November 30, 2010

Dear QUEST Seniors,

Congratulations on the completion of your QUEST capstone course!

The QUEST program is well known for its rigorous academic standards, so your success is one to be celebrated. We are proud that graduates of QUEST have taken such good advantage of the resources of this top research university. I am certain you will carry this special experience with you as you move into the professional world.

I am pleased to see that QUEST continues to build its vibrant alumni network, and to prepare its students for international partnerships. You may know that the first QUEST-only study abroad course took place in January of this year with students traveling to Tunis, Tunisia. In January 2011 QUEST will take students to Shanghai and Beijing, China.

I hope you will reach out to other QUEST alumni beyond our campus and seek out international experiences beyond our borders.

Sincerely,

Wallace D. Loh
President
QUEST WELCOMES

Alumni
Family & Friends
QUEST Partners
Students
University Colleagues

Consulting Project Clients

Bowles Fluidics
Force 3
Integrity Consulting
Lockheed Martin
NIKA Architects + Engineers
SAIC
Tulkoff Food Products
University of Baltimore
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Conference Program

Registration & Storyboard Display
Rever Alumni Hall of Fame
5:30 – 6:00 pm

Welcome
Grand Ballroom
6:00 pm

Student Presentation Breakout Sessions
(Please see the chart below.)
6:20 pm

Project of the Year and Closing Remarks
Grand Ballroom
7:40 pm

Reception
Rever Alumni Hall of Fame
8:00 pm

Student Presentation Breakout Sessions

Guests will progress to the student presentations from the welcome in the ballroom. Guests may attend presentations in any room. Time has been built into each session for guests to move to other rooms in-between presentations. Each session will be 15 minutes with a 2 minute transition interval.

Student ushers are available for guests who are looking for specific rooms and presentations.

<table>
<thead>
<tr>
<th>Session 1</th>
<th>Ballroom A</th>
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<tr>
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<td>ATK Product R&amp;D</td>
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<td>Session 2</td>
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<td>Session 3</td>
<td>ATK Competitiveness Survey</td>
<td>SAIC Gov 2.0</td>
<td>Lockheed Martin OLDP</td>
</tr>
<tr>
<td>Session 4</td>
<td>Tulkoff Food Products</td>
<td>Integrity Consulting</td>
<td>University of Baltimore</td>
</tr>
</tbody>
</table>

Refreshments will be available in the Rever Alumni Hall of Fame between the Student Presentation Breakout Sessions.
The QUEST - ATK (Competitiveness Survey) Project
ATK (Alliant Techsystems): A Strategic Analysis

Organization Profile:
Alliant Techsystems is a defense contractor headquartered in Minneapolis, MN, providing aerospace and defense products to the US government accounting for over 60% of total sales. The company currently records $4.8B in revenue and employs over 18,000 individuals. Their main products include fuses, rocket motors, ammunition, and other engine components.

Department: Missile Products Group
Project Champion: Kurt McIntyre, Strategic Market Analyst

Quest Student Team: Team Joint Strike

Jonathan Geerts
B.S. Aerospace Engineering
Expected May 2011

Jeremy Gilstein
B.S. Finance
B.S. Accounting
Expected May 2011

Lucy Qian
B.S. Finance
Expected May 2011

Rajan Sharma
B.S. Aerospace Engineering
Expected May 2011

Lily Zhen
B.S. Finance
B.S. Accounting
Expected May 2011

Biography
The team is comprised of five seniors in the QUEST Honors Program with a complementary set of majors including Finance, Accounting, and Aerospace Engineering. Team Joint Strike's diverse academic and work backgrounds, supplemented with its strong knowledge of the aerospace defense industry and various valuation techniques provide it with a solid framework for meeting ATK’s needs.

Faculty Advisor
David Ashley
Executive in Residence, QUEST Honors Program
Lecturer, Robert H. Smith School of Business

Project Abstract
ATK's Missile Products Group is a leader in strike weapons and missile components, as well as hypervelocity and air-breathing propulsion systems. Other major products and programs include aircraft sensor integration, missile warning systems, control systems, and advanced technologies for military, space, strategic, and tactical application. To grow this segment, ATK is looking for external growth opportunities that can complement its current systems. Through a thorough strategic analysis, ATK can achieve long-term growth coupled with customer base expansion through cost and top line synergies.

Key Contributions and Recommendations
The team has successfully devised multi-staged filter processes to effectively analyze the current aerospace and defense industry landscape. Through this detailed analysis, Joint Strike has come up with five companies for ATK to align itself with and create strong synergistic value. The team has done a full comparable company analysis as well as a discounted cash flows analysis to further rank these five companies on their economic value to ATK.
**THE QUEST - ATK (PRODUCT R&D) PROJECT**

**ATK R&D: FOSTERING ATK AND UNIVERSITY OF MARYLAND COLLABORATION**

**ORGANIZATION PROFILE:**
Alliant Techsystems Inc. (ATK) is one of the largest defense and aerospace companies in the United States, with more than 18,000 employees, and 60 facilities located both domestically and internationally. The organization is comprised of four groups: Aerospace Systems, Armament Systems, Security and Sporting, and Missile Products.

**Department:** Missile Products Group, Business Development Division  
**Project Champion:** Kevin Schoonover, Manager, Missile Defense Business Development

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**QUEST STUDENT TEAM: TEAM EOS**

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree(s)</th>
<th>Expected Graduation Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brian Daisey</td>
<td>B.S. Operations Management</td>
<td>Expected May 2012</td>
</tr>
<tr>
<td>Jason Gates</td>
<td>B.S. Civil Engineering</td>
<td>Expected May 2011</td>
</tr>
<tr>
<td>Stephanie Nguyen</td>
<td>B.S. Marketing</td>
<td>Expected May 2011</td>
</tr>
<tr>
<td>David Rubinstein</td>
<td>B.S. Finance</td>
<td>B.A. Economics</td>
</tr>
<tr>
<td>Amy Zhou</td>
<td>B.S. Mechanical Engineering</td>
<td>Expected May 2011</td>
</tr>
</tbody>
</table>

**BIOGRAPHY**
Team Eos is comprised of five undergraduate students with a diverse background of interests and skills. Each team member has excelled within his or her area of study and has brought invaluable expertise to the project. Team Eos’ unique composition of business and technical knowledge allowed the team to develop innovative quality management techniques and to analyze complex technical research. Team Eos has worked to provide an exceptional recommendation to ATK that will add value to the firm well into the future.

We would like to thank Mr. Schoonover, Professor Ashley, Dr. Bailey, Ms. Coomber, Ms. Lee, and Ms. Goodell. Their support and encouragement has provided Team Eos with a fantastic experience and learning opportunity.

**FACULTY ADVISOR**
David Ashley  
Executive in Residence, QUEST Honors Program  
Lecturer, Robert H. Smith School of Business

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**PROJECT ABSTRACT**
ATK currently relies on U.S. government defense spending for 69% of the company’s total revenue. Faced with the prospect of significant defense spending cuts, ATK is searching for new research and development opportunities that will allow the company to capitalize on its changing business environment. Team Eos provided ATK with a recommendation of project investment and partnership opportunities at the University of Maryland. Team Eos identified developing technologies and business initiatives, and considering both ATK and University interests, recommended the optimal portfolio of five project partnerships. Team Eos has also provided ATK with a process and set of innovative tools that will allow ATK to maintain its relationship with the University well into the future. These recommendations will assist ATK in maintaining its position as a leader of its industry. These recommendations will allow the company to solidify its relationship with the University of Maryland community.

**KEY CONTRIBUTIONS AND RECOMMENDATIONS**
Team Eos’ recommendation is intended to add value for ATK in two separate ways. First, Team Eos has recommended a portfolio of five project partnerships. This portfolio will allow ATK to immediately begin exploring this new source of R&D and to capitalize on its new relationship with the University. Second, Team Eos has built a process and set of innovative tools that can be continuously applied to identify optimal partnerships. This will allow ATK to significantly enhance its research and development relationship with the University well into the future.
**THE QUEST - BOWLES FLUIDICS PROJECT**

**BREAKING INTO THE WASTEWATER TREATMENT INDUSTRY**

**ORGANIZATION PROFILE:**
Founded in 1958, Bowles Fluidics develops and manufactures fluid flow devices, laying claim to over 250 patents. By creating customized fluid flows without moving parts, the company provides unique and elegant solutions. Bowles Fluidics carries 85% of the market for windshield washer spray nozzles in North America.

**Department:** Advanced Products  
**Project Champion:** Dr. Sri Sridhara, Vice President, Advanced Products

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**QUEST STUDENT TEAM: HqO**

**Kelly Kidwell**  
B.S. Fire Protection Engineering  
Expected May 2011

**Daniel Latinsky**  
B.S. Finance  
B.S. Mathematics  
Expected May 2011

**Jessica Lieberman**  
B.S. Mechanical Engineering  
Expected May 2011

**Nancy Rogan**  
B.S. Civil Engineering  
Expected December 2011

**Micheline Tocco**  
B.S. International Business  
Expected May 2011

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**BIography**
Since September, Team H₂O has been working diligently to aid Bowles in making an informed decision. With backgrounds in business and engineering, the team conducted research on the aeration market, analyzed and synthesized results, and arrived at a final recommendation. During meetings twice a week in the Engineering and Physical Sciences Library and QUEST lab, team H₂O hurdled challenges and transformed from a group of individuals into a quality team—and braved the olfactory sensations of wastewater treatment plants.

**Faculty Advisor**  
Dr. Charles Carr  
Senior Technical Consultant  
University of Maryland Manufacturing Assistance Program  
Maryland Technology Enterprise Institute

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**Project Abstract**
Aeration is the most energy intensive part of the wastewater treatment process, costing over $9 billion per year across the industry. Additionally, aeration equipment regularly clogs over time and increases energy costs by $2.25 billion per year in the industry. Bowles Fluidics Corporation would like to enter the aeration market utilizing their existing fluid technology and expertise to provide a quality product to increase aeration energy efficiency and mitigate clogging problems, both reducing energy costs. Team H₂O was chosen to determine if it is beneficial for Bowles Fluidics to enter the aeration manufacturing industry and, if appropriate, compile a strategy for introducing their new product to the market.

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**Key Contributions and Recommendations**
Team H₂O recommends that Bowles Fluidics Corporation leverage their existing technology to enter the wastewater treatment aeration industry. Our recommendation is comprised of the following three components: sell to municipal wastewater treatment plants, enter the market independently and launch innovative products. Each of these three strategies to enter the aeration market is essential to Bowles Fluidics’ success as a new player in the industry. The team’s extensive technical and market research has led us to this recommendation which we hope will drive Bowles Fluidics Corporation to be a successful player in the wastewater treatment aeration industry.
**THE QUEST - FORCE 3 PROJECT**

**AUTOMATED THREAT RESPONSE IN CYBER SECURITY**

**ORGANIZATION PROFILE:**
Force 3 is an innovative IT solutions company that is dedicated to offering services that improve productivity, reduce costs, and enhance the way their clients conduct business in the commercial, government, and healthcare sectors. Force 3’s strong partnerships with industry leaders such as Cisco, Sun, and EMC allow the company to deliver the latest advancements to add value to their clients.

**Department:** Technology and Solutions

**Project Champion:**
- Krissy Kelley, Vice President of Marketing
- Chris Knotts, Director of Technology and Solutions
- Les Tractman, Chief Operating Officer

**QUEST STUDENT TEAM: BRUTE FORCE**

**CH Albach**
- B.S. Computer Science
- B.S. Biology
- Expected May 2011

**James Hallas Button**
- B.S. Information Systems
- B.S. Supply Chain Management
- Expected May 2011

**John McGahagan**
- B.S. Electrical Engineering
- Expected December 2010

**Olivia Shin**
- B.S. Operations Management
- B.S. Information Systems
- Expected May 2011

**BIOGRAPHY**
Brute Force consists of students in the Business, Computer Science, and Engineering schools, which has allowed the team to contribute their diverse skill sets to this project. Each team member has been able to contribute from a technical background as well as experience with Total Quality tools and Six Sigma strategies. Brute Force draws from a diverse background of experience in the IT consulting field. We would like to thank our project co-champions at Force 3: Krissy Kelley, Les Trachtman, and Chris Knotts, QUEST staff: Dr. Joe Bailey, David Ashley, Nicole Coomber, and Schquita Goodwin, and our faculty advisor Dr. Hassan Ibrahim for all of their help and support throughout this project.

**FACULTY ADVISOR**
Dr. Hassan Ibrahim
Tyser Teaching Fellow
Department of Decision, Operations, and Information Technologies
Robert H. Smith School of Business

**PROJECT ABSTRACT**
Force 3 has developed a new cyber security product called the ActiveDefense™ Platform. This product supports automated threat response as well as a high level of integration between security tools, which allows for better communication between all elements of a security system. The goal of this project is to determine the industry interest in automated threat response tools such as the ActiveDefense™ Platform and offer an external perspective on this concept.

**KEY CONTRIBUTIONS AND RECOMMENDATIONS**
Survey and interview results suggest that there is significant interest in automated threat response among high-level security professionals. In addition, security professionals are not satisfied with their organization’s current level of automation. Therefore, Brute Force recommends that Force 3 enhance the ActiveDefense™ Platform as a communications layer. ActiveDefense™ Platform should support multi-vendor communication and allow flexibility for security professionals. Users would benefit from the ability to define their own scripts as a threat response.
THE QUEST - INTEGRITY CONSULTING PROJECT
EMERGENCY MANAGEMENT PLANNING PLATFORM

ORGANIZATION PROFILE:
Integrity Consulting is a management, information technology, and engineering consulting organization providing services to commercial and federal sector clients within the Washington Metropolitan region. Integrity Consulting was created with a vision of changing the nature of consulting by setting a new standard for commitment, trust, and execution.

Project Champions: Michael Fried, Manager
David Mayo, Consultant
Joseph Underwood, Principal

QUEST STUDENT TEAM: KlutchCrew

Chris Coraggio
B.S. Information Systems
B.S. Marketing
Expected May 2011

Asmi Joshi
B.S. Computer Science
Expected May 2011

Estefi Medina
B.S. Finance
B.S. Operations Management
Expected May 2011

Amanda Schreier
B.S. Marketing
Expected May 2011

BIOGRAPHY
Our team comes from various academic backgrounds that include marketing, finance, information systems, operations management and computer science. In addition we also have experience in social media platform development, human computer interaction, systems development and project management. We worked in a very collaborative and dynamic environment, which helped us create innovative and user centric design. Overall, we have really enjoyed working with our project champions from Integrity Consulting and have learned a lot from this experience!

FACULTY ADVISOR
Dr. Jeffrey Herrmann
Associate Director, QUEST Honors Program
Associate Professor of Mechanical Engineering
Joint Appointment with the Institute of Systems Research
A. James Clark School of Engineering

PROJECT ABSTRACT
Catastrophes such as September 11th and Hurricane Katrina have demonstrated the importance of emergency management planning in ensuring the safety of American citizens. Currently, the public and private sectors struggle with creating unified emergency management plans because they lack efficient research, communication and collaboration capabilities. Integrity Consulting identified this opportunity and conceptualized a web platform that will address the needs of the emergency management planning community. The KlutchCrew’s job was to bring Integrity Consulting’s concept of an integrated web platform to life by creating its user interface and documenting its capabilities.

KEY CONTRIBUTIONS AND RECOMMENDATIONS
Our recommendations consist of two deliverables- mockups of the proposed platform and a requirements document.

Our mockups illustrate what the platform would look like in addition to its capabilities. We created 14 mockups that focus on different aspects of the emergency management planning process, including contacting professionals, doing research, selecting suppliers, and working together on projects. Some of the tools we integrated were blogs, news feeds, multimedia, advanced search, social media, and WebEx. The requirements document lists and prioritizes all the tools and capabilities of the platform and describes how emergency management professionals would use them in the planning process.

Overall our recommendations improve communication and collaboration, data collection and information search. Our team is confident that our proposed platform will be invaluable to those in the emergency management planning field.
THE QUEST - LOCKHEED MARTIN (OLDP) PROJECT
STREAMLINING THE OFF-BOARDING PROCESS

ORGANIZATION PROFILE:
Lockheed Martin's Operations Leadership Development Program (OLDP) is a 2-year rotational program for recent university graduates and Lockheed Martin employees with less than three years experience. Participants complete six-month rotations in three core functional areas (manufacturing, supply chain management and quality) and one elective area, as well as taking technical classes and attending leadership development conferences.

Department: Enterprise Operations
Project Champions: John Kearney, Operations Engineer LDP
Mina Evans, OLDP Corporate Program Manager

QUEST STUDENT TEAM: REVOLVOLUTION

Chirag Arora
B.S. Finance
B.S. Operations Management
Expected May 2011

Kirsten Chen
B.S. Operations Management
Expected May 2011

Jasmine Keene
B.S. Mechanical Engineering
Expected May 2011

Stephanie Martin
B.S. Mechanical Engineering
Expected May 2011

Caitlin Roller
B.S. Operations Management
B.S. Marketing
Expected May 2011

BIOGRAPHY
QUEST Team Revolvolution has a unique combination of business and engineering majors, enabling the team with a cross-functional approach to the operations process. Comprised of both conceptual minds and critical thinkers, Team Revolvolution was able to delve into Lockheed Martin's Operations Leadership Development Program with both qualitative and quantitative research and analysis techniques to create innovative solutions for the company to move forward in working to improve the program. Throughout the process, the team pulled from their unique experiences from academics, internships and QUEST to contribute effectively to the team's overall effort.

FACULTY ADVISOR
Dr. J. Gerald Suarez
Lockheed Martin Visiting Technical Fellow
Professor of Practice in Systems Thinking and Design
Robert H. Smith School of Business

PROJECT ABSTRACT
The Operations Leadership Development Program (OLDP) has the opportunity to improve its off-boarding process (that is, the process by which participants obtain their first off-program position) in order to improve efficiency, utilization of resources and employee retention rate. Team Revolvolution looked at the OLDP pipeline from the recruiting process, through the rotations and into off-boarding and post program experience to determine the impact of this opportunity and identify the root drivers for improvement. From there, the team worked towards creating recommendations that would create a more streamlined process for program stakeholders, including program participants, hiring managers and the Program Management Office (PMO).

KEY CONTRIBUTIONS AND RECOMMENDATIONS
Through survey collection, interviews, and data analysis, Team Revolvolution determined four main recommendations and created specific implementation steps and timelines to improve the program’s off-boarding process. The four recommendations are: 1) Clarify communications between participants, graduates, site leads, managers and the Program Management Office (PMO), 2) Strengthen the internal OLDP network, 3) Track program success with metrics, and 4) Make recruitment more selective. The team identified key steps that the PMO should take in addition to where in the pipeline (from recruitment through off-boarding) the steps should be executed. Through these implementation guidelines, OLDP can improve program success and develop the future leaders of Lockheed Martin.
THE QUEST - LOCKHEED MARTIN (MS2) PROJECT
MS2 SPECTRUM OF DEPOT SERVICES

ORGANIZATION PROFILE:
Headquartered in Bethesda, MD, Lockheed Martin is a global security company principally engaged in the research, design, development, manufacture, integration, and sustainment of advanced technology systems, products, and services. The Mission Systems & Sensors (MS2) business line executes nearly 500 programs for the U.S. Navy, Coast Guard, Air Force, Army, and Marine Corps, as well as industrial, research, and medical customers in 50 nations.

Department: MS2, Mission Systems & Sensors
Project Champions: Wesley J. Turner, Senior Project Engineer—MS2 Global Sustainment

QUEST STUDENT TEAM: MS2 CONSULTING

Elizabeth Ahn
B.S. Finance
B.S. Operations Management
Expected December 2011

Erick Alves de Sa
B.S. Mechanical Engineering
Expected May 2011

Lauren Gardner
B.S. Aerospace Engineering
Expected May 2012

Matt Love
B.S. Supply Chain Management
B.S. Marketing
Expected May 2011

Vidya Sathyamoorthy
B.S. Finance
B.S. Marketing
Expected May 2011

BIOGRAPHY
Our team, MS2 Consulting, is composed of five dedicated seniors who, through our diverse internship, academic, and extracurricular experiences, epitomize the multidisciplinary cross-collaboration that is the cornerstone of the QUEST program. We were fortunate to be well-equipped with dynamic consulting skills as well as relevant industry experience to effectively address the opportunity at hand. After a semester filled with hard work and many long nights, we have full confidence in the viability and utility of our final recommendations. We would like to sincerely thank our project champion Mr. Wesley Turner, faculty advisor Dr. Thomas Corsi, and the entire QUEST community, from our inspiring teachers to our fellow Cohort 16 members.

FACULTY ADVISOR
Dr. Thomas Corsi
Michelle E. Smith Professor of Logistics
Director, Supply Chain Management Center
Logistics, Business, and Public Policy
Robert H. Smith School of Business

PROJECT ABSTRACT
Lockheed Martin MS2 has 14 product repair sites, many of which still operate with legacy programs from defense acquisitions over the years. Consequently, varying terminology is employed across the locations causing miscommunication both internally and externally. MS2 has a long-term vision to standardize their operations and therefore tasked our team with developing a definitive site categorization to help initiate the alignment process. MS2 will utilize this nomenclature to label and differentiate between the sites. We researched aerospace and defense industry repair services and interviewed subject matter experts as well as MS2 stakeholders. This information was used to create and validate our final deliverable: a tool with service site definitions and recommended performance measures.

KEY CONTRIBUTIONS AND RECOMMENDATIONS
Our recommendations seek to alleviate much of the potential confusion from the use of multiple repair service terminology. First, we propose that all 14 MS2 sites be referred to, in the broad sense, as “service sites” regardless of what level of service is provided. To align with commonly-used terms in the industry, we recommend categorizing MS2’s service sites into three levels: Maintenance, Repair, or Overhaul. The site capability is the differentiating factor between the three levels. Our categorization tool, which provides the definitions and general information differentiating each service site level, is complemented by a list of performance measures pertinent to each level. We recommend benchmarking these metrics, many of which are already being measured, to ensure continuous operational improvement.
Organization Profile:
NIKA Architects & Engineers is a full-service architecture and engineering firm focused on the Federal Government and private institutions, with specialized expertise in healthcare and complex facilities.

Project Champion: Manan Bahri, Electrical Engineer

Quest Student Team: U-NIKA

Ryan Ganser
B.S. Fire Protection Engineering
Expected May 2011

Jeremy Loya
B.S. Operations Management
B.S. Information Systems
Expected May 2011

Michael Pertmer
B.S. Mechanical Engineering
Expected May 2011

Stephany Tong
B.S. Operations Management
B.S. Supply Chain Management
Expected May 2011

Aaron Wertman
B.S. Operations Management
B.A. Philosophy
Expected May 2011

Biography
Team U-NIKA is a multidisciplinary team of five QUEST seniors with backgrounds in Operations Management as well as Fire Protection and Mechanical Engineering fields. The team’s unique combination of experiences has familiarized them with the engineering peer review process, business process re-engineering, and project management. With a wide range of backgrounds and work experience and through the utilization of skills learned through QUEST, U-NIKA is able to supply NIKA Architects and Engineers with effective solutions for the future.

Faculty Advisor
Dr. Senthil Arul
NAAP Associate Manager
NAVSEA

Project Abstract
NIKA has experienced rapid growth in the past few years and the current project management process needs to be updated to facilitate their quick expansion. Due to considerable increases in the number of employees and contracted projects, the old management process was becoming inadequate. U-NIKA’s challenge was to provide NIKA with an improved project management plan to enable continued growth.

Key Contributions and Recommendations
Using data collected from employees during interviews and a survey, team U-NIKA was able to target three areas of improvement for project management at NIKA. Team U-NIKA has recommended an improved project kickoff meeting, a project charter, as well as the addition of a project closeout meeting. With improved starts and finishes to their projects, NIKA will be able to accurately assess their performance and take actions at the beginning of each project leading to continual improvement of their project management process and concurrent enhancement of the employee experience.
THE QUEST - SAIC (CYBER-HUMAN FACTORS) PROJECT
HUMAN COMPUTER INTERACTION OF CYBER SECURITY

ORGANIZATION PROFILE:
SAIC is a FORTUNE 500 scientific, engineering, and technology applications company headquartered in McLean, Virginia. SAIC has over 45,000 employees and offers services in national security, energy and the environment, critical infrastructure and health. As a leading provider of IT solutions services for all layers of the modern enterprise, from enterprise strategy consulting to managed infrastructure services, SAIC’s IT experts are helping global enterprises every day cope successfully with today’s competitive realities and challenges.

Department: Cyber Security Solutions
Project Champion: Hart Rossman, Vice President and Chief Technology Officer for Cyber Programs

QUEST STUDENT TEAM: TEAM CYBEROLOGY

Sebastian Gomez  
B.S. Computer Science  
Expected May 2011

Melinda Jih  
B.S. Operations Management  
Expected May 2011

Brad Klein  
B.S. Computer Engineering  
Expected May 2011

Mitchell Kochman  
B.S. Information Systems  
B.S. Accounting  
Expected May 2011

Jeremy Prince  
B.S. Electrical Engineering  
Expected May 2011

BIOGRAPHY
Team Cyberology consists of students in the business, computer science, and engineering schools, which has allowed us to gain diverse multidisciplinary perspectives on our project. Each member provided a unique set of skills and real world work experience. We would like to thank our subject matter experts, Robert Maxwell, Rohit Bhayana, Andy Baer, John Payne, Mike Murphy, and Michel Cukier. Additionally, we would like to thank the QUEST staff David Ashley, Joe Bailey, Nicole Coomber, our faculty advisor Michael Hicks, and our project champion Hart Rossman.

FACULTY ADVISOR
Dr. Michael Hicks  
Associate Professor in the Computer Science Department and University of Maryland Institute for Advanced Computer Studies (UMIACS)  
Affiliate Associate Professor in Electrical and Computer Engineering  
University of Maryland, College Park

PROJECT ABSTRACT
As our dependence on technology and the internet increases, so does the threat of cyber attacks. Cyber security applications are currently developed with minimal consideration for the cyber security professionals’ computer interactions. Cyber security professionals spend nearly all day on the computer working to combat cyber attacks. Team Cyberology discovered specific components of graphical user interfaces and work environments that can be used to increase the effectiveness of cyber security professionals.

KEY CONTRIBUTIONS AND RECOMMENDATIONS
Team Cyberology recommends using a modified Kano Chart to show a grading scale for cyber security applications. The Kano chart has three levels: level one includes the needed factors, level two includes the wanted factors, and level three includes the desired factors. The breakdown makes cyber security more measurable because SAIC can now identify features that are beneficial to have, and those that are absolutely necessary for a functioning system. Using our recommendations, SAIC will be able to develop cyber security applications that are more usable.
THE QUEST - SAIC (Gov 2.0) PROJECT
HEALTH 2.0 PREDICTIVE MODELS

ORGANIZATION PROFILE:
SAIC is a FORTUNE 500® scientific, engineering, and technology applications company that uses its deep domain knowledge to solve problems of vital importance to the nation and the world, in national security, energy and the environment, critical infrastructure, and health.

Department: Cyber Security Solutions
Project Champion: Hart Rossman, Vice President and Chief Technology Officer for Cyber Programs

QUEST STUDENT TEAM: TRANSPARENT COMMUNICATIONS

Melissa Brenner
B.S. Operations Management
B.A. Government and Politics
Expected May 2011

Jessica Stewart
B.S. Bioengineering
Expected May 2011

Sandy Kwon
B.S. Operations Management
B.A. Philosophy
Expected December 2011

Dmitriy Portnyagin
B.S. Marketing
B.A. Economics
Expected May 2011

Rameen Taeb
B.S. Mechanical Engineering
Expected May 2011

BIOGRAPHY
Team Transparent Communications leveraged the diverse perspectives of its members to analyze the Gov2.0 movement, the healthcare industry and various relevant trends from other fields to develop an innovative, idealized design that would help people stay healthy. Team members developed decision frameworks for designing and analyzing future opportunities and platforms, as well as prioritizing target stakeholders and presented their research and recommendations to the client in the form of a business strategy. The team had a great learning experience and would like to thank Hart Rossman, Dr. Bruce Golden and the QUEST faculty for making this unique and valuable experience possible. The team members look forward to using the lessons learned to create value in their future endeavors.

FACULTY ADVISOR
Dr. Bruce Golden
Professor in Decision, Operations, and Information Technologies
Robert H. Smith School of Business

PROJECT ABSTRACT
SAIC is an industry leader, advancing technology to improve the state of our society. For this reason, SAIC is interested in exploring opportunities related to Gov 2.0 and the healthcare industry. Team Transparent Communications has been given the opportunity to develop an idealized design and supporting business strategy detailing the implementation of the vision to make healthcare more efficient for stakeholders.

KEY CONTRIBUTIONS AND RECOMMENDATIONS
Through a research based approach, Team Transparent Communications has conceptualized an innovative Gov 2.0 platform that will integrate quantitative and qualitative healthcare information to improve decision making. The team has outlined a strategy to build the underlying models in a way that the development process adds value. The team recommends beginning the implementation process by targeting military personnel and veterans, who already have technology enabling them to download their health records. As Electronic Health Records become the standard, our proposed solution will scale to incorporate and make use of the additional individual health data. The proposed solution promotes the Gov 2.0 philosophy and allows for further democratization of the healthcare industry.
THE QUEST - Tulkoff Food Products Project  
Waste Reduction & Water Treatment Optimization

**Organization Profile:**
Established in the 1930s, Tulkoff Food Products, Inc. provides kitchens with quality condiments, sauces, and spreads. Tulkoff is most famous for their horseradish sauces and prides itself on state-of-the-art facilities. Tulkoff strives to demonstrate environmental responsibility during their complex manufacturing processes.

**Department:** Operations  
**Project Champions:** Philip Tulkoff, CEO  
Buddy Dietz, VP of Operations

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**Quest Student Team: Saucy Solutions**

**Jeffrey Lue**  
B.S. Finance  
B.S. Operations Management  
Expected December 2011

**Yasmeen Thomé**  
B.S. Operations Management  
Expected May 2011

**Augusto Tono**  
B.S. Supply Chain Management  
B.S. Operations Management  
Expected May 2011

**Melanie Wong**  
B.S. Civil and Environmental Engineering  
Expected May 2011

**Jesse Wu**  
B.S. Accounting  
B.S. Information Systems  
Expected May 2011

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**Biography**
Team Saucy Solutions is a multi-disciplinary team eager to work with Tulkoff on this unique project. The team enjoys working together and is confident in their recommendations. Team Saucy Solutions would like to thank Tulkoff Food Products, subject matter experts, professors, and industry professionals who helped guide their methodology and recommendations.

**Faculty Advisor**
Dr. Jeffrey Herrmann  
Associate Director, QUEST Program  
Associate Professor of Mechanical Engineering  
Joint Appointment with the Institute for Systems Research  
A. James Clark School of Engineering

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**Project Abstract**
Tulkoff Food Products processes over two million pounds of horseradish annually. As a result, Tulkoff spends $100,000 to send nearly 250,000 pounds of peels, dirt, and sludge waste to a landfill each year. Tulkoff seeks to reduce waste management and water treatment costs, while addressing environmental sustainability. The team’s opportunity was two-fold: finding market demands for their waste products and optimizing their water treatment process.

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**Key Contributions and Recommendations**
Saucy Solutions recommends a partnership with a local composting company and the installation of a decanter centrifuge system. In addition to saving 700,000 gallons of water annually and creating a zero-waste business model, these recommendations will save Tulkoff approximately $65,000 each year. These recommendations allow Tulkoff to better align with their environmental initiatives. The team created a detailed business plan that includes implementation analyses, comprehensive cost models, and industry contacts.
THE QUEST - UNIVERSITY OF BALTIMORE PROJECT
PROJECT TITLE: GRADUATE ADMISSIONS PROCESS IMPROVEMENT

ORGANIZATION PROFILE:
The University of Baltimore is located in the heart of the city's Mount Vernon Cultural District in Baltimore, MD. The school was founded in 1925 and is part of the University System of Maryland. There are 2,100 graduate students currently enrolled at UBalt. The graduate program consists of four schools: School of Law, Merrick School of Business, Yale Gordon College of Liberal Arts, and College of Public Affairs.

Department: Graduate Admissions
Project Champion: Alison Buckley; Director, Office of Graduate and International Admission and Enrollment

QUEST STUDENT TEAM: UBelong

Kalika Bhusry
B.S. International Business
Expected May 2011

Cristina Chow
B.S. Accounting
B.S. Supply Chain Management
Expected December 2011

Eden Goldman
B.S. Marketing
Expected May 2011

Russell Lyons
B.S. Mechanical Engineering
Expected May 2011

Rita Wu
B.S. Operations Management
B.S. Supply Chain Management
Expected December 2011

BIOGRAPHY
Team UBelong is comprised of a cohesive group of a variety of business and engineering majors. After numerous late-night meetings, site visits and interviews we have gained a deeper understanding of how to balance working hard while having fun along the way. Through maintaining constant contact, we were able to communicate effectively and efficiently not only within our team, but with our client and various stakeholders as well. We enjoyed the opportunity to work together and gain insight from each others’ past experiences and backgrounds. We would like to thank all those who helped contribute to the success of our project; we have appreciated all your time and feedback, and we couldn’t have done it without you!

FACULTY ADVISOR
Nicole Comber
Assistant Director, QUEST Honors Program

PROJECT ABSTRACT
In 2008, the University of Baltimore implemented an electronic admissions process in hopes of streamlining the process and becoming greener by reducing paper applications flowing through the graduate admissions office. With limited documentation and a lack of integration between the newly implemented software systems, PeopleSoft and Image Now, the admissions process did not see the results they initially hoped for. Although electronic student profiles and documents became more organized, it became increasingly harder for admissions staff and program directors to process applications and decisions. UBelong’s goal is to formulate recommendations to help reduce turnaround time for graduate school admissions decisions.

KEY CONTRIBUTIONS AND RECOMMENDATIONS
UBelong devised three recommendations that are easy to execute and will produce positive results shortly after implementation. The first recommendation centers around creating a standardized coding system for all application documents (ex: Last-name_Firstname_Documenttype). Next, a script would be created to capture and record the documents an applicant has submitted. This will automatically generate and fill a summary sheet with information (name, university attended, GPA, etc.) used to evaluate an applicant. This will significantly reduce the amount of time program directors spend identifying key pieces of information.

The second recommendation requires the provost to enforce a strict decision deadline that program directors have to follow. This creates a routine and produces faster turnaround time that will eliminate cycle time outliers. Lastly, the university should eliminate the process of residency checks for students who will not be admitted to the university, thus allowing staff to better allocate their time.
QUEST Faculty and Leadership

Dr. Senthil Arul
Associate Manager, NAVSEA
Project Advised: NIKA Architects + Engineers

Senthil Arul is working as NAAP Associate Manager at NAVSEA since September 2009. Prior to joining NAVSEA, Senthil worked at Ford Motor Company for 20+ years in various engineering and engineering management positions. Senthil has extensive experience in all phases of product development – Pre-program, Concept Development, Detail Design, Change Management, Prototyping, Testing and Validation, Pre-Production, and Production. He has broad management experience in Product Development, Program Management, Cost Management and Quality Process Improvements.

Recently (2009), Senthil completed a Doctoral Degree in Manufacturing (friction welding of aluminum alloys and forming metal matrix composite by friction welding) at the University of Michigan, Ann Arbor. Senthil is an expert in quality methods such as benchmarking, value management and decision analysis.

Senthil is DAWIA level I certified in Cost Engineering, Systems Engineering, and Program Management. During weekends and evenings, Senthil serves as a Faculty Advisor at University of Maryland, College Park coaching seniors on a capstone project.

David Ashley
Executive in Residence, QUEST Honors Program
Robert H. Smith School of Business
Faculty for BMGT/ENES 490H

Projects Advised: ATK (Competitiveness Survey); ATK (Product R&D)

David Ashley is an adjunct professor and an Executive in Residence at the University of Maryland School of Business. His is also a program analyst for the Department of Homeland Security. His duties involve developing business models, performance measurement and survey work, and program management and program reviews for the Federal Management Emergency Agency. He also served as the Executive Officer for FEMA’s Office of Policy managing budget and personnel issues. Before joining FEMA, Mr. Ashley served as a Financial Resource Manager with the Department of Homeland Security, Customs and Border Protection. His duties involved managing a $200M budget including its formulation and execution. Additionally, he oversaw performance measurement and analysis, survey research, and strategic planning for CBP. Previous to his DHS assignment, Mr. Ashley worked for the U.S. Small Business Administration where he led various marketing research efforts including the SBA’s branding campaign. Before joining the federal government. Finally, Mr. Ashley served as the director of the Small Business Development Center at the University of New Mexico. While on the Valencia Campus, he oversaw the Center’s operation including formulating business and marketing plans for area businesses as well as assembling business loan packages.

Mr. Ashley served as president of the University of Georgia’s Marketing Research Institute International and he served two terms as president of the Mid-Atlantic Chapter of the Marketing Research Association. He has published in Quirks Marketing Research Review and has published instructor ancillary materials for various marketing, marketing research, and economics textbooks for Wiley Publishing. Finally, Mr. Ashley is authoring a marketing research textbook though Kendall Hunt Publishing due in the fall 2011.
QUEST Faculty and Leadership, Continued

Dr. Joseph P. Bailey
Executive Director, QUEST Honors Program
Research Associate Professor of Decisions, Operations & Information Technologies
Robert H. Smith School of Business

Dr. Joseph P. Bailey is the QUEST Executive Director and a Research Associate Professor at the Robert H. Smith School of Business. He has been a faculty member at the University of Maryland since 1998. In addition to teaching the capstone course in the QUEST program, Dr. Bailey also teaches the QUEST sophomore course on innovation and design and an MBA course on managing digital markets. His research focuses on Internet commerce and digital platform competition.

Dr. Bailey has written numerous peer-reviewed journal articles, book chapters, and co-edited the book *Internet Economics* from MIT Press. His research has impacted company strategy and public policy beyond his scholarly publications. Additionally, he has worked with multiple companies including Amazon.com, AutoTrader.com, eBags, eHarmony, Home Depot, Match.com, SAIC, and Staples. Dr. Bailey’s research has also led to interactions with international organizations and government agencies including the Federal Communications Commission, National Science Foundation, OECD, U.S. Patent and Trademark Office, and the U.S. Postal Service.

Dr. Bailey completed his Ph.D. in June 1998 in the Technology, Management and Policy Program at MIT—a...
Nicole M. Coomber, M.A.
Assistant Director, QUEST Honors Program
Project Advised: University of Baltimore
Nicole Coomber currently serves as assistant director for the University of Maryland QUEST program. She establishes and maintains professional relationships for the program, manages donations, and is involved with curriculum development and execution. She also aids in grant writing efforts for the program, and this past year managed a successful NSF grant to run a workshop on learning outcomes and assessments for multidisciplinary engineering, technology, and management programs.

Previously, Nicole worked as policy analyst intern at the Joint National Committee on Languages and as a French teacher and administrator at independent schools in New York and Washington, DC. After graduating Phi Beta Kappa from the University of the South in 2001 with a B.A. in English and French, she earned an M.A. in French Studies from Middlebury College while living in Paris. Currently, she is pursuing an Education Policy Studies Ph.D. here at Maryland.

Nicole’s research includes studying policy impacting higher education and foreign language education. She is currently working on her dissertation, an oral history project that explains the relationship between federal foreign and second language education policies and the establishment of foreign language programs at the higher education level.

In March of 2010, she presented her research on the history of foreign language education at the Northeast Conference on the Teaching of Foreign Languages in New York City.

Dr. Bruce L. Golden
Professor and France-Merrick Chair in Management Science
Robert H. Smith School of Business
Project Advised: SAIC (Gov 2.0)
Bruce Golden received his undergraduate degree in mathematics from the University of Pennsylvania and his masters and doctoral degrees from the Massachusetts Institute of Technology. He joined the faculty of the University of Maryland Business School in 1976 and served as a Department Chair from 1980-1996. Bruce has received numerous awards, including the Thomas L. Saaty Prize (1994 and 2005), the University of Maryland Distinguished Scholar-Teacher Award (2000), the INFORMS Award for the Teaching of OR/MS Practice (2003), the INFORMS Computing Society Prize (2005), and the Harvey J. Greenberg Award for lifetime contributions to the INFORMS Computing Society. He was named an INFORMS Fellow in 2004. Since 1999, Bruce has served as Editor-in-Chief of NETWORKS. Before that, he was Editor-in-Chief of the INFORMS Journal on Computing.

In 1980, Bruce and several colleagues founded two companies specializing in the design and sales of vehicle routing software. He and his partners successfully grew these companies and sold them in late 1998. The surviving company is RouteSmart Technologies, Inc.

His current research interests include transportation science, vehicle routing, and healthcare operations management.

Kylie K. Goodell
Graduate Assistant, QUEST Honors Program
Kylie Goodell joins the QUEST team as a Graduate Assistant. She is currently pursuing her M.A. in Higher Education here at Maryland. She compiles the bi-annual resume book, serves as an advisor to the staff of the QUESTPress newsletter issued each month and organizes QUEST’s alumni relations initiatives.

Prior to coming to Maryland, she worked as an industrial engineer for Tyco Electronics in Greensboro, NC. While earning her B.S. in Industrial and Systems Engineering with a minor in French from North Carolina State University, Kylie was very active in many philanthropic, scholastic, and social organizations.
QUEST Faculty and Leadership, Continued

Dr. Jeffrey W. Herrmann
Associate Director of QUEST and Associate Professor of Mechanical Engineering
A. James Clark School of Engineering

Projects Advised: TulkoFF Food Products; Integrity Consulting
Jeffrey W. Herrmann is an associate professor at the University of Maryland, where he holds a joint appointment with the Department of Mechanical Engineering and the Institute for Systems Research. Dr. Herrmann earned his B.S. in applied mathematics from Georgia Institute of Technology. As a National Science Foundation Graduate Research Fellow from 1990 to 1993, he received his Ph.D. in industrial and systems engineering from the University of Florida. His dissertation investigated production scheduling problems motivated by semiconductor manufacturing. He held a post-doctoral research position in the Institute for Systems Research from 1993 to 1995.

His current research interests include emergency preparedness planning and response, health care operations, production scheduling, and decision-making systems.

Dr. Michael Hicks
Associate Professor of Computer Science
University of Maryland Institute for Advanced Computer Studies
College of Computer, Mathematical and Physical Sciences
Project Advised: SAIC (Cyber-Human Factors)
Michael W. Hicks is an associate professor in the Computer Science department and UMIACS at the University of Maryland, College Park. His research focuses on using programming languages and analyses to improve the security, reliability, and availability of software. Noteworthy among his research accomplishments is the development of analysis and compilation tools for enabling software to be safely updated while it runs, to fix bugs and security flaws, and to add new features.

He has also explored the design of new programming languages and analysis tools for automatically discovering or remediating software flaws and security vulnerabilities. He is also interested in human-computer interaction, particularly as they relate to the use of software tools, and distributed systems design and evaluation, particularly when adaptivity and security are system goals.

Dr. Hassan Ibrahim
Associate Professor of Computer Science
Tyser Teaching Fellow
Department of Decision, Operations and Information Technologies
Project Advised: Force 3
Dr. Hassan Ibrahim is a Distinguished Tyser Teaching Fellow at the Robert H Smith School of Business. Dr. Ibrahim received D.Sc. and Master degrees in Engineering Management from The George Washington University. He also has Bachelor degree in Electrical Engineering. Dr. Ibrahim areas of specializations are Project Management, Information Systems development, and Operations Management.

Dr. Ibrahim’s research was published by Harvard Business School and the Production and Inventory Control Journal. Ibrahim served on the Editorial Review Board of the Journal of Operations Management. His primary teaching areas are: systems analysis and design, data communications, and operations management. He was nominated for the Outstanding Scholar of the Year Award in the Commonwealth of Virginia in 1996. He has worked for and consulted with a number of industry leaders including the World Bank, McDonnell Douglas, Phillips Electronics, and Siemens Medical Systems.

Melanie N. Lee
Program Manager, QUEST Honors Program
Melanie Lee joined the QUEST community in Spring of 2009. Since coming to QUEST, she remains highly involved with the strategic implementation of extracurricular programming for the students to include the Integrative QUEST Events Initiative. She serves as a student affairs counselor and administrator, events coordinator, and website content manager.

Prior to joining QUEST, Melanie worked as an Assistant Manager in Smith’s Domestic and International EMBA Programs where she organized student trips for our international EMBA students to come to our College Park campus. In this role, she served as a student advisor and faculty liaison, and coordinated EMBA activities with our partners in China, Switzerland, and Tunisia. Prior to that, Melanie was Program Coordinator in the office of Executive Education. Additionally, she brings experience as Special Education Coordinator in the Extended School Year Program for Montgomery County Public Schools. She holds a Bachelor’s Degree in Psychology from the University of Maryland College Park.
J. Gerald Suarez was named Associate Dean of External Strategy for the Smith School in 2008. In this role, Suarez oversees Smith’s Offices of Career Management, Recruiting and Marketing Communications. In 2005, he joined the Smith School as an Executive Education Senior Fellow, Ralph J. Tyser Teaching Fellow for the Decision, Operations and Information Technology Department, and Executive Director of the Quality Enhancement Systems and Teams (QUEST) Honors Fellows program. In 2008 he received the prestigious Allen J. Krowe teaching excellence award.

He has taught at the corporate, executive MBA, full-time MBA, international, and undergraduate levels and has served as academic director for executive on-site programs at Lockheed Martin Corporation and Scientific Applications International Corporation (SAIC). In 2009, Dr. Suarez became a Visiting Fellow for Lockheed Martin Corporation. Prior to joining the Smith School, Suarez served under two administrations in the White House as the Director of Presidential Quality -- the first such post in the institution’s history.
LEARNING AND COLLABORATING

ABOUT QUEST
Quality Enhancement Systems and Teams (QUEST) is a multidisciplinary engineering, technology and management program at the University of Maryland. Students participate in a challenging course of study that focuses on quality management, process improvement, and system design. Funded in 1993 by a grant from IBM to establish total quality on university campuses, the University of Maryland has continued the program which has produced excellent graduates prepared to face the changing landscape of business, engineering, and technology.

COLLABORATION & TEAM WORK
In each QUEST course, students work in cross-functional teams on action learning projects. The team based and multidisciplinary format of the curriculum provides students with experience in team dynamics, allows collaboration between individuals of diverse skill sets and talents, and inspires an environment for collaborating on ideas and tactical strategies.

COMMUNITY OF LEARNING
QUEST is a community of learning – all members contribute to and benefit from the interactions and lessons learned. The community includes students, faculty and staff, alumni, professional partners and University colleagues. This dynamic combination provides a broad field of shared learning experiences, networks, sponsorship and project opportunities, and a unique program structure.

MULTIDISCIPLINARY FOCUS
QUEST students represent majors within three colleges of the University:
- A. James Clark School of Engineering
- College of Computer, Mathematical and Natural Sciences
- Robert H. Smith School of Business
QUEST students share and develop their organizational and technology acumen while increasing their understanding of how these industries are interdependent in the professional field.

ACTION LEARNING
QUEST courses go beyond the walls of the university by inviting in corporate guest speakers and allowing students to apply course lessons to real-world challenges. Students learn to apply principles of quality management, process improvement and system design to meet the needs of customers and users. As seniors, student teams work on problems defined by corporate, government, and non-profit organizations, learn about the consulting process, and provide recommendations.

JOIN THE LEARNING COMMUNITY
QUEST partners are individuals and organizations who engage in and contribute to learning programs, projects and initiatives. Partners interact with the students, staff and faculty in a variety of forums resulting in value-added exchanges of knowledge and ideas. Partners are engaged in:
- Receiving consulting services
- Sponsoring Integrating QUEST (IQ) events, initiatives and visits to their organizations
- Sponsoring the QUEST Senior Conference

QUEST partners gain exposure for recruiting students to internship, co-op and full-time positions and benefit from a heightened presence at the university level.

To join us, please share your business card with a staff member or contact us at:

QUEST Honors Program
3335 Van Munching Hall
University of Maryland
College Park, MD 20742
(301) 405-9553
questmail@umd.edu
FORMER QUEST PROJECTS OF THE YEAR

2006: THE QUEST – GE HEALTHCARE PROJECT

PROJECT: GE HEALTHCARE

Farrell Bowen (Zimmerman)
Matthew Horney
Ryan Morton
Gautam Sawhney

2007: THE QUEST – ANACOSTIA WATERSHED SOCIETY PROJECT

PROJECT: PRESERVING THE ANACOSTIA WATERSHED

Greg Brown
Christopher Barrow
Jessica Slick
Ashley Ng

2008 (TIE): THE QUEST – UKRAINIAN YOUTH PROJECT

PROJECT: SHUTTERS4SCHOLARS

Ianina Jmourko
Alexandra Petrenko
Shaun Robinson
Allison Sedrish
Ellen Shvets
Vlad Tchompalov

2008 (TIE): THE QUEST – WINCHESTER HOMES PROJECT

PROJECT: SUSTAINABLE SOLUTIONS FOR CONSTRUCTION WASTE MANAGEMENT

Brad Eisenberg
Tracey Epstein
Sean Kirk
Mary Larson

2009: THE QUEST - LOCKHEED MARTIN (OCEAN WAVE) PROJECT

Project: Deployment of Ocean Wave Power-Generating Buoy Farms

Suehyun Cho
Munaf Kachwala
Abhishek Kumar
Abby Widom
Gary Wu
QUEST Sponsors
The QUEST Honors Program at the University of Maryland thanks all of its sponsors. Sponsorship of many different kinds makes our action learning curriculum possible. Thanks to the support of the companies listed below, we are able to deliver outstanding learning opportunities to our talented students.

Project Sponsors
The companies below have made a significant contribution our QUEST Seniors as they complete their capstone learning project. In addition to a financial contribution, these sponsors have given an enormous amount of time and thought leadership to a team of students.

- ATK*
- Bowles Fluidics
- Force 3
- Integrity Consulting
- Lockheed Martin*
- NIKA Architects + Engineers
- Tulkoff Food Products
- SAIC*
- University of Baltimore

* Two Projects

Conference Sponsors
The companies below have made a significant contribution to our QUEST Senior Conference. Thanks to their financial support, our QUEST Seniors have been given the opportunity to professionally present their projects and our QUEST community has been given the chance to celebrate their accomplishments.

- ATK
- PwC

Other Support
The companies below have contributed to the learning of our QUEST Seniors in a variety of ways including our co-curricular activities.

- Accenture
- Booz Allen Hamilton
- Capital One
- Deloitte
- IBM
- Johnson & Johnson
- KPMG
- NASA
- T. Rowe Price
- Unilever
- Smith Undergraduate Student Association (SUSA)

Thank You!
**Special Thanks & Acknowledgements**

QUEST would like to thank and acknowledge all of the individuals, committees and organizations who have contributed to helping honor and celebrate student achievement at this event.

**QUEST Students**

**QUEST Alumni**

**Family, Friends and University Colleagues**

**Consulting Project Advisors**

Dr. Senthil Arul  
David Ashley*  
Dr. Charles Carr  
Nicole Coomber  
Dr. Tom Corsi  
Dr. Bruce Golden  
Dr. Jeffrey Herrmann*  
Dr. Michael Hicks  
Dr. Hassan Ibrahim  
Dr. Gerald Suarez  
*2 projects

**QUEST Curriculum Review Committee**

Dr. Joseph Bailey  
Nicole Coomber  
Kylie Goodell  
Dr. Jeffrey Herman (Chairman)  
Stephanie Martin  
Stephanie Nguyen  
Dr. James Purtilo

**Student Volunteer Committee**

Lauren Bailey  
Haley Brown  
Daniel Choquette  
Alison Cowley  
Chetali Gupta  
Jessica O'Keefe  
Anna Mayr  
Varisha Parikh  
Shirley Qin  
Aparna Roa  
Addrenia Smith  
Luxi Wang

**QUEST Partner Colleges**

College of Computer, Mathematical and Natural Sciences  
A. James Clark School of Engineering  
Robert H. Smith School of Business

**Catering**

Matters of Taste

**Photography**

Lisa Helfert