Abstracts For Awarded Grants FY11


The Small Business Development Center 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 counseling at no charge, in addition to a variety of workshops, seminars, and a small business certificate program.


The Small Business Development Center 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 counseling at no charge, in addition to a variety of workshops, seminars, and a small business certificate program.

ALLEN, Lorraine: Trenton SBDC - Jobs Act – Rutgers - 1/1/2011 - 12/31/2012 – Awarded $ 60,000:

The Small Business Development Center at the College of New Jersey will provide clients with free confidential counseling, free and affordable workshops, and marketing research to support business expansion. In addition to these services, the center will also provide online resources, information, courses, and communication.


The objectives of the proposed work build on recently published results by the PIs and aim to understand landing behavior at various levels. The first objective is to quantify whole body kinetics during landing to determine how control of posture at impact stabilizes the toad’s body by minimizing torques about the center of mass. The second objective is to use electromyography to determine if modulation of forelimb muscle motor patterns results in stereotyped joint kinematics despite changes in hop distance and landing forces. The third objective is to use in vivo and in vitro measurements of select forelimb muscle lengths to determine whether motor control strategies protect muscles during energy absorbing eccentric contractions. The fourth objective is to use sensory perturbations to determine how visual and non-visual feedback shape the motor control strategies of landing during the aerial and impact phases.
**BEETLE, William: Mobility & Community Form Modification #9: Linking Transportation & Land Use – NJ DOT - 11/15/07-9/30/11 – Awarded $1,923,802:**

The New Jersey Department of Transportation (NJDOT) desires to assist New Jersey municipalities to envision and achieve more well-rounded transportation systems that closely link to and serve vibrant and sustainable communities. Transportation facilities when more carefully linked with land development enhance regional mobility through trip avoidance, trip chaining, multi-modal transportation use, and the development of more robust transportation networks. An effective way to achieve this goal is by linking transportation and land use through municipal master plans, which are then implemented through municipal land development and land use ordinances.

NJDOT has developed a concept called "Mobility and Community Form" (MCF) that uses a visioning (charrette) process to link transportation and land use; and then translate that visioning into master plan goals and eventually into form-based code and infrastructure design standards to affect the community development process.

NJDOT desires to contract with the Municipal Land Use Center @ The College of New Jersey (MLUCBTCNJ) to assist and support municipalities in their implementation of MCF strategies. Under the direction of NJDOT, MLUC @ TCNJ will provide administrative direction and perform the technical work as described in the Scope of Work below. Under the direction provided by NJDOT, MLUC@TCNJ, working with other consultants and not-for-profit organizations, herein referred to as the "project team," will select up to 10 municipalities to implement MCF strategies through visioning, master plan changes and modifications of municipal ordinances and codes.


The program evaluation would be a qualitative and quantitative review of the educational procedures and practices of Emily Fisher Charter School to assist the school in meeting the Annual Yearly Progress indicators required by the State Department of Education.

Objectives:

1. To identify programmatic and curricular needs of the existing program.
2. To identify programmatic and curricular resources to address these needs.
3. To assist the school in setting immediate implementation plans to meet their needs.
4. To assist the school in developing training programs for staff in implementing their plan to improve instruction toward meeting the AYP goals.
BENOIT, Margaret: Klyuchevskoy Volcanic Group Investigation – NSF - Geophysics - 1/1/10-1/1/12 – Awarded $21,052 (F1135):

Located at the junction of Kamchatka and the Aleutian Arc, the Klyuchevskoy Volcanic Group is among the most active volcanic features on Earth. Composed of a number of active edifices, the Klyuchevskoy Group (KG) is arguably the most productive single island arc volcano. While lavas of the Klyuchevskoy Group are typical for subduction zone water-induced flux melting, its position within the Kamchatka subduction zone is quite unusual. The depth to the subducting Pacific plate is ~170 km, much larger than the typical range where fluids are released from the slab. This inconsistency points to unusual geodynamic conditions responsible for the recent (~50Ka) formation of the KG and the present remarkable productivity. Notably, previous geophysical studies identified considerable heterogeneity of seismic properties within the mantle wedge beneath it.

This projects aims to put new seismological and geochemical constraints on the upper mantle structure beneath the Klyuchevskoy Group. It is motivated by our previous research effort which identified a planar dipping seismic feature in the mantle wedge which is ~110 km deep and appears to be sharply bounded. It is likely that there is a relationship between this feature and the unusual aspects of the volcanic activity of the Klyuchevskoy Group.


The College of New Jersey, Career and Community Studies Program, under the competition CFDA 84.407A, is seeking to extend and enhance the currently operating Career and Community Studies Program (CCS) at TCNJ so to result in establishing it as a high quality inclusive comprehensive transition and postsecondary model program for students with intellectual disabilities.


It is evident in the growing body of literature and from the experience of operating a program that students with intellectual disabilities can benefit from a high quality, inclusive, and comprehensive transition and post-secondary program in higher education. This project seeks to enhance and expand the current four-year college program at The College of New Jersey. Since graduating our first senior class, it is evident that this program can benefit significantly from resources that will expand and enhance a replicable model for a four-year program.

BRESNAHAN, Carol: CACG Dual Enrollment Year 2 - U.S. Dept. of Education via CHE - 7/1/2010 - 6/30/2011 – Awarded $ 25,000 (F1075):
This proposal aims to encourage and expand access to and affordability of higher education for academically high-achieving high school students. This planning and expansion project will be aimed at students from low-income families, who are potential first-generation college students, who are from groups under-represented in mathematics and science, and who also need college-level training in writing. These students will come from high schools in two school districts local to The College of New Jersey (TCNJ): Trenton Central High School (TCHS, includes Medical Arts and West Trenton satellite campuses) and Ewing High School (EHS).

**CHAZELLE, Celia: Associates Degree Programs at Wagner Youth Correctional Center – Sunshine Foundation – 1/1/2011 - Awarded $67,675 (N1140):**

The College of New Jersey (TCNJ) aims to be “a national exemplar in the education of those who seek to sustain and advance the communities in which they live.” Through its innovative curricular, co-curricular, and extra-curricular programs, it promotes intellectual and scholarly growth in its undergraduates and instills a sense of civic responsibility. TCNJ students learn to relate the knowledge and intellectual habits acquired through their education to their roles as responsible, engaged citizens of a democratic society. These goals and expectations are manifested in the College in Prison Program linking TCNJ with Albert C. Wagner Youth Correctional Facility (ACW). Led by a team of faculty and staff from TCNJ School of Culture and Society and the Bonner Center for Civic and Community Engagement, the program provides a rich array of research, teaching, and community outreach resources to enhance academic opportunities for ACW inmates.

**CHAZELLE, Celia: College in Prison – NJDOC sub from US Department of Justice – 1/4/2011 - Awarded $78,564 (F1142):**

The Second Chance Act of 2007 provides a comprehensive response to the increasing number of people who are released from prison, jail, and juvenile residential facilities and returning to communities. There are currently over 2.3 million individuals serving time in our federal and state prisons, and millions of people cycling through local jails every year. There are approximately 94,000 youth in residential confinement within the juvenile justice system on any given day. Ninety-five percent of all offenders incarcerated today will eventually be released and will return to communities. The Second Chance Act will help to ensure the transition individuals make from prison, jail, or juvenile residential facilities, to the community is safe and successful.


This MCC&HC grant will help support The College Art Gallery at The College of New Jersey’s public programs including exhibition and arts lectures. The College Art Gallery presents six exhibitions and several lectures annually. All gallery events are free and open to the public. Funding defrays costs related to printing, professional fees and exhibition costs.
CURTIS, Cynthia: Sonya Kovalesky Day – Association for Women in Mathematics – 9/1/10 – 4/1/11 - Awarded $2,000 (F1160):

The College of New Jersey is a highly competitive public undergraduate institution outside Trenton, NJ. We value our strong ties with the public K-12 system in New Jersey, especially in Trenton and Ewing, as an important part of our public mission. We will focus our recruiting for the program in these schools, while also bringing in suburban students from other area schools. The ethnic breakdown for the Trenton school system is 62% African-American, 34% Hispanic, 3% White, and 1% Asian. Suburban school systems in New Jersey generally have significantly fewer African-American students and more white and Asian students, with ratios correlating to economic strata. The ethnic background of our attendees will reflect the ethnic backgrounds of the schools from which they come.


To increase opportunities for New Jersey’s college students with disabilities to meet the academic needs of college through access to technology tools and texts in alternate formats to increase their independence, participation, and productivity. This goal includes the three objectives listed below. To increase the availability and use of assistive technology by students with disabilities on New Jersey’s college campuses through the expansion of an Assistive Technology Loan Program and the provision of targeted and timely technical assistance. 2. To increase access to books and other instructional materials by students with disabilities through the operation of the Alternate Format Center. This service converts printed text into electronic formats so that college students who have print disabilities (i.e., are blind/visually impaired, have physical disabilities that interfere with reading, or have learning disabilities that prevent them from gaining meaning from text) will be able to access their reading assignments in a timely manner using technology tools provided by the Assistive Technology Loan Program. 3. To promote and share up-to-date information on new technology tools and best practices in the implementation of assistive technology to New Jersey’s institutions of higher education; K-12 personnel, students and parents; and adults who have disabilities.


PIs will oversee the undergraduate programmers in the design, development, and testing of additional COMTOR features. In addition, the Co-PIs will monitor and facilitate the development of the COMTOR community, organize and execute the various proposed workshops at relevant conferences, as well as disseminate the results of the project.
DONOHUE, Pat: Capacity Building & Servathon Initiative – Bonner Center Community Partner – 7/1/10-6/30/11 - Awarded $30,000:

DONOHUE, Pat: Education Works AmeriCorps – Education Works/Corporation for National and Community Service – 11/1/10-10/31/11 - Awarded $15,091:

Education Works is a not-for-profit organization that provides comprehensive support for economically disadvantaged communities in Philadelphia, Chester, PA; and Camden and Trenton, NJ. Their goal is to provide educational programs and services that enrich the lives of children, youth and families confronting high rates of poverty and other barriers to educational achievement. By tackling core issues like literacy, graduation rates, safety and social awareness Education Works is equipping individuals with the tools they need to stay safe, finish school, make better choices and become more productive members of their communities.

DONOHUE, Pat: Central Jersey Bonner VISTA Project – Corporation for National and Community Service – 4/24/2011-5/5/2012 - Awarded $36,000:

The New Jersey Bonner VISTA Fellows Initiative will further develop an already successful network of campus and community partnerships in Central New Jersey, enabling it to mobilize a more complete range of resources to combat a core set of social ills: unemployment, hunger (Including child nutrition), and literacy. This three-year initiative will target central New Jersey, with 10-12 Bonner VISTA Fellows serving in Trenton and New Brunswick to forge stronger ties between an engaged college or university and some of the most prominent anti-poverty non-profit organizations in the state. The goal of these local collaborative projects is to increase the capacity of the partner organizations to move more individuals out of poverty and towards self-sufficiency.

Missing Donohue

DREWES, Donna: Sustainable Jersey – GR Dodge Foundation – 1/1/2011 – 12/30/2011 – Awarded $100,000:

The Sustainable Jersey program has effectively developed and implemented a sustainability certification for municipalities. Specific projects have included planting community gardens, addressing “green” building issues, and organizing local recycling programs. The Municipal Land Use Center (MLUC) collaborates with other organizations to assist various municipalities with planning for and obtaining Sustainable Jersey certification.

DREWES, Donna: University of Maryland SJ Technical Services – USEPA – 4/1/10-12/31/10 – Awarded $6,000
Sustainable Jersey™ is a statewide initiative of municipal governments and leading organizations working to support and create a sustainable future. Sustainable Jersey identifies specific actions municipalities can implement to achieve a prestigious certification that confers status as well as financial incentives. The program contains a comprehensive suite of tools, resources, trainings, and incentives to help New Jersey municipalities make progress toward the certification, and sustainability in general. In addition to “how-to” information, the certification program contains detailed standards to evaluate, track and monitor the sustainability efforts of New Jersey’s municipalities. A key strength of the program is the ability to link “incentives” from public and private sources, such as bonus points on State grant programs for participating communities. A training component and technical resource center also supports communities in undertaking new initiatives, is also part of this comprehensive program.


DREWES, Donna: NJBPU Sustainable Jersey- NJBPU- 7/1/10- 12/31/11: Awarded $870,000:

We believe that there is no reason that every single municipality in New Jersey cannot initiate and complete a wide range of energy and cost saving activities in a short period of time. The laws and regulations, financial instruments, technical knowledge, and program capacity already exist. Utilizing the assets and reputation of the Sustainable Jersey program, we believe we can expand our partnership with the Board of Public Utilities to build on the existing base of programs to implement a new slate of activities that are efficient and effective, leverage the private sector and volunteers, and will lock in long-term savings for communities, residents, and businesses, throughout New Jersey.

ERICKSON, Jeffrey: Nicotine, Serotonin, and postnatal development of cardiorespiratory control- CJ Foundation for SIDS- 3/1/2011- 3/1/2012- Awarded $15,000

N1237 7/13/11 - 6/30/12?? FY 12

The underlying basis for Sudden Infant Death Syndrome (SIDS) is currently unknown. However, recent analysis of tissue taken from infants dying of SIDS has revealed a strong correlation between SIDS and deficiencies in the brainstem serotonin (5HT) neurotransmitter system. It has been widely suggested that defects in 5HT neuron development could produce underlying abnormalities in cardiorespiratory control that, in combination with exposure to specific environmental risk factors during a restricted postnatal period, might precipitate events leading to sudden infant death. Several risk factors for SIDS are known. One of the most prominent is exposure to cigarette smoke, which contains as a major ingredient the neuroteratogen nicotine. Data from both human and animal studies indicate that prenatal exposure to cigarette smoke or to nicotine has a detrimental effect on cardiorespiratory control after birth, including abnormalities in baseline breathing pattern, the frequency of apneas, ventilatory responses to hypoxia and
hypercapnia, regulation of heart rate, and the ability to autoresuscitate from primary apneas. I have shown previously that the Pet-1 mutants survive to birth but display a depressed and irregular breathing pattern during the first postnatal week that is characterized by a high incidence of spontaneous and prolonged apneas. Interestingly, ~23% of the Pet-1 mutants die during the first postnatal week, and in those that survive, the initial cardiorespiratory deficits resolve spontaneously with increasing postnatal age. Based on these considerations, availability of the Pet-1 mouse provides a unique opportunity to explore the relationships between brainstem 5HT deficiency, prenatal nicotine exposure, and alterations in cardiorespiratory control that may ultimately reveal underlying mechanisms by which smoking increases the risk for SIDS.

FIEBER, Larry: Center for Future Educators at TCNJ – NJ EA - 1/1/11-12/31/13 - Awarded $215,000 (N1120):

This is the continuation of a partnership between the NJEA and TCNJ to continue the TCNJ and NJEA Center for Future Educators at TCNJ for prospective future teachers at The College of New Jersey. As the attached proposal demonstrates, this center will continue the vision for statewide leadership in the recruitment of prospective future teachers and will serve additionally as an exemplary national model of future teacher development and recruitment. The central focus of these efforts will be on those prospective teachers who seek roles in the most challenged school districts as well as in those subject areas, such as STEM, where there is a documented, severe shortage of well-prepared qualified teachers.

FOELL, Christen: NJ Americorps Formula Proposal – NJ CNCS - 9/1/10-8/31/11:
Awarded $63,946

FOELL, Christen: NJ AmeriCorps Bonner Leader Program – Continuation Year 2 – Dept. of State – 9/1/10 – 12/31/11 – $315,737

FOELL, Christen: NJ AmeriCorps FY11 match - - 9/1/2010 – 8/31/2011 – Awarded $27,189:

FOELL, Christen: NJ AmeriCorps Econ Op Match - - 9/1/2010 – 8/31/2011 – Awarded $8,715:

GOEKE, Alison: CTE Partnership – NJ DOE – 9/1/10-8/31/11 Awarded $315,000 (F1128):

The project began in September 2009 with the establishment of a STEM Advisory Committee, including the Project Director/State Advisor, as well as a selected Chairperson. This team of college faculty members, representatives from business and industry, secondary and postsecondary teachers, administrators and counselors has worked collaboratively toward developing a vision of statewide, standards-based, quality, secondary and postsecondary STEM education. Chosen for their expert knowledge/experience in a STEM area, committee members met on January 14, April 14 and will gather on June 16 and again in August at TCNJ’s Center for
Excellence in STEM Education. All meetings have a written agenda and accurate meeting minutes are taken.

GOEKE, Alison: Career & Tech Ed Partnership-State – NJ DOE – 9/10-8/31/11
Awarded $140,000 (F1127):

The Collegiate Organization TES (Technology Education Society) will provide support to TSA in preparing the site and in conducting the NJ Competitive Events Spring Conference and Fall leadership Conference.


Our mission is to foster excellence in the teaching and learning of STEM through novel and integrative inquiry and design-based methods. Our mission includes education research, professional development for educators and education administrators, curriculum development, and community outreach.


It is imperative to address dangerous drinking and the respective cultural expectations, habits, and behaviors. In order to do this, we must seek strategies that will impact these challenges. The latest research reveals that alcohol problems on U.S. college campuses should be addressed through a comprehensive approach that features environmentally focused prevention strategies (Toomey et al., 2007). The Higher Education Center has identified five areas of strategic intervention that are effective in changing the campus culture around alcohol and other drugs: (1) Offer substance-free social, extracurricular, and public service options, (2) Create a health-promoting normative environment, (3) Restrict the marketing and promotion of alcohol and other drugs both on and off campus, (4) Limit availability of alcohol and other drugs, and (5) Develop and enforce campus policies and enforce laws to address high-risk and illegal alcohol and other drug abuse and violence.

Through grant monies in the past, we have been able to hold state-wide events such as the Peer Institute as a way to share ideas, methods, strategies, etc to create substance-free events on college campuses. Presenters who have attended this event as well as TCNJ’s Welcome Week incoming freshman have discussed the concept of making healthy choices. These events are always great successes. Future students would most definitely benefit from having these opportunities available to them, made possible through the grant.
HADGE, Joe: LollaNoozoa 2011- Division of Alcoholic Beverage Control – 6/1/2011 – 5/31/2012 – AWARDED $5,000 (F1159)

The specific goals of this event are to provide a non-alcoholic outlet to students, to prevent underage drinking and to promote responsible decision making and interaction with all members of the community. The event will be planned to take place on a known “drinking” night. The event will last approximately 4 hours and will begin at approximately 9 p.m. The activities may take place in the Student Center, Lions Stadium (Football Field), outdoor tennis courts and volleyball courts as well as additional facilities. In the event of inclement weather, we will utilize past years’ rain plans.


Pursuant to the investigation plan provided by discussions with HeartWare, Inc., the following work will be performed. A review meeting (teleconference or in person) will be scheduled with HeartWare at the conclusion of each of the numbered activities listed below, with all parties reaching agreement on specific methods to be used on the following activities.

HARRIS, Leona: CURM Mini-Grant – NSF - CURM - 6/14/10-3/31/11 – Awarded $5,250 (F1120):

This proposal exemplifies the type of research and broader impact initiatives that the College is committed to promoting and supporting as part of our mission to both fully support the holistic development and our faculty and to offer a highly competitive education to tomorrow’s leaders. The School of Science will use the $5,000 faculty stipend for reassigned time from teaching a “Calculus” course for the purpose of working with her undergraduate collaborators on the proposed research, providing in-load ‘teaching’ credit for Dr. Harris, and all TCNJ faculty members, for in engaging students in independent research, travel funding for Dr. Harris to attend the Joint AMS/MAA Meetings in January, and travel funding for her student collaborators to present the results of their research at an appropriate scholarly meeting.

HUNT, David: Alzheimer’s Disease Research - Merrill Lynch - 6/1/2010 – 6/30/2012 – Awarded $25,570.60 (P1019):

This proposal focuses on the laboratory application of organic chemistry to the study of disease processes and the discovery of new drugs. Research efforts with emphasis on applications to drug design and discovery in the therapeutic areas of Alzheimer’s Disease.

This proposal is centered on providing an enriching STEM (Science, Technology, Engineering & Mathematics) oriented summer research experience in the space, earth, and atmospheric sciences for underrepresented pre-service K-12 educators at The College of New Jersey (TCNJ). The IMPRESS-Ed program is divided into a common experience composed of two modules addressing astrophysics and earth system science respectively, followed by an individual mentored research experience in one of those areas.

**KRIMMEL, John: Promoting Responsible Fatherhood Yr. 5 – NJ Dept. of Corrections – 9/30/10 - 9/29/11 – AWARDED $62,400 (F1140)**

The New Jersey Department of Corrections (NJDOC) is proposing to engage the spouse and/or children of offenders under its jurisdiction as allies in the end of the criminal and addictive lifestyle of their loved ones. It is the mission of the NJDOC to ensure public safety through appropriate confinement and offender rehabilitation programming. It is the family; however, that has the greatest personal stake in the success of this mission. The family can offer support under the stresses of reintegration and can provide external motivation for behavior change. The focus of the program will be an underserved population, those who max-out (complete their sentence) while behind bars. Following the evidence based La Bodega approach, the goal is relapse prevention and stable and healthy familial relationships. Through family case managers, contact with the participating offender and his/her family prior to release will occur to establish the treatment plan and goals for the individual. The case managers will arrange for family counseling during correctional visitation and will begin to establish specific links to social and drug treatment services in preparation for release. The case managers will continue to work with and be a resource to the ex-offender and his/her family post release. Components include a link to licensed outpatient drug treatment opportunities, family counseling, strengthening marital relationships, parenting skills and domestic violence (batterers) education. An evaluation component is included from the program’s inception to determine the value of the investment in this approach.

**MAGEE, Nathan: Experimental Investigation of Depositional Mechanisms in Ice Crystals under Cirrus-Like Conditions - Research Corporation - 7/1/2010 - 6/30/2012 – Awarded $35,000 (N1031):**

The Single-Investigator Cottrell College Science Award support research in astronomy, chemistry, physics, and closely related fields that significantly overlap with research in these three disciplines at public and private, predominantly undergraduate colleges. The projects proposed are judged on the basis of scientific originality, significance, feasibility, overlap with the three core disciplines and the ability of the institutional environment to sustain the activity. The involvement of undergraduate students in the research is expected, and is an important factor in most awards. After review by the Foundation staff and outside referees, the composite proposal material is evaluated by an advisory committee of scientists drawn from the academy community. Awards are made to the institution on behalf of the individual investigator following approval by the Foundation’s Board of Directors.
Nonlinear optical materials are integral to applications such as fiber optic data transmission and diode-pumped lasers. Future applications have motivated considerable research to develop new materials based on nonlinear optical polymers, which offer greater compositional flexibility than conventional crystalline materials. Optical functionality in a polymer is incorporated by blending a chromophore with a transparent polymer host. The polymer is heated above its glass transition temperature and an applied electric poling partially orients the dipolar chromophores along the field direction. Understanding the mechanisms leading to dipolar order and its relaxation over time is a central challenge to developing polymeric materials with stable nonlinear optical functionality. Research to date on nonlinear optical polymers has largely been confined to homopolymer hosts, which offer limited options for tuning the chromophore micronenvironment. A promising alternate approach to achieving stable dipolar ordering is to selectively encapsulate the chromophore in one domain of a block copolymer.
PETROFF, Jerry: Professional Services to Students with Deaf blindness FY11 - CBVI – 9/1/10 - 6/30/2011 – Awarded $94,653 (S1163):

The New Jersey Department of Human Services, NJ Commission for the Blind and Visually Impaired (CBVI) maintain discreet caseloads of students who are deafblind (ages 3-21) for the purpose of providing a level of direct educational services to supplement to local school district mandated special education program. This MOU is being implemented to address the current urgency in assuring there is a fully qualified educator with specialized expertise in the education and habilitation of students with deafblindness especially within the southern region of the state.

RICE, Leslie: NJ Nursing Education Collaborative (NJNEC) – Subaward from Robert Wood Johnson Foundation - 8/1/10-7/31/11 – Awarded $298,911 (N1017):

The Robert Wood Johnson Foundation’s (RWJF) New Jersey Nursing Initiative is a comprehensive five year program that will address the states faculty shortage by developing, implementing, and evaluating a statewide model for the recruitment and retention of nurse faculty. Innovations in nursing curricula, the development of new and creative teaching and learning models, and more attention to faculty preparation and development are critical to the recruitment and retention of nurse faculty in New Jersey and in the U.S. The New Jersey Nursing Initiative Faculty Preparation Program will provide funding in the areas of curriculum enhancement and scholarships.

RUBY, Patricia: Animals in the Community - IFAW – 1/1/11 - 12/31/2011 – Awarded $30,000 (N1130):

Launched in 2009, Sustainable Jersey is a voluntary municipal certification program that provides guidance and incentives to New Jersey communities that want to pursue sustainability. While administered by the Municipal Land Use Center (MLUC) at TCNJ, the program relies on strong partnerships with state agencies and other organizations. To enhance the program, staff from MLUC collaborated with The International Fund for Animal Welfare (IFAW) to incorporate the issue of “Animals in the Community” (AiC) into the municipal certification program. The AiC actions promote sustainable communities by safeguarding public health, promoting responsible citizenship, improving economic efficiency, recognizing the value of wildlife in ecosystems, and reducing resources wasted in resolving conflicts.

SALGIAN, Andrea: RUI: Giving the Maestro a Human Heart - Fostering Creativity in a Multi-Disciplinary Undergraduate Environment (Addendum) – NSF – 7/1/2008 – 6/30/2012 – Awarded $18,000 (Total = $377,477) F9073

Faculty members from Computer Science, Music, Mechanical Engineering and Interactive Multimedia propose to create, evaluate, revise and repeat a two-semester multidisciplinary undergraduate research seminar at The College of New Jersey (TCNJ) for students from the
Schools of Science, Engineering, and Arts & Communication, that fosters creativity, scientific methods, and computational thinking, by encouraging novel problem-solving approaches.

The goal of seminar will be to corroboratively design and build artificial systems that can not only conduct an orchestra, but also react and respond to the musicians. Its outcome will consist of systems will combine the physical arm movement of the robotic performance with animated visual displays that provide a feedback similar to the facial expression of a human conductor, thus giving the robotic conductor “a human heart”. We will teach undergraduate students two behaviors that have been previously tied to increased creativity: collaboration and computational thinking. The course setting will also be used to analyze the creative, collaborative and cognitive processes.


Parent-Child Interaction Therapy (PCIT) is an empirically-supported treatment for conduct-disordered young children that places emphasis on improving the quality of the parent-child relationship and changing parent-child interaction patterns. In PCIT, parents are taught specific skills to establish a nurturing and secure relationship with their child while increasing their child’s prosocial behavior and decreasing negative behavior. This treatment focuses on two basic interactions: Child Directed Interaction (CDI) is similar to play therapy in that parents engage their child in a play situation with the goal of strengthening the parent-child relationship; Parent Directed Interaction (PDI) resembles clinical behavior therapy in that parents learn to use specific behavior management techniques as they play with their child.

TANG, Linghui: Expanding International Business Education at TCNJ to China - U.S. Dept. of Education - Business and International Education - 7/1/2010 - 6/30/2012 – Awarded $81,175.00 (F1015):

The College of New Jersey (TCNJ), a highly selective state college with a focus on undergraduate education, has a long tradition in international business education. The proposed project will expand the existing international education curriculum by including Chinese business practices and culture and enhancing Chinese language skills of our students in a real business environment. Building upon the strength of our interdisciplinary programs, the proposed program will (a) add three China related courses to the International Business curriculum at the School of Business at TCNJ; (b) strengthen our partnership with the New Jersey Small Business Development Center (NJSBDC) to serve the needs of the business community; (c) create new international business internships and encourage more TCNJ students to study in China; (d) create the Institute of Chinese Business Studies (ICBS), which serves as the foundation for continuing Chinese business education at TCNJ and providing services to the business community in the Trenton area.

We expect the approximately 40 students who will be attending this seminar will be drawn roughly 60/40 from TCNJ and other local institutions (such as Princeton, Rutgers, Rider, and NYC and Philadelphia schools). The seminar will feature lectures by economists, historians, and philosophers (possibly also academic lawyers), as well as discussion sections, and we will have logistical support from the educational foundation the Institute for Humane Studies. Students will be actively encouraged to challenge the views presented, and lecturers encouraged explicitly to acknowledge that this approach to things doesn't have all the answers. The idea really is to encourage discussion of all political viewpoints.


We propose to monitor four at spectrum radio quasars and one radio galaxy to search for variability on timescales comparable to the light crossing time of the accretion disk around the central supermassive black hole and the base of the relativistic jet. We want to see if some optical variability in quasars is due to a bright feature in the accretion disk as it approaches the last stable orbit, or if it is due to inhomogeneities in the jet, possibly in a helical structure. A quasi-periodic light curve is very likely indicative of an accretion disk origin, and provides a dynamical means of measuring a lower limit to the mass of the supermassive black hole which may be compared to those derived by other methods, such as the shape of X-ray iron K$_\alpha$ lines and stellar velocity dispersions. Kepler is ideally suited to the necessary measurements, by delivering highly-stable photometry continuously on timescales from 10s of minutes to days.