care team.

Finally, the data will also be securely recorded in the patient's personal health record, so that it is accessible for them to share with other clinicians whenever there is a clinical need to do so.

From a technology perspective, this research project allows the TATRC Mobile Health Innovation Center (MHIC) team to achieve an important milestone for the MHCE system and mCare application – providing interoperability with a variety of devices and health information systems in a secure, encrypted fashion.

For more information on TATRC and its many projects and initiatives, please visit: www.tatrc.org.

Let's Get Social!



#theTATRC

For more information on TATRC and its many initiatives

visit: www.tatrc.org or call 301.619.7927



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These articles are disseminated for informational, situational awareness of TATRC events and programs/projects. The opinions, interpretations, conclusions and recommendations of the following articles are those of the authors and are not necessarily endorsed by the Department of Defense or the U.S. Army.