

Abstracts for Awarded Grants FY2014 By Department

School of Arts and Communications:

Department of Art and Art History:

HUTTON, Deborah: Art Amongst War: Visual Culture in Afghanistan, 1979-2014 – NJ Council for the Humanities – 8/1/2013-11/1/2014 – F1484 – Awarded \$10,702:

Through the funding of this grant, TCNJ will present a series of five public programs and an interdisciplinary exhibition that will examine the effects of 35 years of war in Afghanistan on the culture of the country. This project is being developed by an Advisory Committee of Humanities Scholars and will include historical documentary films and moderated discussions with a Kabul-based NGO, a war veteran, and a leader of a social development organization in Afghanistan.

School of Business:

SBDC:

ALLEN, Lorraine: SBDC Federal Portion CY 2014 – SBDC (Subaward from Rutgers) – 1/1/2014-12/31/2014 – F1441 – Awarded \$165,000:

The Small Business Development Center (SBDC) at The College of New Jersey provides assistance to small businesses in all industries to maneuver around the obstacles to success. The SBDC offers group, as well as confidential one-on-one se counseling at no charge, in addition to a variety of workshops, seminars, and a small business certificate program.

ALLEN, Lorraine: Hurricane Sandy Phase II – US Small Business Administration (Subaward from Rutgers) – 9/1/2013-8/31/2015 – F1454 – Awarded \$70,400:

This grant will support the creation of centers to provide clients with free, confidential counseling, free and affordable workshops, and marketing research to support business expansion. In addition to these services, the centers will also provide online resources, information, courses, and communication.

ALLEN, Lorraine: SBDC State Portion CY 2014 – SBDC (Subaward from Rutgers) – 7/1/2013-6/30/2014 –S1441 – Awarded \$16,500:

The Small Business Development Center (SBDC) at The College of New Jersey provides assistance to small businesses in all industries to maneuver around the obstacles to success. The SBDC offers group, as well as confidential one-on-one se counseling at no charge, in addition to a variety of workshops, seminars, and a small business certificate program.

Community Centers:

CATIES:

DELL, Amy: Expanding AT Services to People with Disabilities in New Jersey: Expansion of AT Services to People with Autism – Disability Rights New Jersey – 4/1/2014-9/30/2014 – F1344 – Awarded \$8,333:

The purpose of the expansion of this grant is to educate school personnel and parents on how to select and use iPad technology to provide students who have disabilities with access to appropriate apps for augmentative communication, reading, writing, visual supports, and learning. This grant intends to expand the Center for Assistive Technology and Inclusive Education Studies (CATIES) inventory of assistive technology apps and accessories for the iPad that will enable students who have disabilities to use the iPads. CATIES also intends to hold iPad Demonstration Days to provide demonstrations of apps and accessories that may meet students' educational needs to interested school personnel and parents. Finally, this grant will provide support for CATIES to conduct outreach to school districts and parents so that they will be aware of CATIES expertise in using iPads to support the education of students with disabilities and available trainings.

Bonner Center:

DONOHUE, Patrick: CNCS-AmeriCorps VISTA (yr3) – CNCS – 7/1/2013-6/28/2014 – F1152 – Awarded \$40,000:

The work of the New Jersey Bonner VISTA Fellows Program will address persistent statewide poverty issues with a particular emphasis on Essex, Middlesex, and Mercer counties. Municipalities within these counties such as Newark, New Brunswick and Trenton are plagued by extreme levels of poverty. The need for anti-poverty programs in these targeted geographic areas is well documented. The New Jersey Bonner VISTA Fellows Program will focus on various anti-poverty services and in particular, those services related to the Corporation's focus areas of Economic Opportunity, Education, and Healthy Futures.

DONOHUE, Patrick: Bonner Community Scholars @ TCHS – Trenton Board of Education – 9/1/2013-8/31/2014 – N1499– Awarded \$24,350:

Through this grant, the Bonner Center at The College of New Jersey will provide the following services to Trenton Central High School (TCHS): A TCNJ Bonner Community Scholar Team, which will provide tutoring, mentoring, and beautification and enrichment projects; Service Learning Classes at TCHS, which will assist teachers in incorporating community service and service learning into classrooms; assistance with recruitment and running of a Book Club; a Young Men Leadership Academy, which will provide discussion groups, workshops, community service, and tutoring to young men; a Social Media Consultant to assist with TCHS media sites; Youth Development Enrichment Days to connect enrichment trips to learning objectives; and provide TCNJ campus tours to the TCHS students.

DONOHUE, Patrick: Trenton Violence Reduction Strategy (TVRS) – Department of Law and Public Safety – 9/25/2013-6/30/2016 – S1455- Awarded \$957,334:

The City of Trenton experiences a significant amount of street crime, as a number of neighborhoods have become "open air" drug markets. In addition to illegal drug sales, violent crime, prostitution, illegal firearms, robbery, aggravated assault, and theft have become constant reminders of urban decay to the law-abiding residents and those who work in the city. Through grant money, the Trenton Violence Reduction Strategy will include three components aimed at solving these problems. The components are as follows: a social service and public health component to provide life skills and job training

providers designed to reduce violence; a law enforcement component that targets lower level gang members with a balanced message between arrest and social services; and a research component that included evaluations of gang members and sets and agencies that provide services to the community, as well a back end outcome evaluation of the clients served through this program.

DONOHUE, Patrick: AmeriCorps NJ CNCS Formula – Department of State – 9/1/13-12/31/14 – S1450 – Awarded \$231,217:

This grant will address the persistent statewide poverty issues in pre-determined New Jersey counties. Some municipalities in these counties are plagued by extreme levels of poverty, and the need for anti-poverty programs in these areas are well-documented. Through the funding of this grant, the program will focus on various anti-poverty services and in particular, those services related to economic opportunity, education, and healthy futures.

DONOHUE, Patrick: Wells Fargo/Bonner Ed Team Y3 – Wells Fargo – 8/22/2013-8/31/2014 – P1455 – Awarded \$25,000:

The funding of this grant will allow the Bonner Community Scholars to continue the following five programs at both Trenton Central High School and Hedgepeth-Williams School: A Read Aloud and Respond, as fifteen minutes of reading and responding to the story is proven to make a difference; Targeted Tutoring, which creates one-on-one lessons to build upon specific skills with struggling students; a 6th Grade Writing Project, which allows students to come to TCNJ to complete a year-long writing project, resulting in their own book; HSPA Tutoring to improve graduation rates; and College Access and Enrichment, where Bonners will work specifically with the TCHS boys basketball team to tutor and mentor them, helping them gain further academic and social skills.

DONOHUE, Patrick: Fee for Service MOU with Department of Corrections (GED) – NJ Department of Corrections – 6/1/2014-12/31/2014 – F1453 – Awarded \$30,000:

With the funding of this grant, The College of New Jersey plans to provide approximately thirty volunteers who will offer at least twenty hours of assistance to forty Department of Corrections (DOC) GED students. These volunteers will receive training from college, Bonner, and DOC staff. The ultimate goal is to document the progress of the DOC students and increase the number of DOC students.

DONOHUE, Patrick: FY2014 Innovation Funds – Bonner Foundation – 3/2007-8/31/2015 – N7055 – Awarded \$29,750:

Through this grant, The Bonner Center at The College of New Jersey will have the ability to address the one issue, from which most of the other problems have stemmed, that the City of Trenton, NJ is facing: the lack of economic opportunities or jobs. This grant offers an opportunity for Bonners, other students, and their partners (faculty and community) to directly and indirectly address this lack of opportunity in a place-based initiative; one that focuses on downtown Trenton. Specifically, they will help establish and maintain a city hub for community engaged learning and innovation; one that will draw visitors downtown and channel their creativity to help rejuvenate the heart of the city.

FOELL, Christen: National Bonner AmeriCorps Program- Year 1 – Corporation for National and Community Service – 10/6/2013-10/5/2016 – F1431 – Awarded \$227,825:

Given the breadth of community needs within the targeted geographic areas, Bonner AmeriCorps members will serve with a wide range of organizations addressing the needs related to education, poverty, economic opportunity, environmental issues, services for persons living with disabilities, and other human needs. However, Bonner AmeriCorps members will be primarily involved in service related to the educational, economic, and health related needs of disadvantaged persons.

FOELL, Christen: FY14 NJ AmeriCorps Bonner Match – Bonner Foundation – 9/1/2013-8/31/2014 – N1450 – Awarded \$45,250:

This grant is part of an effort to mobilize students, professors, and other volunteers to address the unmet needs of local communities. In particular, this grant will be used to fund Program Operating Costs as defined by the New Jersey AmeriCorps Bonner Leader Program project budget and any other budget amendments sent to the Bonner Foundation.

NJSSI:

DREWES, Donna: Dodge: SJ Municipal Certification Program Support – Dodge Foundation – 10/1/2013-9/30/2014 – N1427 – Awarded \$300,000:

The funding from this grant is intended to support the work of TCNJ's Sustainability Institute related to Sustainable Jersey's municipal government certification program. This includes: identifying key sustainability issues that can be addressed at the local level, documenting solutions and best practices related to those issues, and maintaining a robust program of financial, technical, and peer support, and policy coordination to help move communities toward sustainability.

DREWES, Donna: Walmart Small Grants Administration – Walmart Foundation – 10/1/2013-12/31/2014 – N1488 – Awarded \$14,275:

The NJSSI will use this grant money to continue to promote sustainability within municipalities.

DREWES, DONNA: Sustainable Jersey for Schools – Subaward for New Jersey School Boards Association – 7/1/2013-6/30/2016 – N1484 – Awarded \$225,000:

This grant will support the development and creation of a new Sustainable Jersey for School Districts certification program, which will be modeled after the Sustainable Jersey municipal government certification program. This program is committed to advancing sustainable development practices in schools throughout New Jersey.

DREWES, Donna: SJ PSEG Program Support – Sustainable NJ/ PSEG Foundation – 7/1/2013-6/30/2014 – N1486 – Awarded \$75,000:

This grant is provided to support the implementation of the Sustainable Jersey program through the Sustainability Institute at The College of New Jersey. The funding is intended to support the work of The College of New Jersey's Sustainability Institute related to Sustainable Jersey's municipal government certification program. This unrestricted funding may be used for staff and direct costs associated with the administration of the Small Grants program area, as well as general program administration.

DREWES, Donna: SJ Recovery Network – Dodge Foundation – 7/1/2013-12/31/2014 – N1482 – Awarded \$560,000:

This grant allows the Sustainable Jersey Climate Adaption Task Force to continue its work, such as developing actions that will assist New Jersey municipalities in becoming more resilient to the impacts of climate change, addressing concerns including drought, extreme heat, public health threats, and other high-priority concerns, among other things.

DREWES, Donna: SJ Gov 2.0 Communications – SJ/Community Foundation of New Jersey – 7/1/2013-12/31/2014 – N1480 – Awarded \$190,000:

DREWES, Donna: State Public Health Actions to Prevent Chronic Disease – NJ DOH Office of Nutrition and Fitness – 7/1/2013-6/30/2014 –N1581 – Awarded \$34,595:

Through this grant, activities and projects to promote policy and environmental change for obesity prevention at the local level will be implemented. One such project is providing education and training to municipal staff and volunteers on actions that can contribute to increased physical activity. There will also be a small grants program to help communities which have high rates of physical inactivity, obesity, and chronic diseases in the successful completion of the goals of this grant.

SOLOMON, Randall: SJ BPU Compliance Filing FY14 – NJ BPU – 7/1/2013-6/30/2014 – S1330 – Awarded \$580,876:

SOLOMON, Randall: Sustainable Jersey Hub Network and Outreach Support – SJ Gas – 10/1/2013-12/31/2014 – N1478 – Awarded \$ 130,000:

Items to be accomplished this year under this grant include a kickoff event, which will include a regional forum and a resource fair, mobilizing Atlantic County Hub Leadership, a Hub agenda and a Hub launch, a communication platform, a new Jersey League of Municipalities Conference, hub activities, a home energy audit link, new program elements, as well as marketing and outreach strategies.

SOLOMON, Randall: Surdna 2014 Renewal – Surdna Foundation – 12/17/2013-12/16/2016 – N1425 - Awarded \$825,000:

The renewal of this grant will continue to work on the Gold level of certification, and defining sustainability. Specifically, we will finalize the work that was begun and publish a complete set of sustainability “definitions,” each with indicators, targets, and rubrics. In 2014, we will begin tracking the actual data and will hold an annual event where we publicly track our progress as a state and as the Sustainable Jersey movement. New activities for this grant will include two areas. First, we will work with local certification programs around the country to share best practices and identify opportunities for collaboration. The second major area of emphasis will be working with our process and task forces to address emerging next-generation infrastructure issues such as green infrastructure, micro-grids, resilient and renewable backup generation, and alternative vehicle fuel infrastructure, among others.

SOLOMON, Randall: Community Resilience Initiative – NOAA – 6/1/2014-7/1/2016 – Awarded \$181,370:

School of Education:

Center for Future Educators:

FIEBER, Laurence: 2014 Center for Future Educators – NJEA – 1/1/2014-12/31/2016 – N1420 – Awarded \$645,000:

The renewal of this grant will continue the partnership between the NJEA and TCNJ, to continue the Center for Future Educators at TCNJ for prospective future teachers. This grant will also continue to support the following programs: the New Jersey Future Educators Association (NJFEA), NJFEA State Conference, NJFEA Middle School Conference, NJFEA Student Members and Advisors Leadership Development, NJEA Convention NJFEA Session, Urban Teacher Academy, Tomorrow's Teachers Training, recruitment, media coverage and outreach, and public relations.

Counselor Education:

GIBSON, Cassandra: CRAFT: Community Reinforcement and Family Training - J. Seward Johnson, SR 1963 Charitable Trust 3/3/2014–12/31/2015 – N1421 – Awarded \$10,000:

The grant will be used to bring the originator of CRAFT, Dr. Bob Myers, to TCNJ for a two-day training for TCNJ Clinic staff, faculty, students, current practicing SACs and school counselors in all Mercer County School Districts, and targeted practicing community counselors. They will follow-through with post-training supervision for one faculty member which will enable him to become a certified trainer in CRAFT. This will enable our Counselor Education Department to provide ongoing CRAFT training to the Mercer County community annually in the future.

GIBSON, Cassandra: Contact to Serve as the Mercer County IDRC – Mercer County Government – 5/1/2014–4/30/2016 – Awarded \$220,000:

The TCNJ Clinic will provide IDRC services to eligible recipients in Mercer County, enhancing the safety and welfare of the Mercer County community. The IDRC will include a didactic first offender psycho-education program, evaluation, and case management, as well as treatment referral and monitoring if appropriate. The Clinic uses Motivational Interviewing and a strength-based approach to meet the needs of clients. Available research on preventing recidivism shows that interventions grounded in motivational-interviewing are more effective than traditional intervention methods. Also unlike deficit-based styles, which could blame and shame the client for addiction or DUI arrests, this approach will decrease defense mechanisms and increase the likelihood of client engagement.

Center for Sensory and Complex Disabilities (CSCD):

BLUMBERG/PERTOFF, Richard/Jerry: Enhancing and Extending the Current Career and Community Studies Program at TCNJ – US Department of Education – 10/1/2013-9/30/2014 – F1145 – Awarded \$220,196:

The College of New Jersey, Career and Community Studies (CCS) Program, will use these grant funds to extend and enhance the currently operating Career and Community Studies Program (CCS) at TCNJ. This

will continue to establish the CCS Program as a high quality inclusive comprehensive transition and postsecondary model program for students with intellectual disabilities.

PETROFF, Jerry: New Jersey Consortium on Deaf-Blindness – US Department of Education – 10/1/2013-9/30/2014 – F1449 – Awarded \$268,086:

This grant was awarded for the purpose of serving youth and adults who are deaf-blind and works with them to pursue independent living and employment goals. The goal of this project is to assure the provision of high quality education programs within natural environments/supported inclusive settings and appropriate services for infants, toddlers, children, and youth who are deaf blind. This goal will be accomplished through a menu of discrete initiatives within a responsive statewide approach for families, educators and community service providers under the following objectives: 1) To facilitate the development and ongoing implementation of a Statewide Community of Practice on the Education of Students with Deaf blindness that includes family members; deaf blind adult consumers; early intervention, special and general education personnel; and State and Local Educational Agencies; 2) To develop and implement a well-coordinated and responsive centralized system for professional development (including on-site coaching support) specific to the needs of students who are deaf blind; and 3) To develop a statewide initiative for the early and ongoing identification of infants, students and youth with deaf blindness.

PETROFF, Jerry: Work Skills Prep Program FY2014 Extension – NJ CBVI – 9/25/2013-9/30/2014 – S1461 – Awarded \$420,668:

The goal of this grant is to provide a Two-Week Summer Program for Extended School Year Service and Transition/Vocational Assessment for youth who are blind/visually impaired with complex educational needs. TCNJ will design and implement a two-week summer residential program for high school students (ages sixteen and over), who would benefit from an employment outcome upon graduation with or without supports. There will be two, two-week sessions that will include up to twelve students per session, twenty-four students per summer. This program is designed to yield critical transition-sensitive information as well as provide a context for youth to maintain academic and functional skills over the summer months. It includes dedicated classes, community-based vocational experiences, campus-wide and community recreation activities, and independent living skills assessment and development.

PETROFF, Jerry: Support Service Provider (SSP) FY14 – NJ CBVI – 7/8/2013-6/30/2014 – S1465 – Awarded \$224,436:

The goal of this grant is to promote greater community integration for adults who are deaf-blind and that meet the project criteria through development and implementation of a statewide network of Support Service Providers.

PETROFF, Jerry: NJCDBP FY14 – Commission for the Blind and Visually Impaired – 7/8/2013-6/30/2014 – F1459 – Awarded \$117,142:

This grant was awarded for the purpose of serving youth and adults who are deaf-blind and works with them to pursue independent living and employment goals. More specifically, this grant supports the implementation of the National Deaf-Blind Equipment Distribution Project in New Jersey.

Education Administration and Secondary Education:

SEATON, Gregory: Evaluation Solution for the NJ Partnership for School-Based HIV, STD, and Pregnancy Prevention – NJDOE-DOC – 4/30/2014–7/31/2014–S1495–Awarded: \$18,000.00

The aim of this grant is for The College of New Jersey to provide evaluation services for its project of school-based HIV, STD, and Pregnancy Prevention supported under a five-year agreement with the Center for Disease Control (CDC) and Prevention. In addition to evaluation, this grant will also support the creation of a CDC sexual health intervention database.

School of Engineering:

Civil Engineering:

BETCHEL, Andrew: Fresh Concrete Water: Cement Ratio for NJ ACI – NJ Chapter of American Concrete Institute – 8/1/2013-11/11/2013 – P1420 – Awarded \$8,836:

This grant will support research to show the accuracy and repeatability of the AASHTO T-318 test when the concrete is properly sampled according to AASHTO T-141. This will be accomplished in two phases. The first phase will be the laboratory phase. Small batch mixes (1/8th ft³) will be created where the water content can be strictly controlled. AASHTO T-318 will then be used to evaluate the known water content. A larger batch (1 ft³) will then be created in a drum mixer and its calculated water content using AASHTO T-318 will be compared to its known water content and the water content of the same mix at a smaller scale. In Phase II AASHTO T-318 will be used along with AASHTO T-141 to sample and determine the water content of concrete from a ready mix truck.

BRENNAN, Thomas: Characterizing Highway Corridor Length to Evaluate Travel Time Reliability – University Transportation Research Center – 1/1/2014-2/28/2015 – F1405 – Awarded \$15,000:

This grant supports the development of a technically sound, yet visually intuitive methodology to appropriately group series of Traffic Message Channel (TMC) segments with similar attributes to determine baseline travel times and distances along corridors. Furthermore, an enhanced graphical representation of the travel times will be developed that allows a visual comparison of the hourly, daily, and seasonal travel time patterns along a defined corridor. This project will utilize a 70 mile portion of I-80 in northern New Jersey as a case study, along with probe vehicle speed data from 2011 and 2012. Through this grant, it is hoped to identify and quantify congestion to better allocate resources and prevent car crashes.

Electrical and Computer Engineering:

STEM Center:

ANDERSON, Christopher: NJ EbD- Engineering by Design Year 3 (FY 2014) – Martinson Family Foundation – 9/1/2013-8/31/2014 – N1232 – Awarded \$104,043:

The goal of this grant is to increase the size of the NJ State Consortium to 60 districts, or 50 network schools, represented by 100 teachers. This grant also seeks to work toward the creation of a self-sustaining consortium by the end of the third year, beginning now by investing in trainers that can generate revenue, and by charging for supplemental professional development offerings.

GOEKE, Alison: TSA FY2014 (CTSO-TSA Yr. ¼) – New Jersey Department of Education – 11/1/2013-10/31/2014 – S1428 – Awarded \$ 146,500:

The Technology Student Association (TSA) is the only student organization devoted exclusively to the needs to technology education students. TSA is a catalyst for engaging students in a quality STEM education, while refining the skills they need for high-wage, high-demand careers. Participation in TSA provides an ideal platform for integrating real world, project based learning and activities, with the required science, technology, engineering, and mathematics skills needed to succeed in the 21st Century. Since TCNJ became the lead agency for TSA in 2000, it has become the fastest growing Career and Technical Student Organization (CTSO) in the state. More than 2,000 middle and high school students competed in the 2013 State Conference at TCNJ this spring, the highest in NJ TSA history. TCNJ's central location helps to draw students and educators from all areas of the state for TSA events. The low number of future professionals to fill STEM-related careers is a state and national concern, but TSA is the solution. Each year, TSA engages thousands of NJ students in STEM matter through exciting, hands-on, technology and engineering activities and competitions. By continuing to improve and expand upon the opportunities of TSA providers for NJ youth, the number of students choosing STEM-related college degrees and career paths may increase, helping to mold our state's next generation of technologists, scientists, inventors, designers, mathematicians, and engineers.

School of Humanities and Social Sciences:

History:

CHAZELLE, Celia: Pathways Project NJ STEP (Modification 3) – Gates Foundation>Rutgers – 1/2/2013-12/31/2014 – N1346 – Awarded \$28,000:

The College of New Jersey was awarded this grant to work in conjunction with the NJ-Step staff at Rutgers University School of Criminal Justice to offer college courses in NJ State correctional facilities as a member of the STEP Consortium. TCNJ will specifically recruit faculty to teach courses offered by the college, both college level degree tracked courses and combined courses with TCNJ civilian students.

Psychology:

CHUNG, He Len: Media Literacy and Youth Development – Society of Community Research and Action – 9/1/2013-8/31/2014 – N1415 – Awarded \$1,199:

This grant, which is the collaboration between The College of New Jersey (TCNJ) and *Beyond Expectations, Inc. (BE)*, is a media literacy project that aims to provide life skills and relationship development to youth from and near Trenton, NJ, including some who have been involved with the foster care system. The project is youth-driven and involves a 6-session production workshop in camera operation, audio production, segment development, and events management. Approximately 15 youth

have already signed up to complete the workshop and help organize a community screening (November 16, 2013) to showcase media projects that raise awareness of issues facing vulnerable youth. Most of the participants were recruited from the YMCA of Trenton.

School of Nursing, Health and Exercise Science:

Health and Exercise Science

RATAMESS, Nicholas: Effects of Advantra Z Supplementation on Acute Resistance Exercise Performance– Nutratche– 5/15/2014–1/31/2015– Awarded \$51,165:

This grant supports research into the Advantra Z supplement, specifically on acute resistance exercise performance. The Advantra Z supplement possesses the potential to preserve skeletal muscle mass, while still supporting weight loss. Thus, through a series of comprehensive tests, this grant seeks to determine the potential benefits of Advantra Z.

School of Science:

Biology:

DICKINSON, Gary: Assessing the Effect of Environment on Barnacle Settlement, Adhesion, and Biomineralization – ONR – 4/15/2014–4/14/2017–F1432– Awarded \$284,613:

Barnacles are dominant members of marine biofouling communities throughout the world's oceans. They adhere to nearly any surface in the marine environment, including ship hulls and maritime facilities, resulting in a tremendous cost and performance burden for the Naval Fleet. Although we are beginning to understand the biochemical mechanisms involved in barnacle adhesion, relatively little is known about how the environment affects barnacle adhesion and subsequent mineralization. The goal of the proposed work is to assess the impact of variations in salinity, pH and temperature on adhesion and biomineralization in the barnacle *Amphibalanus amphitrite*. The proposed work will provide the Navy information on how barnacle fouling pressure might vary under different environmental regimes and sheds light on the fundamental mechanisms of adhesion and biomineralization in barnacles. Moreover, this work provides information on the most favorable environmental conditions for reducing the fouling load, which could be incorporated into mitigation strategies around a ship's hull.

ELLIOT, Kathryn: ASM Student Fellowship – American Society for Microbiology – Summer 2014 – Awarded \$6,500:

The funding from this award went to an undergraduate student participating in the American Society for Microbiology's Undergraduate Research Fellowship Program during the summer of 2014.

Chemistry:

CHAN, Benny: PERSIST (Program to Enhance Retention of Students in Science Trajectories), Phase 2 – National Science Foundation – 9/1/2013-8/31/2018 – F1497 – Awarded \$154,031:

This grant supports the improved PERSIST program, now including an application and interview process, peer and faculty mentoring, tutoring, mini bridge program, and career development programming. Through this grant, we PERSIST 2.0 will support our current and future cohorts of students. Through our assessment process, we will expand the scope of the already successful program to study and to enhance the “Halo Effects” we have observed. The Halo Effects have the potential to dramatically change the basic support structure for all students at the College, not just the students receiving the PERSIST scholarship. Specific goals for PERSIST 2.0 include documenting and disseminating effective peer and faculty mentor strategies for students, increasing student-faculty interactions among all students, increasing partnership with the Educational Opportunity Fund program, maximizing effective math/science tutoring for all students, and disseminating our overall results and program to the community at large.

O’CONNOR, Abby: Synthesis of Cationic Nickel (II) Complexes Containing Hemilabile – 9/1/2013-8/31/2015 – P1340 – Awarded \$50,000:

The funding of this grant allows the PI to work closely with undergraduate chemistry students, while focusing on the use of first-row transitional metals to catalyze reactions typically performed by platinum metal groups.

Computer Science:

KIM, Edward: wHealth: A Window into Your Future Health (phase 2) – Robert Wood Johnson – 9/2/2013-9/30/2015 –N6009 - Awarded \$100,000:

wHealth is an interactive storytelling application designed for the Health 2.0 Developer Challenge sponsored by the Robert Wood Johnson Foundation: Games to Generate Data Challenge. For this project, two big questions were addressed: how do we improve the health of our users and what useful health data do we collect? Through interactive storytelling, this game engages users, while still transferring knowledge and minimizing future discounting.

KNOX, Deborah: NIST-SURF Program – NIST – 5/27/2014-8/8/2014 – F1496 – Awarded \$8,503:

The funding from this award went to an undergraduate student participating in the National Institute of Standards and Technology’ Summer Undergraduate Research Fellowship Program during the summer of 2014.

PAPAMICHAIL, Dimitris: Algorithms for Synthetic Gene Library Design – National Science Foundation – 1/28/2014-9/30/2015– F1495 – Awarded \$199,999:

The emerging field of synthetic biology is a discipline of the biological sciences that has a potential global impact on a variety of fields, including the re-designing of micro-organisms to solve pressing biomedical issues. The important advance in the biotechnology industry that has truly enabled synthetic biology and opened the door to thoughtful biological system design is the scientific community’s ability to synthesize, without a natural template, genetic material in the form of DNA. This ability to synthesize DNA now allows researchers to manipulate gene structure and function in ways that were previously impossible. The research outlined in this grant is looking to exploit genetic code’s redundancy, to manipulate bacterial gene expression. Through this grant, a Co-PI at SUNY-Farmingdale State College will provide *in vivo* experimentation, validity, and real life data to support the gene design algorithms

designed *in silico* by Dr. Papamichail, at TCNJ. The gene design algorithms constructed will yield (digitally) a library of genes that will be tested in the model organism *E. coil*.

Mathematics and Statistics:

OCHS, Michael: Modeling Transcription Reprogramming by Markov Chain Monte Carlo Sampling – National Institute of Health – 9/1/2013-8/31/2014 – F1462 – Awarded \$271,584:

The major goal of this project is to integrate previous studies and data resources into a prior model on the effect of signaling on transcriptional reprogramming. The three aims are as follows: 1. Develop a model of signaling coupled to transcriptional reprogramming, 2. Develop a model of the effect of methylation on inference of transcriptional reprogramming, and 3. Develop a methodology to identify biomarkers for transcriptional reprogramming based on the MCMC models.

Physics:

McGEE, David: Optical and Electro-optic Modulation of Biometrically-Functionalized Nanotubes – Sub From UM-Madison / USDOE – 12/1/2014-11/30/2016 – F1471 – Awarded \$90,000:

Through this Subaward, the PI will complete the following tasks for the UM-Madison grant: Photoinduce birefringence and AFM characterization, chromophore surface coverage and orientation, and chromophore-nanotube coupling.

WIITA, Paul: Collaborative Research – NSF – 8/15/2013-7/31/2016 – F1436 – Awarded \$48,128:

WIITA, Paul: Earthscope: Deep Earth Process – NSF – 8/12/2013-8/11/2014 – F1473 – Awarded \$154,723:

Student Life:

ADEP:

HADGE, Joe: 2014 NJ Peer Institute – NJ Highway Traffic Safety – 10/1/2013-9/30/2014 – F1450 – Awarded \$66,966:

With the continuation of this grant, state-wide events, such as the Peer Institute, will be held as a way to share ideas, methods, strategies, etc. to create substance-free events on college campuses. Presenters who will attend these events, as well as attend TCNJ's Welcome Week for incoming freshmen, will discuss the concept of making healthy choices. Past events under this grant have always been met with great success.