

**GEORGIA RACE TO THE TOP  
INNOVATION FUND  
APPLICATION FACE SHEET**

**SECTION 1: APPLICANT AGENCY**

Applicant Agency (Legal Name): Georgia Tech Research Corporation

Legal Mailing Address: 505 10<sup>th</sup> Street, NW

City: Atlanta County: Fulton State: GA Zip: 30318

Federal Employer I.D. #: 590603146 DUNS #: 097394084

Congressional District #: 5th

Executive Officer Name: Vannessa Daniels Title: Division Manager

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**SECTION 2: PARTNERSHIP LEAD CONTACT**

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**SECTION 3: FISCAL CONTACT**

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**SECTION 4: GRANT AMOUNT REQUESTED: 1,091,881.66****SECTION 5: APPLICANT AGENCY FISCAL INFORMATION**

1. Month of Fiscal Year End: June
2. Attach to the application, the applicant agency's financial audit.
3. Is applicant agency delinquent on any federal debt? NO  YES  If yes, attach a detailed explanation.

4. Did applicant agency receive 80 percent or more of its annual gross revenue in federal awards in its preceding fiscal year; and \$25,000,000 or more in annual gross revenue from federal awards and in so doing is required to comply with "Federal Funding Accountability and Transparency Act"? NO  YES  If yes, attach names and total compensation of the five most highly compensated officers of the grantee.\*

\*Per ARRA requirements, compensation information is publicly available through reporting to the SEC and therefore not required to be listed. <https://www.fsrs.gov/#a-faqs>

**SECTION 6: PARTICIPANT DATA:**

Approximate number of students served: 12 – this is the number of students who we will put into teaching positions. Through these participants, we will impact approximately 2000 secondary STEM students in the participating counties.

Population of focus (i.e. age, gender, race): For the teacher participants - recent college graduates, no restrictions on gender/race, etc. For the students they will teach – secondary school students, no restrictions.

**SECTION 7: SERVICE DELIVERY AREA**

Primary county or counties to be served: Ware and Dougherty (others are joining as we continue)

List other counties to be served (if any): \_\_\_\_\_

Congressional District(s) to be served: 1, 2

**SECTION 8: PROGRAM ACTIVITIES**

**Recruit, train, and support GT and other metro-Atlanta highly qualified STEM students to teach for two years in rural, high-needs school districts in Georgia.**

**SECTION 9: AUTHORIZING SIGNATURES**

*I, the undersigned, an authorized representative of the applicant, have read, understand, and agree to all relative conditions specified in the Race to the Top Innovation Fund Request for Proposals and having read all attachments thereto do submit this application on behalf of the applicant agency. If awarded a grant to implement the provision herein, I do certify that all applicable federal and state laws, rules, and regulations thereto will be followed.*

**APPLICANT AGENCY:**

Vannessa Daniels, Division Manager 6/23/11  
Signature and Title Date

## EXECUTIVE SUMMARY

The STEM Teach for Georgia project is a collaborative partnership between Georgia Institute of Technology (Georgia Tech), the Okefenokee RESA, and the Ware County and Dougherty County school districts. The partnership will most likely grow during the first year to encompass additional RESAs and school districts. Together, these institutions aim to attack the shortage of academically qualified STEM secondary teachers in rural Georgia. There are a multitude of reasons for this shortage. This project will address two of them: the shortage of funds in these counties available to hire new teachers, and the ability to attract new STEM graduates to these communities.

This project will base its approach on the successful model that Teach for America (TfA) has established for attracting academically gifted young college graduates to teach in under-served school districts. As of now, TfA in Georgia is limited to the metro-Atlanta area, and there are no programs like TfA to serve the rural parts of the state. While the new Georgia Teaching Fellows program is targeting some rural Georgia areas, it is essentially an alternative certification program and does not really address the issue of attracting academically gifted young graduates who might not have already considered a teaching career. One of the main successes of the TfA model is that it is seen more as a service program (like the Peace Corps) with a short-term commitment that is an honor (and hence serves as a benefit to the participants even if they do not end up choosing teaching as a career path). This proposal aims to adapt the TfA model and design it in order to be effective in rural Georgia. The STEM Teach for Georgia project will specifically recruit students who want to return to or move to a rural setting to teach in a high-needs school. It will build in a training course that will prepare these recruits for the challenges of living and working in a rural community while also highlighting the special benefits that this kind of environment offers. And, the Innovation Fund support will pay for two years of competitive salaries for the teachers as well as the fees to go through either a GaTAPP or OYSP program (or the equivalent amount of funding will be applied to an MAT program).

In the first year of the project, the team will research these challenges and benefits of the partnering communities and carefully design the training and induction program to address and exploit them. In addition, the team will the recruit, select, place, and train the first cohort of four novice teachers. Each participant will have a GPA of at least 2.75 in a STEM field from either Georgia Tech or another university in the state. During the second year of the project, this first cohort will be in the classroom in one of our partner high schools, fully supported by the grant. The cohort will have a wide range of professional development opportunities along with financial support to start along the road to certification. Simultaneously, the team will repeat the recruitment, selection, placement, and training cycle with the second cohort – this time the group will have eight individuals. Both cohorts will be in the classroom during the third year of the grant. While the team continues supporting both cohorts, they will also be investigating and pushing hard to find funding to sustain this program beyond the Innovation Fund support period. Throughout, the project activities and outcomes will be assessed through mixed methods that will provide both feedback to the Governor’s Race to the Top team and to prospective long term funders. Presuming that each recruited teacher has five classes of 25 students each throughout their time in the schools, this project will impact 2000 students in the partner school districts. That is 2000 students who will be taught by academically gifted STEM recent graduates from leading universities. The impact, though, will expand beyond just these students – there is

evidence that young enthusiastic content expert teachers have impact beyond their own classrooms through their collaboration with other teachers in the schoolhouse. Indeed, proponents of the TfA model argue that “bringing in talented and energized young teachers will invigorate students and their schools” (Ferguson, 2010).

There is wide agreement that the future prosperity of the state of Georgia depends on an educated workforce. The first step towards achieving that goal is to have science and math teachers who are both content experts and who are enthusiastic and talented teachers. The STEM Teach for Georgia project presents one approach to succeeding at this first step.

## Section 1: Partnership Overview

### Who are the major partners?

#### Georgia Institute of Technology (Georgia Tech)

Within the state of Georgia, Georgia Tech has never been known by anyone as a producer of teachers. The general view, within both the halls of Georgia Tech and the halls of Georgia high schools, is that there are far easier routes to teaching, and that they don't pass through the notoriously difficult classrooms of Georgia Tech. Georgia Tech has always had the distinction of being the most academically elite public school in the state, and one of the most elite in the nation; in Fall 2010 the 2712 incoming freshmen scored an average of 707 on the math SAT and 667 on the verbal SAT. All students must take calculus and computer science, and the science and engineering degree requirements are extensive and difficult. High school students who excel in science and mathematics are steered towards Georgia Tech to make their career as a "helluva engineer," not as a helluva high school math or science teacher.

Regardless of this statewide tendency to assume that Georgia Tech doesn't produce teachers, those in contact with in-service STEM teachers recognize that there are actually substantial numbers of Georgia Tech alumni teaching in Georgia's high schools, and that school system administrators value them highly for their deep content knowledge, their high academic standards, and their work ethic. Since Georgia Tech has not in the past recognized K-12 teaching as a possible career choice for its graduates, all of these enterprising alumni have had to navigate the road to teaching with no support from the Institute. This road generally leads through a local MAT program or a Georgia Teacher Academy for Preparation and Pedagogy (GaTAPP), though no data is available about the actual number of Georgia Tech graduates in the K-12 teaching workforce, or how they got there. Through *Tech to Teaching*, a program co-sponsored by the National Science Foundation, Georgia Tech has been working since 2009 to create a set of pathways to K-12 teaching that build upon existing educational initiatives, are tailored to the strengths of Georgia Tech students, and are flexible and efficient. A core goal of *Tech to Teaching* is to produce prospective teachers who are well trained in STEM content, in the nature of research, and in basic educational pedagogy. The Institute now has in place a Director of Pre-Teaching, a sequence of educational psychology courses, and a special summer research experience program specifically for students interested in secondary STEM teaching. There is further work ongoing for the development of a series of methods courses, and there are established partnerships with local MAT programs.

The Director of Pre-Teaching has worked with several hundred Georgia Tech students since the position was created. This indicates there are a reasonable number of Georgia Tech students interested in a teaching career. Note that this project will also recruit students from other Georgia colleges and universities, paying careful attention to their academic qualifications in STEM fields.

#### Okefenokee RESA

The Okefenokee Regional Educational Services Agency (RESA) serves eight (8) school systems in the Southeast corridor of the state. Its mission is to provide leadership, services, and support to systems and schools to meet improvement goals. Heavily involved with the systems it supports, it also has partnerships with the local colleges and libraries: representatives from the each of these entities serve on the RESA Board of Control.



The Okefenokee RESA provides a defined set of core services aimed to support local schools through research related to educational improvements and their implementations, professional development focused on student achievement and school accountability, mentoring, professional learning services and materials, curricula and instruction programs, and implementation of academic assessment and evaluation. Through these services, the RESA serves as an educational anchor within this region that invites both teachers and administrators in and gives them the opportunity to grow as educators.

#### Ware and Dougherty County School Districts

*Dougherty County Schools* Dougherty County Schools is a school system in West-Central South Georgia with a mission to provide a safe, supportive, nurturing and cultivating environment where students can learn and achieve academically. This is supported by the system's core belief to provide the best quality educational opportunities for students. Dougherty Schools, the largest participating school district, has twenty-six schools, four of which are high schools. Three of these schools are designated Title-I schools. The total student population is approximately 15,800 students. Dougherty Schools also is currently the 2<sup>nd</sup> largest employer in the County.

The school system is heavily connected with its regional partners. Each of the schools in the district has specific community *Partners in Excellence*. Many of these partnering institutions offer mentors, programs, and monetary rewards for the students.

*Ware County Schools* Ware County Schools is a rural South East Georgia school system with a mission, in unity with the Ware County community, to guarantee that all students are provided with superior instruction, resources, environment and guidance to ensure top quality graduates, with life-long learning skills, who can live responsibly in society. The plan to execute this mission is with the shared vision of creating and providing opportunities for their students to receive a world-class education. Ware County has ten schools, one of which is a high school, Ware County High, which is a designated Title-I school. The total student population is approximately 8300 students.

The school system implemented two projects over the past several years aimed at increasing the level of teacher preparation/professional development. As a member of the *Direct to Discovery (D2D)* program, Ware County classrooms connect via high-definition video conferencing and an advanced broadband connection to access advanced STEM content and expertise on the Georgia Tech campus. Their teachers work with Georgia Tech faculty to better understand how emerging concepts like nanotechnology can be connected and celebrated through the classroom curriculum. In 2008, the school system initiated the *Teacher Quality Grant Program* which addressed three basic needs central to this proposed project: 1) pipeline and recruitment of prospective teachers, 2) reducing out-of-field teachers, and 3) building a critical mass of qualified, experienced teachers. This demonstrates the school system's dedication to teacher recruitment as well as the development of their existing staff.

Both Ware and Dougherty County Schools share a common goal – successfully educate all students and expand the climate/culture of success within the school system. The population of these school systems represents a myriad of different ethnic and socio-economic levels. Table 1 represents a quick overview of the middle and high schools within each of the participating counties based on the Georgia Report Card for Parents. This highlights the variation within the counties at both the achievement and investment levels.

Table 1. Ware and Dougherty County Schools Snapshot (middle and high schools only)

<u>County</u>	<u>Achievement Score</u>	<u>% Exceeding Standards</u>	<u>School</u>	<u>Grade</u>	<u>Poverty Rate</u>	<u>Met AYP</u>	<u>FTE</u>	<u>School Site Spending per FTE</u>	<u>Centralized System Spending per FTE</u>
Ware	89.3	37.4	Ware Magnet	HS	25%	Yes	478	\$7,139	\$1,509
Ware	97	30	Ware Magnet	8th	35%	Yes	478	\$7,139	\$1,509
Ware	88	24	Waycross Middle	8th	60%	Yes	576	\$8,242	\$1,509
Ware	49.8	14.8	Ware County High	HS	56%	No	1523	\$7,332	\$1,509
Ware	78	13	Ware County Middle	8th	69%	Yes	706	\$7,888	\$1,509
Dougherty	99.5	33.5	Robert A Cross Middle Magnet	8th	45%	Yes	600	\$5,794	\$1,827
Dougherty	61.4	21.3	Westover High	HS	47%	Yes	1214	\$6,007	\$1,827
Dougherty	46.8	9.6	Monroe High	HS	79%	Yes	1106	\$6,800	\$1,827
Dougherty	46.2	12.3	Albany High	HS	70%	No	856	\$6,798	\$1,827
Dougherty	40.8	5.7	Dougherty Comprehensive High	HS	75%	No	1017	\$6,976	\$1,827
Dougherty	79	17	Merry Acres Middle	8th	71%	No	801	\$7,038	\$1,827
Dougherty	78	7.5	Albany Middle	8th	91%	Yes	604	\$6,463	\$1,827
Dougherty	76.5	7.5	Southside Middle	8th	78%	Yes	494	\$7,377	\$1,827
Dougherty	72	5.5	Dougherty Middle	8th	91%	Yes	718	\$6,155	\$1,827
Dougherty	70.5	8	Radium Springs Middle	8th	86%	No	581	\$7,384	\$1,827

## **Partnership's Goal**

Collectively, we have a very simple goal – to increase the number of highly qualified STEM teachers in rural Georgia counties. The literature is clear that there are a number of reasons why it is difficult to attract and retain STEM teachers in rural areas (see next Section for a discussion of some of these issues), and it is just as clear that such teachers are a necessary component of improving the education that our rural students receive. We expect that our partnership, with the resources from the Innovation Fund, will allow us to start to make a difference in this very important area. We will build on other successful models, adapting them to fit our context, and tapping into the pool of academically qualified recent STEM graduates from the State's colleges and universities.

## **Relevant Experience**

Georgia Tech has the entire necessary infrastructure in place to administer a project of this size. Further, the PI of this project, Dr. Donna Llewellyn, has ample experience directing and managing large sponsored projects. In particular, she was the PI on the National Science Foundation (NSF) sponsored GK-12 project, *Student and Teacher Enhancement Partnership (STEP)* – a ten year (2001-2011), \$3.5M project that placed over 120 STEM graduate students in metro-Atlanta high schools to partner with math and science teachers and students. Currently, Donna is the co-PI on two NSF sponsored projects – *Science Learning Integrating Design, Engineering and Robotics (SLIDER)* and *Tech to Teaching*. SLIDER has a goal to design an eighth grade physical science curriculum that is inquiry-based and uses engineering design and LEGO robotics to engage the students, and then to implement and study this curriculum in three middle schools in the State (in Cobb, Fulton, and Swainsboro counties). *Tech to Teaching* is described above. In addition, Donna is a co-PI on a new project funded by the Goizueta Foundation with the goal of facilitating success of Hispanic students in STEM fields. These programs provide evidence that Donna Llewellyn has the necessary experience in managing partnerships of similar size and scope that have led and are leading to positive project implementation. The entire management team (see Section 5 for details) has the necessary combination of experience and expertise to design and implement this project.

## **Section 2: Need for Project**

The 2007 Rural Teacher Retention Study, conducted by the National Research Center on Rural Education Support, found that over 50% of all responding districts reported difficulty in filling math and science teaching positions (Dadisman et al, 2010; Zhao, 2005). Georgia's shortage of well-qualified STEM teachers is state-wide, but, like other states, Georgia's rural school districts "face special challenges in recruiting teachers" in critical-needs fields such as math and science (Monk, 2007, 160). Prospective teachers may be concerned about issues related to geographic and social isolation, as rural districts typically offer limited options for shopping, restaurants, healthcare and housing, while simultaneously offering less-competitive salaries than their urban or suburban counterparts. Prospective teachers may also be concerned about rural districts requiring them to teach multiple subjects and grade levels, including teaching subjects outside of their certification field (Zhao). Teachers in rural areas often have fewer opportunities to collaborate with peers or to pursue professional development, and both of these factors affect teacher retention. Another potential challenge for rural districts trying to recruit teachers can be the fact that many rural areas tend to have low numbers of students who move on to higher education.

Rural school districts not only need more math and science teachers, but also need to recruit and retain highly qualified teachers in these subjects. Scholars have noted that teachers in rural districts often



possess “comparatively low educational attainment, which suggests one reason why rural areas may be less likely to offer college-preparation programs” such as Advanced Placement courses (Monk, 159). Additionally, rural districts are less likely to recruit teachers who have graduated from “top-ranked colleges or universities,” such as Georgia Tech (Monk, 2007, 159). At least one study has found that science teachers in rural districts are more likely to have majored in education, and therefore have taken less course work in science and mathematics than their urban counterparts who are more likely to have degrees in their academic content fields (Monk, 2007).

The National Education Association notes that rural and small-town school districts need help to attract, train, and retain quality teachers, while stressing that there can be some advantages to teaching in these districts. For example, rural areas often offer smaller class sizes and a stronger sense of community than urban or suburban schools. Teachers may also enjoy relatively high social status in rural communities (Osterholm, Horn and Johnson, 2006). New teachers often struggle to master classroom management, and many studies find that rural schools tend to have fewer discipline problems and can be safer environments than their urban counterparts. Ideally, rural school districts should consciously seek to hire teachers who have a genuine interest in working in rural schools, but for the reasons discussed, this can be difficult. What rural districts can do is strive to present both the pros and cons of the local work environment, thus recruiting teachers who will have an understanding of the challenges and potential rewards.

According to the Alliance Math and Science Task Force (2008), Georgia’s current shortage of math and science teachers is “severe” and will worsen in the near future, “unless aggressive and immediate action is taken.” Our state-wide production of Physics, Chemistry, Environmental Sciences and Earth Systems teachers is particularly inadequate, but the need for teachers in all areas of science and math is great and will continue to increase because of the new High School Graduation Rule that requires students to take four years of science and math courses during high school. Our rural and smaller school districts may face extra strains to develop and staff additional and new science and math courses. Because many Georgia schools find it difficult to attract and retain qualified and effective math and science teachers, the Alliance recommends that districts employ more teachers through alternative routes to certification. By placing recent college STEM graduates into classrooms and supporting them while they earn their teacher certification, the STEM Teach for Georgia project would be a new and much needed alternative certification option to bring math and science teachers to rural Georgia.

### **Target Population**

The localities that these rural school districts cover are often very diverse and prove to be a challenge when trying to recruit and retain highly qualified teachers from the outside. Using Ware County as an example, community data from the 2007-2008 Report Card indicates that Ware County Schools has 53 students who are eligible to receive services through the Migrant Education Program. In Ware County in FY 2008, on average, there were 2,308 households on food stamps every month. There were 142 Temporary Assistance for Needy Families (TANF) families each month in FY 2008. The 2006 per capita income for Ware County was \$23,478.

Table 2 indicates the level of poverty for Ware County. This information was compiled from the 2000 US Census.

Table 2: Percentage of Families and People Whose Income in the Past 12 months is below Poverty

	<b>Dougherty</b>	<b>Ware</b>
All families	19.6%	14.9%
Families with children under 18 years	28.5%	21.2%
Families with related children under 5	33.7%	18.3%
Families with female householder, no husband present	43.8%	35.3%
With related children under 18	51.5%	44.8%
With related children under 5 years only	63.3%	35.4%
All people	24.8%	19.0%
Under 18 years of age	35.3%	26.0%
Related children 5 to 17 years of age	34.1%	29.3%

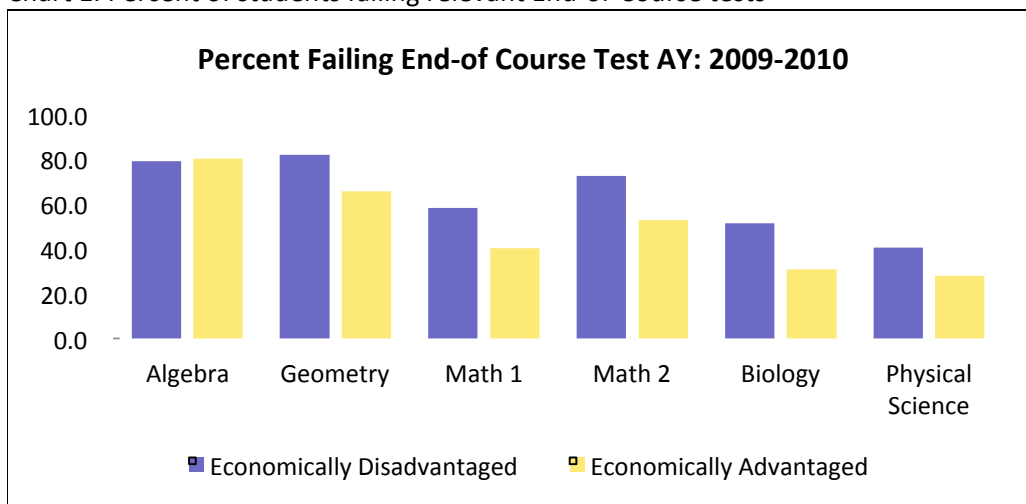
Data on student performance in math and science courses from the Georgia End-of-Course tests is ground-level evidence of the need for STEM teachers who can provide effective instruction that promotes student learning. Table 3 presents the average percentage of students failing the relevant STEM end-of-course tests across the five schools participating in our proposal.

Table 3. Average percent of students failing the End-of-Course tests across five participating high schools

End-of-Course Test	AY: 2009-2010	AY: 2008-2009	AY: 2007-2008
Algebra	79.7	82.8	64.2
Geometry	90.0	70.6	59.6
Math 1	53.2	--	--
Math 2	70.2	--	--
Biology	47.4	50.8	56.4
Physical Science	40.6	45.2	56.2

Importantly, as Chart 1 shows, in AY 2009-2010, across all six high schools, passing the relevant STEM end-of-year course tests was difficult for many students regardless of whether they were economically disadvantaged or not.

Chart 1. Percent of students failing relevant End-of-Course tests



## **New Approach**

The turnover rate for math and science teachers is higher than for teachers in other fields, with science teachers typically having the highest rates of leaving the teaching profession (Zhao, 2005; Ingersoll, 2000). As already discussed, rural districts can have even more difficulties recruiting and retaining teachers. Since the 1980s, alternative certification programs have become common across the nation as part of the strategies to address teacher-shortage needs, especially in hard-to-staff fields—such as science and math—and especially in hard-to-staff schools, such as those in urban and rural areas (Zhao). One of the purposes of alternative certification programs is to recruit “bright and promising college graduates into teaching,” who have not followed traditional routes, such as by completing bachelor’s degrees in teacher education (Zhao, 2). Rural Georgia school districts are open to alternative certification; indeed, the RESA that is participating in our proposal has established a GaTAPP program. Yet there is still a need for more math and science teachers in these districts because it is difficult to attract teacher-candidates with STEM backgrounds into teaching. Teach for America (TfA) specifically recruits talented college graduates, who generally would not consider a teaching career, by asking them to commit to teach in urban or rural high-needs schools for 2 years, during which time they complete local teacher certification and strive to improve student achievement (Kopp; TfA, 2010). TfA recruits, called “corps members,” are selected through a competitive process which considers their academic background, leadership skills, and demonstrated dedication to fighting educational inequality. Corps members receive an intensive 5-week summer pre-service training, which includes student teaching. Nationally, TfA places teacher recruits in both urban and rural high-needs schools, but in Georgia, TfA is restricted to the metro-Atlanta area. This proposed program will bring talented and dedicated teacher-recruits to rural Georgia, specifically in STEM teaching fields. It will use a model like TfA’s to attract people willing to serve for at least 2 years, and then partner with Georgia’s approved teacher-certification programs, such as GaTAPP, to facilitate their training and certification. This proposal includes strategies in the induction program to encourage these teacher-recruits to remain in K-12 teaching careers.

## **Section 3: Quality of Project Design**

Modeled after the successful *Teach for America* program, the *STEM Teach for Georgia* project aims to serve rural, traditionally under-served, Georgia school districts. Graduating students, and recent alumni, of Georgia Tech and other area colleges and universities will be recruited and trained, and then placed into rural school districts as science, mathematics, and technology teachers for two years. The program will provide induction support as well as financial support for the teacher-recruits to start on the road to full certification. While continuing on as a teacher at the end of the two years is not required, there is an expectation that some of the participants will do so. By paying and supporting these teacher-recruits as they get started on a road to a teaching career in a rural district, the project is laying the foundation for addressing the long-term issue of highly qualified STEM teacher recruitment into under-served counties in Georgia.

The project plan is to work on finalizing the design of the program in collaboration with our partners during fall 2011. We will recruit the first cohort of four teacher-recruits during spring 2012 – they will undergo training during the summer 2012, and be placed in teaching positions for the 2012-2013 and 2013-2014 school years. During the 2012-2013 year, they will go through an induction program and will begin their pathway to certification. In spring 2013, we will recruit a second cohort of 8 teacher-recruits

who will then undergo training during summer 2013 and be placed into teaching positions for the 2013-2014 school year (with an induction program and support towards certification). Continuation into a second year of teaching for this cohort will be contingent on our attaining the additional necessary funding. Assessment will be ongoing throughout the process.

At the start of this project, the partnership will include Ware and Dougherty Counties and the Okfenokee RESA. We have an indication that Lee County is also on board, and we expect other school districts to join us as the project gets developed. The number of economically disadvantaged students in each of the partnering districts in their secondary schools is indicated in Section 1. Presuming that, on average, each teacher recruited through this program teaches five classes of 25 students each year, this program has the potential to directly impact 2000 Georgia secondary STEM students. It is expected that by having these novice teacher-recruits who have recently graduated with STEM degrees that there will be a spillover impact in other ways in the school house as well (Ferguson, 2010).

There are four major components in the Statement of Work template; the assessment/evaluation component is described in a separate section of this proposal and in the evaluation plan template. Here is a more detailed description of each of the four steps in the Statement of Work.

#### 1. Recruitment, Selection, and Placement

Georgia Tech has a Director of Pre-Teaching, Beth Spencer, who regularly consults with students interested in a teaching career. In 2010, Beth worked with 106 unique students, while 530 people currently receive information about K-12 teaching through a campus listserv, so Beth is in an excellent position to recruit for these positions. On Georgia Tech's campus, there are several established methods for recruiting program applicants. First, the listserv is used to communicate announcements, including job and training opportunities. The Georgia Tech Academic Advisors Network (GTAAN) publishes a monthly newsletter, which reaches all academic departments on campus, so Academic Advisors will be aware of the new program and can share it with students who are making plans for post-graduation. The flat screen TVs in the Student Center, library, and the new G. Wayne Clough Undergraduate Learning Commons also relay information to students. Beginning in fall 2011, the Office of Undergraduate Studies will have a new Resource Room open to students, which will include designated space for program brochures. The new program will also be promoted by Tech's Career Services, advertised in the student newspaper, and marketed in student gathering places. Since this program is open to graduates of other Georgia colleges and universities, Beth Spencer will also communicate with academic advisors and appropriate staff on these campuses.

The application for this program will include a form that asks about the student's interest in teaching in a rural county, their related experience, and other relevant information. Other components of the application packet will include a resume, a transcript, and three letters of reference. A team of individuals including at least the PI of this project, the Pre-Teaching Director, and a classroom teacher will also interview each qualified applicant. Minimum requirements will include a STEM major, a cumulative GPA of at least 2.75, and an interest in teaching in a rural county.

The PI of the project, the Pre-Teaching Director, and a representative from each of the participating schools will make actual school placement decisions. The team will discuss ahead of time the needs at each of the schools, as well as their capacity for taking new teachers, and those issues will be taken into account in the selection process as well.

## 2. Training

All individuals accepted into the project will participate in a summer training program. This program will have several goals, including:

- Building community – these teacher-recruits will likely feel somewhat isolated in their new positions. Therefore, it is important that they form a cohort community for mutual support and growth. This will be accomplished through regularly scheduled facilitated meetings of the cohort. The online collaborative platform that will be used for the school year induction program will be introduced and the participants will have the opportunity to use the tools and to experience the nature of an online community.
- Teaching the foundations of educational psychology – many of these teachers will be complete novices. Therefore, it is important to give them a foundation of learning and developmental theory as well as a toolbox of classroom management and instructional strategies. This will be accomplished through an existing GT three-credit semester course called “Principles of Teaching and Learning I: CETL 4001.” For non-GT participants, we will arrange for them to be able to take the course as guests. Any participants who have already taken this course (or an equivalent) will be excused from this portion of the summer program.
- Teaching about the issues involved in teaching in a rural school – many of these teachers will not be from rural Georgia and therefore will be unaware of the specific issues related to teaching in such a locale. Therefore, it is important for them to gain a deep understanding of the region and the issues facing the students and teachers in this area. This will be accomplished through a one-credit special topics course (required of all participants), a “regional teaching seminar” that will cover both the economic and policy related issues as well as the human ones. The group will visit the county where they will be teaching, and teachers from those counties (and staff from the relevant RESAs) will be invited to the class to discuss the day-to-day life of a teacher in that district.

## 3. Induction

The teacher-recruits will receive support through their first years in the classroom through several avenues.

- The local RESA offers professional development programs that will be available to the participants (see letter of support from the Okefenokee RESA).
- The Center for Advanced Communications Policy will provide ongoing professional development using technology through the Foundations for the Future program (F3). The Georgia Tech Foundations for the Future (F3) program is a collaboration of Georgia Tech researchers working with government and industry support to ensure universal K-12 technology access and effective use in Georgia and beyond. Since the summer regional teaching seminar course will serve as the initial orientation to the participants’ school districts, this will in fact also serve as the first step of the induction program. The F3 program will provide a central part of this course, working with the partnering school districts to prepare the teachers for issues related to the availability and effective use of classroom technology, the mission and challenges of the school, school demographics, and programs supported by the school. Additionally, information regarding communication platforms, ongoing training opportunities, and other ways in which teachers will be supported by the *STEM Teach for Georgia* project will be discussed. The support from the F3 program will continue during the teacher-recruits’ first year in the classroom. Here are some of the elements that will be included in this professional development program:

Classroom Technologies While most schools share a common technology infrastructure, each school system employs different technology strategies to support specific vision and missions specific to their district. For beginning teachers, it can be daunting and overwhelming to walk into a classroom and be expected to successfully integrate Promethean Boards, HD Video Conferencing units, iPads, iPods, different software suites, and other technologies – all of which are used in some fashion within the participating school districts. The F3 program will work with the teacher-recruits during the summer regional teaching seminar to understand the technological landscape within their district and school, and will offer strategies on how to best integrate technology into their lesson plans as well as help teachers locate free resources to support technological use and integration throughout the school year.

STEM Teach for Georgia project communication strategy To ensure that the project has transparency and that information is being documented, the project team will employ the use of the Sakai-based T-Square learning portal hosted by Georgia Tech. Through this learning management system (LMS), the group will facilitate discussion pages, use the built-in mail function for direct communication, serve as a document repository, and host the project calendar. Because not all teacher-recruits will be familiar with this tool, the team will create a part of the regional teaching seminar course on how to use the tool effectively, set up alerts, and manage communications. During this course, communication and documentation needs will be reviewed and discussed.

Ongoing Technology Professional Development The beginning teachers will also need ongoing professional development throughout their two-year rotation in the program. Such ongoing professional development is critical to ensure that the teacher-recruits have the proper support during this formative period. The program will leverage an existing professional development program, *Explorers Guild* ([www.f3program.org/?q=content/explorers-guild](http://www.f3program.org/?q=content/explorers-guild)) by allowing the teachers to participate in the workshops via webcast. This is a monthly offering to school districts throughout the state focusing on topics usually related to technology in the classroom. Participating teachers earn free PLU credits required by the school districts to ensure that teachers are maintaining ongoing training. In addition to these offerings, the F3 team will work with the teacher-recruits through the T-Square platform to understand their current training needs and to determine whether they are being met through various resources in the schools, the RESAs, and the Explorers Guild Program. The F3 team will work with their education network to develop/offer any training needed by the teachers that these constituents are not currently offering.

Classroom Resources One of the more daunting aspects of being a new teacher is not being aware of available resources or who to contact about needed resources. As part of the T-Square site, the F3 team will create a database of available resources, identifying the items' costs and potential uses in the classroom.

- All participants will be guaranteed a placement in the GIFT (Georgia Intern-Fellowships for Teachers) program housed at Georgia Tech. GIFT was founded in 1991 as a program of the Georgia Institute of Technology's Center for Education Integrating Science, Mathematics, and Computing (CEISMC). This program is a paid 4-7 week summer internship for science, mathematics and technology teachers. GIFT offers teachers real world applications of the

subjects that they teach. Teachers are exposed to inquiry and problem solving, cutting-edge scientific research, and data analysis. By offering business and industry internships and public science institute and research fellowships, teachers increase content knowledge and gain practical examples of science, technology, engineering, and mathematics applications for enriched instruction and teaching practices based on evidence-based experiences. Since its founding, GIFT has placed teachers in more than 1500 positions statewide. For more information about the CEISMC GIFT Program, please visit <http://www.ceismc.gatech.edu/GIFT>.

#### 4. Pathway to Certification

There will be a clear expectation that all participants in this program work towards teacher certification for secondary teaching in a STEM field. The individuals may choose the route that they prefer – options include a OYSP program offered through the school district or RESA, a GaTAPP program offered by a RESA, or an MAT program offered at a university or through Georgia ONmyLINE. We have a letter of support included from the Okefenokee RESA and we expect to also work with the SW GA RESA (these are the two relevant RESAs for our current school district partners). If other school districts come on board during the project, we will also include their RESAs. The Georgia Professional Standards Commission has also communicated their support for this project. There is money budgeted to cover the entire expense of the OYSP or TAPP route, or we will offer partial payment for the MAT option. Accepted participants will be advised on how to select and prepare for the appropriate GACE Content Assessment exams to enable them to begin their route to teacher certification.

#### Justification for this Project Design

The Teach for America (TfA) model is one kind of alternative certification route to teaching. Although TfA has come under some criticism for not solving the problems associated with teacher retention, and therefore proving costly to participating schools (Glazerman, Mayer, and Decker, 2006), the program stands by its requirement of only a 2-year teaching commitment. The purpose of TfA is to place graduates from the nation's top colleges who otherwise would not consider teaching into high-needs schools for two years of teaching service, but more than 60% of TfA alumni remain in full-time education careers (Kopp). When asked whether a 3-year commitment would be better, TfA founder Wendy Kopp cites "evidence that [requiring three years] would significantly decrease the size, diversity, and quality of our corps, particularly in such key areas as math and science." A recent study has found that TfA recruits are effective math teachers: students taught by TfA recruits learn more math during a school year than do schoolmates taught by teachers hired via other, more traditional routes (Viadero, 2004). Another study has found that TfA teachers' positive effects on high school student test scores "exceed the impact of additional years of experience and are particularly strong in math and science" (Xu, Hanaway, and Taylor, 2009).

Like TfA, this proposed program will recruit academically-talented students to commit to teach for 2 years in rural Georgia. TfA has become incredibly successful in recruiting "elite" college students by allowing graduates to "do good" for the nation's "neediest" school children while also participating in an organization with status equivalent to "a kind of domestic Peace Corps" (Larabee, 2010, 48). In its recruitment efforts, STEM Teachers for Georgia will stress rural Georgia's need for math and science teachers, thus appealing to applicants' interest in serving some of the state's communities. The fact that this STEM-based program is affiliated with Georgia Tech should lend it prestige. Because this program seeks to address rural Georgia's need for well-qualified STEM teachers, recruits will be drawn only from STEM majors. Although existing research does not clearly define a definite correlation between subject matter preparation and student learning, there are many studies that do show "a positive connection

between teachers' subject matter preparation and both higher student achievement and higher teacher performance on evaluations, particularly in mathematics [and] science" (cited in Wilson, Floden, Ferrini-Mundy, 7). Additionally, while "one of the most heated debates concerning teacher preparation is the extent to which pedagogical skills and knowledge are necessary in addition to a solid grasp of subject matter," some scholars argue that current research fails to indicate the best way for new teachers to acquire such knowledge and skills, thus "open[ing] the door to the consideration of alternative preparation routes" (Allen, 2003, 5). Georgia's Professional Standards Commission has found that attrition rates for teachers certified via alternative and traditional routes are the same (GPSC, 2008). Research indicates that high-quality alternative certification programs, especially those designed for specific localities, can prepare teachers who will be as effective as traditionally trained teachers (Allen, 2003, 6). We expect that most STEM Teach for Georgia recruits will choose to complete local GaTAPP certification programs. In addition, this program will supplement the work of the local schools and RESAs by providing the teacher-recruits with the support and professional development they need to become effective in the classroom.

Induction programs for new teachers are crucial to producing effective teachers as well as to retaining teachers long-term. Approximately 30% of new teachers leave the profession within their first 3 years of teaching; after 5 years, more than 45% have left (Graziano). The Alliance cites studies that have found that "student achievement gains for new teachers in a comprehensive induction program were as high as those of fourth-year teachers who had not received induction." The Alliance recommends the following for effective new teacher induction programs: (1) all new teachers should have an assigned coach/mentor; (2) new teachers should participate in an external network of educators; (3) schools should provide new teachers with supportive communication from their school leaders. Studies consistently find that connecting new teachers with experienced teachers in formal mentoring relations may reduce the high teacher attrition rates, but research also indicates that new teachers often have limited opportunities to learn from experienced teachers in their school (Weems and Rogers, 2010). Ideally, the mentor teacher should be in the same field as the novice teacher, and schools should foster opportunities for new teacher collaboration with other teachers in their subjects (Graziano). The STEM Teach for Georgia program will build on these recommendations in the design of its induction program.

#### **Section 4: Quality of Project Evaluation**

The project management team is committed to monitoring the progress of the project through both formative and summative assessment methods. Formative assessment activities will provide information that can be used to modify program activities, and will be collected and reviewed on an on-going basis. Summative assessment activities will provide data on overall program effectiveness and will be collected and analyzed at logical points in time, such as end of courses and end of teaching terms. Some examples of the kinds of assessment activities we will engage in are provided below.

Applicant and cohort demographics will be maintained in a student database, and a matrix outlining the effectiveness of various recruiting strategies will be developed in order to help ascertain the most effective recruiting strategies. An application essay will provide both a baseline measure of students' motivation to teach and motivation to work in hard-to-staff regions of Georgia.

As described in Section 3, in the summer prior to teaching, teacher-recruits will enroll in CETL 4001: Principles of Learning and Teaching I and a one-hour regional teaching seminar. Satisfaction with the courses will be assessed using surveys, and course artifacts will provide a basis for evaluating student learning in the courses. Teaching self-efficacy will be assessed at the beginning of the program, and at



the end of the teaching experience to quantify gains in teacher efficacy over the course of training and experience in the classroom.

Teacher-recruits will be a part of an online professional learning community and will participate in ongoing professional development activities offered both by Georgia Tech and by their school districts and RESAs. Engagement patterns and satisfaction surveys at the conclusion of each professional development activity and at key points in the online learning community will allow us to monitor student engagement and satisfaction with these support elements. Focus groups will explore the experiences associated with starting a STEM teaching career in a rural area, and will address the perceived adequacy of support they are receiving from their school, their peers, and Georgia Tech. Teacher-recruits will also complete a professional growth plan that will require them, at a minimum, to engage in goal setting, reflective analysis, and discussion of progress with a mentor teacher on a bi-weekly basis.

The program is designed to enable teacher-recruits to display adequate and appropriate levels of performance on the Teacher Effectiveness Measure (TEM). Observation of the teacher-recruit by the principal and assistant principals during the delivery of instruction and at other times as appropriate will provide information to the teacher-recruit and to the assessment team concerning the adequacy of the teacher-recruit's performance in the classroom and suggested strategies for remediation of any deficiencies.

Targeted surveys will allow us to gather data regarding satisfaction with program components and satisfaction with teaching placement and experience, while focus groups at key points will explore the relevance of the pre-teaching training and professional development and certification activities to their work and success in the classroom. At the end of the two-year program, students will indicate their future intentions in an overall 'Teach for Georgia' program-satisfaction survey.

We also expect that students in Teach for Georgia classrooms will have comparable or higher pass rates on the relevant STEM-focused End-of-Course tests relative to historical school performance levels on those tests. Additionally, we anticipate that students in these classes will have comparable or higher pass rates on these tests than students in courses by teachers at the same school with a equivalent level of experience.

Assessment data collected from these activities will ensure that we are developing an effective new method for educating STEM teachers to meet the needs of rural counties. Such evidence will provide the information necessary for soliciting additional funds that can extend the project beyond the length and scope of this Georgia Race to the Top STEM Innovation Fund project.

## **Section 5: Quality of Project Management Plan**

The following individuals will make up the management team for this project:

- Donna Llewellyn, Ph.D. – Principal Investigator  
Donna will be in charge of the administration and coordination of this project.

Donna Llewellyn is the Director of the Georgia Tech Center for the Enhancement of Teaching and Learning (CETL). Donna was the Principal Investigator of the National Science Foundation (NSF) funded project, *Student and Teacher Enhancement Partnership (STEP)*, which, for ten years (2001-2011),

trained and then placed STEM graduate students in metro-Atlanta high schools to work with math and science teachers and students. Currently, Donna is the Co-PI in charge of research on another NSF project (*SLIDER: Science Learning Integrating Design, Engineering, and Robotics*) which is developing and implementing an inquiry curriculum based on engineering design principles and LEGO robotics kits for eighth grade physical science classes in three middle schools in Georgia. The PI for this project is Dr. Richard Millman, the Director of Georgia Tech's K-12 outreach center, CEISMC. In addition, Donna is the co-PI on an NSF project, *Tech to Teaching*, which is working to facilitate the pathway to a teaching career for Georgia Tech students (both K-12 and post-secondary teaching is included in this project). The PI for this project is Dr. Rafael Bras, the Provost of Georgia Tech. For over ten years, Donna Llewellyn has taken a leadership role in education-related sponsored projects. The combined budget for these projects is approximately \$10M. This experience will be invaluable in the administration of this Teach for Georgia project.

- Beth Spencer, MA, M.Ed. – Project Director

Beth will be in charge of the recruitment of the participants into this project, communication with the participating school districts and RESAs, and will take the lead on selection and placement processes.

Beth Spencer is the Director of Pre-Teaching initiatives at Georgia Tech, and the main campus point of contact for students and alumni interested in K-12 teaching. In her advising role, Beth helps students explore their options in K-12 education and plan their route to teacher certification. Beth also recruits for and participates in the administration of the Georgia Tech/Kennesaw State University and the Georgia Tech/Georgia State University NSF-funded Robert Noyce programs and partnerships.

- Caroline Noyes, Ph.D. – Training and Evaluation Director

Caroline will have two roles for this project. She will direct the evaluation effort, and she will provide the instruction for the summer training course.

Caroline Noyes is the Assistant Director of the Georgia Tech Office of Assessment. Trained as an educational psychologist, Caroline has taught both pre-service teachers and experienced teachers seeking advanced degrees. Caroline's education and work have focused on assessing student learning both in and outside of the classroom. Trained at the intersection of both education and psychology, Caroline has an understanding of the unique needs of beginning teachers, and has a wide repertoire of assessment methods from which to draw when engaging in both classroom assessment and program evaluation. As her intellectual pursuits turned increasingly towards broader applications of educational assessment and evaluation, she left the classroom, and moved to an administrative position focusing on both academic assessment of student learning and program evaluation. This administrative move has allowed Caroline to increase her use of qualitative assessment methods, and to enhance her skills in survey design. Currently, she design surveys to meet client needs, administer the survey, and provide an analysis of the survey results. Additionally, she conducts focus groups for various campus constituencies. providing a written report of the focus group data.

- Jessica Pater, MS – Collaboration Director

Jessica will take the lead on building the online collaborative community of participants and then using that community for induction and professional development support.

Jessica Pater is a Research Associate in the Georgia Tech Research Institute Information and Communications Lab. Jessica currently serves as the Associate Director of the Foundations for the Future Program at GTRI. In this role, Jessica oversees the daily activities of the program which includes

the professional development program *Explorers Guild* (currently in its 12<sup>th</sup> consecutive year of programming), oversight and research direction for the GT contributions to the Georgia CyberSafety Initiative, and the development and coordination of research programs like the Direct to Discovery Project of which GT is founding member.

- Sonia King – School Partner Lead

Sonia will take the lead in ensuring that the school district partners are fully involved in all aspects of this project.

Sonia King is the secondary math supervisor for Dougherty Schools. As such, she has the experience, insights, and connections to ensure that all decisions related to this project from training through placement and induction are designed and implemented to meet the needs of our rural school partners.

It is expected that we will add at least one more member to this team from one of the participating RESAs. The management team will communicate regularly using technology such as email, Skype, and T-Square (Georgia Tech's online collaboration platform). The Georgia Tech team members all work in close proximity so there will be weekly face-to-face meetings during the first year as the program is launched. In addition, there will be quarterly face-to-face meetings for the whole team (travel money is budgeted to assist with this) – these will rotate between the home institutions of the members. Further, the whole team will get together to interview, select, and place the participants of each cohort.

## **Section 6: Quality of Sustainability Plan**

*STEM Teach for Georgia* is a unique experience that would not be possible in the current economic climate without programs like the RT3 Innovation Fund opportunity. All associated partners within this collaboration have demonstrated high levels of success and sustainability through other programs and projects associated with issues surrounding the teacher pipeline, teacher preparation, and ongoing development and support. The partnership is dedicated to making this a successful project and will be eager to find ways to continue the activities within this project beyond the three-year term outlined by the Innovation Fund program.

One of the key sustainability issues for this project is that there is really only one component that will require substantial financial commitment after the end of the grant funding period - the individual teacher's salaries. Other components of this proposal are being leveraged from existing sustained projects taking place within Georgia Tech. The project team is confident that throughout the life of this project, the relationship between the local school systems and the Georgia Tech partnership will strengthen to the point where the systems will actively recruit pre-certified teachers from Georgia Tech based on their positive experiences with the teachers recruited, trained, and placed through this project. In addition, it is expected that other parties such as local industries, and even perhaps TfA, will observe the success of this program and will be ready to offer support at that time.

The project team views this as a seed grant to test the validity of this type of approach. Based on the extensive evaluation plan, the team expects to illustrate that activities carried out in this project will show levels of success that would enable the project team to seek other external funding to scale the activities beyond the defined school systems within this proposal to the entire region. Funding opportunities for this type of activities could be funded by several government, private, and non-profit agencies.

GOVERNOR'S OFFICE OF PLANNING AND BUDGET				
RACE TO THE TOP INNOVATION FUND BUDGET FORM				
Name of Partnership: STEM Teach for Georgia		Applicants requesting Venture grants should complete the column under "Project Year 1." Applicants requesting funding for Enterprise grants should complete all applicable columns. Please read all instructions before completing form.		
SECTION A - BUDGET SUMMARY				
INNOVATION FUND COSTS				
Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Total (d)
1. Personnel	20812.24	20812.24	10406.12	52030.61
2. Fringe Benefits	5432.00	5432.00	2716.00	13580.00
3. Travel	5000.00	5000.00	5000	15000.00
4. Equipment	0.00	0.00	0.00	0.00
5. Supplies	5000.00	5000.00	5000.00	15000.00
6. Contractual (Inter-divisional Transfer)	15330.00	15330.00	15330.00	45990.00
7. Construction	0.00	0.00	0.00	0.00
8. Other	40000.00	106000.00	112000.00	258000.00
9. Total Direct Costs (lines 1-8)	91574.24	157574.24	150452.12	399600.60
10. Indirect Costs*	7624.42	29664.42	57792.21	95081.06
11. Training Stipends	0.00	154400.00	442800	597200.00
12. Total Costs (lines 9-11)	99198.66	341638.66	651044.33	1091881.66
SECTION C - BUDGET NARRATIVE (see instructions)				

**Funds from the Innovation Fund:**

**Personnel:**

Donna Llewellyn (PI) will be supported for one month of years 1 and 2, and for 0.5 of a month for year 3. This time will be spent coordinating the project and taking care of all of the administrative duties. In addition, Donna will help to ensure that the upper administration at Georgia Tech are aware of the project and are ready to support it.

Beth Spencer (Project Director) will be supported for two months each of years 1 and 2 and for 1 month for year 3. This time will be spent recruiting students into the program, communicating and coordinating with the school district and RESA partners, and leading the selection and placement processes.

**Travel:**

The travel money will be used for the following purposes:

- Support for the GT project team members to visit the partner school districts and RESAs
- Support for the school district and RESA team members to visit GT
- Support for teachers from the partner districts to come to GT to present during the summer training course
- Support for the participating novice teachers to attend meetings or training sessions during the first summer hosted at the school or RESA

- Support to travel to help disseminate results from the project

**Supplies:**

The M&S support will allow us to purchase materials for the training and professional development parts of the program. In addition, there will be a process where the participating teachers can request supplies for their classrooms and funds will be competitively allocated.

**Contractual:**

We will contract with the Georgia Tech Center for Advanced Communications Policy and their Foundations for the Future program partner. This will help with the groundwork for our online induction programs. Note that the Institute overhead rate is already built into the contract rate so there is no additional overhead charged on that line item.

**Other:**

There are several components of the “Other” category –

- Summer program – we have budgeted \$5000 per student for the summer program.
- Academic year program – we budgeted \$10000 for each cohort in the classroom during an academic year (cohort one will be in the classroom during year two and both cohorts will be in the classroom during year three). This money will be available to pay for induction programming at the district or RESA level, to help the novice teachers with equipment or supplies needs that cannot be met with the M&S budget, and to support other professional development programming that we will develop.
- Certification – we will pay up to \$7500 per participant for the costs incurred in the route to certification.
- GIFT program charge – we will place each participant in the Georgia Tech GIFT (Georgia Internships for Teachers) program during the summer after their first year in the classroom. There is a \$1500 administrative charge for each participant in this program.
- Assessment – we will work with the Office of Assessment to cover all of our assessment and evaluation needs for this project. We have budgeted \$20,000 per year for this effort.

**Training Stipends:**

There are two types of training stipends included in this budget:

- The teachers receive \$5100 for participating in the GIFT program.
- We have budgeted \$33,500 for each academic year for each novice teacher placed in this program. This is in line with the entry level salaries in these districts.

**Leveraged Resources from Georgia Tech**

We will make use of several programs at Georgia Tech that are supported through other programs, thus leveraging the rich resources that are available. Here are some of the details:

1. The *Tech to Teaching* project, supported jointly by the National Science Foundation (NSF) and Georgia Tech, provide the salaries for instructors of CETL 4001 classes. We will use one of the supported sections of this class each summer for our training program.
2. The teachers will have access to the F3 Explorers Guild program. Each month during the academic year (Sept – May), there is a two-hour training course that is offered free of charge to educators. These courses are taught at the Atlanta GTRI campus but they are also webcast out to reach those not geographically located in the metro area. Over the past 10 years, the workshops have offered participants the opportunity to learn new technology tools, cutting edge applications

to assist in the classroom, and strategies for increasing their funding base. These activities are supported through by the State of Georgia through the Foundations for the Future funding.

3. The GTRI Conference Center has 10,000 square feet of prime event space. The facility was designed as a high-tech event space; and the Center also features the latest audio visual equipment, as well as webcasting, video and teleconferencing capabilities. Also included in the Conference Center is the F3 Forum which is a room designed for K-12 education training. This space is free for Georgia Tech employees to use and also offers free parking for meeting/conference attendees.

## **Appendices/Attachments**

- A. MOU
- B. Assurances and Certifications
- C. Scope of Work template
- D. Project Evaluation template
- E. Financial Statement/Audit
- F. Letters of Support
- G. References

## MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MOU) is entered into by and between the Governor's Office of Planning and Budget (OPB) and STEM Teach for Georgia (Partnership). The purpose of this agreement is to establish a framework of collaboration, as well as articulate specific roles and responsibilities in support of the State in its implementation of approved Innovation Fund projects.

### I. SCOPE OF WORK

Exhibit 1, the Preliminary Scope of Work, indicates the work that the Partnership is agreeing to implement.

### II. PROJECT ADMINISTRATION

#### A. PARTNERSHIP RESPONSIBILITIES

The Partnership agrees to:

- 1) Implement the plan as identified in Exhibit I of this agreement;
- 2) Actively participate in all relevant convenings, communities of practice, or other practice-sharing events that are organized or sponsored by OPB, the Georgia Department of Education, the Governor's Office of Student Achievement and the US Department of Education;
- 3) Post to any website specified by the State in a timely manner, all non-proprietary products and lessons learned using funds associated with the Innovation Fund;
- 4) Participate, as requested, in any evaluations of this grant conducted by the State or agency conducting business on behalf of the State;
- 5) Be responsive to State requests for information including the status of the project, project implementation, outcomes, and any problems anticipated or encountered; and
- 6) Participate in meetings and telephone conferences with the State to discuss (a) progress of the project, (b) potential dissemination of resulting non-proprietary products and lessons learned, (c) plans for subsequent years of the Innovation Fund grant period, and (d) other matters related to the Innovation Fund grant and associated plans.

#### B. STATE RESPONSIBILITIES

The State agrees to:

- 1) Timely distribute the Partnership's grant during the course of the project period;
- 2) Provide feedback on the Partnership's status updates, annual reports, any interim reports, and projects plans and products; and
- 3) Identify sources of technical assistance for the project.

#### C. JOINT RESPONSIBILITIES

- 1) OPB and the Partnership will each appoint a key contact person for the Innovation Fund grant.
- 2) These key contacts from OPB and the Partnership will maintain frequent communication to facilitate cooperation under this MOU.
- 3) State and Partnership grant personnel will work together to determine appropriate timelines for project updates and status reports throughout the grant period.
- 4) State and Partnership grant personnel will negotiate in good faith to continue to achieve the overall goals of the Innovation Fund.

#### D. STATE RECOURSE FOR PARTNERSHIP NON-PERFORMANCE

If OPB determines that the Partnership is not meeting its goals, timelines, budget, or annual targets or is not fulfilling other applicable requirements, OPB will take appropriate enforcement action, which could include a collaborative process between OPB and the Partnership, or any of the enforcement measures



**VI. SIGNATURES**

**Partnership Executive Official – required:**

Vanessa Daniels 6/28/11

Signature/Date

Vanessa Daniels, Division Manager

Print Name/Title

Partnership Member

**Partnership Member – required:**

Don C. Llewellyn 23 June 2011

Signature/Date

Don C. Llewellyn, Director CETL

Print Name/Title

**Partnership Member – required:**

\_\_\_\_\_  
Signature/Date

\_\_\_\_\_  
Print Name/Title

**Governor's Office of Planning and Budget – required:**

\_\_\_\_\_  
Signature/Date

\_\_\_\_\_  
Print Name/Title

## ASSURANCES

The Applicant hereby assures and certifies compliance with all federal statutes, regulations, policies, guidelines and requirements, including OMB Circulars No. A-21, A-87, A-110, A-122, A-133; E.O. 12372 and Uniform Administrative Requirements for Grants and Cooperative Agreements 28 CFR, Part 66, Common rule, that govern the application, acceptance and use of federal funds for this federally-assisted project.

Also the Applicant assures and certifies that:

1. It possesses legal authority to apply for the grant; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing body, authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information
2. It will comply with requirements of the provisions of the Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (P.L. 91-646) which provides for fair and equitable treatment of persons displaced as a result of federal and federally - assisted programs.
3. It will comply with provisions of federal law which limit certain political activities of employees of a State or local unit of government whose principal employment is in connection with an activity financed in whole or in part by federal grants. (5 USC 1501, et seq.)
4. It will comply with the minimum wage and maximum hours provisions of the Federal Fair Labor Standards Act if applicable.
5. It will establish safeguards to prohibit employees from using their positions for a purpose that is or gives the appearance of being motivated by a desire for private gain for themselves or others, particularly those with whom they have family, business, or other ties.
6. It will give the sponsoring agency or the Comptroller General, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the grant.
7. It will comply with all requirements imposed by the federal sponsoring agency concerning special requirements of law, program requirements, and other administrative requirements.
8. It will insure that the facilities under its ownership, lease or supervision which shall be utilized in the accomplishment of the project are not listed on the Environmental Protection Agency's (EPA) list of Violating Facilities and that it will notify the federal grantor agency of the receipt of any communication from the Director of the EPA Office of Federal Activities indicating that a facility to be used in the project is under consideration for listing by the EPA.
9. It will comply with the flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973, Public Law 93-234, 87 Stat. 975, approved December 31, 1976, Section 102(a) requires, on and after March 2, 1975, the purchase of flood insurance in communities where such insurance is available as a condition for the receipt of any federal financial assistance for construction or acquisition purposes for use in any area that has been identified by the Secretary of the Department of Housing and Urban Development as an area having special flood hazards. The phrase "federal financial assistance" includes any form of loan, grant, guaranty, insurance payment, rebate, subsidy, disaster assistance loan or grant, or any other form of direct or indirect federal assistance.
10. It will assist the federal grantor agency in its compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (16 USC 470), Executive Order 11593, and the Archeological and Historical Preservation Act of 1966 (16 USC 569 a-1 et seq.) by (a) consulting with the State Historic Preservation Officer on the conduct of investigations, as necessary, to identify properties

listed in or eligible for inclusion in the National Register of Historic Places that are subject to adverse effects (see 36 CFR Part 800.8) by the activity, and notifying the federal grantor agency of the existence of any such properties, and by (b) complying with all requirements established by the federal grantor agency to avoid or mitigate adverse effects upon such properties.

11. It will comply, and assure the compliance of all its sub-grantees and contractors, with the applicable provisions of Title I of the Omnibus Crime Control and Safe Streets Act of 1968, as amended, the Juvenile Justice and Delinquency Prevention Act, or the Victims of Crime Act, as appropriate; the provisions of the current edition of the Office of Justice Programs Financial and Administrative Guide for Grants, M7100.1; and all other applicable federal laws, orders, circulars, or regulations.
12. It will comply with the provisions of 28 CFR applicable to grants and cooperative agreements including Part 18, Administrative Review Procedure; Part 20, Criminal Justice Information Systems; Part 22, Confidentiality of Identifiable Research and Statistical Information; Part 23, Criminal Intelligence Systems Operating Policies; Part 30, Intergovernmental Review of Department of Justice Programs and Activities; Part 42, Nondiscrimination/Equal Employment Opportunity Policies and Procedures; Part 61, Procedures for Implementing the National Environmental Policy Act; Part 63, Floodplain Management and Wetland Protection Procedures; and federal laws or regulations applicable to Federal Assistance Programs.
13. It will comply, and all its contractors will comply, with the nondiscrimination requirements of the Omnibus Crime Control and Safe Streets Act of 1968, as amended, 42 USC 3789(d), or Victims of Crime Act (as appropriate); Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973, as amended; Subtitle A, Title II of the Americans with Disabilities Act (ADA) (1990); Title IX of the Education Amendments of 1972; the Age Discrimination Act of 1975; Department of Justice Non-Discrimination Regulations, 28 CFR Part 42, Subparts C, D, E, and G; and Department of Justice regulations on disability discrimination, 28 CFR Part 35 and Part 39.
14. In the event a federal or state court or federal or state administrative agency makes a finding of discrimination after a due process hearing on the grounds of race, color, religion, national origin, sex, or disability against a recipient of funds, the recipient will forward a copy of the finding to the Office for Civil Rights, Office of Justice Programs.
15. It will provide an Equal Employment Opportunity Program if required to maintain one, where the application is for \$500,000 or more.
16. It will comply with the provisions of the Coastal Barrier Resources Act (P.L. 97-348) dated October 19, 1982 (16 USC 3501 et seq.) which prohibits the expenditure of most new federal funds within the units of the Coastal Barrier Resources System.
17. It will comply will all ARRA requirements. All funds must be spent with an unprecedented level of transparency and accountability. Accordingly, recipients of ARRA funds must maintain accurate, complete, and reliable documentation of all ARRA expenditures.

Authorizing Official:

*Vannessa Daniels, Division Mgr 6/23/11*  
Signature and Title Date

## NON-SUPPLANTING CERTIFICATION

Regulations require certification to the effect that grant funds will not be used to increase state or local funds that would, in the absence of such grant aid, be made available for the purpose of this grant program.

### CERTIFICATION:

I certify that grant funds will not be used to supplant state or local funds that would otherwise be available for implementation of this grant program.

I further certify that the program proposed in the grant application meets all the requirements of the applicable Race to the Top Innovation Fund Request for Proposal; that all the information presented is correct and that the applicant will comply with the provisions of the Governor's Office of Planning and Budget, all applicable federal and state laws, and the above mentioned certification should a grant be awarded.

Authorizing Official:

*Vanessa Daniels*

Signature

*Division Manager*

Title

*6/23/11*

Date

**IMMIGRATION AND SECURITY FORM**

A. In order to insure compliance with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act OCGA 13-10-90 et.seq., Contractor must initial one of the sections below:

Contractor has 500 or more employees and Contractor warrants that Contractor has complied with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act by registering at <https://www.vis-dhs.com/EmployerRegistration> and verifying information of all new employees; and by executing any affidavits required by the rules and regulations issued by the Georgia Department of Labor set forth at Rule 300-10-1-.01 et.seq. Contractor has 100-499 employees and Contractor warrants that no later than July 1, 2008, Contractor will register at <https://www.visdhs.com/EmployerRegistration> to verify information of all new employees in order to comply with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act; and by executing any affidavits required by the rules and regulations issued by the Georgia Department of Labor set forth at Rule 300-10-1-.01 et.seq. Contractor has 99 or fewer employees and Contractor warrants that no later than July 1, 2009, Contractor will register at <https://www.visdhs.com/EmployerRegistration> to verify information of all new employees in order to comply with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act; and by executing any affidavits required by the rules and regulations issued by the Georgia Department of Labor set forth at Rule 300-10-1-.01 et.seq.

B. Contractor warrants that Contractor has included a similar provision in all written agreements with any subcontractors engaged to perform site under this Contract.

Authorizing Official:

*Vanessa Daniels* Div Manager 6/23/11  
Signature and Title Date



**OTHER CERTIFICATIONS**

Regulations require certification to the effect that grant funds will not be used to increase state or local funds that would, in the absence of such grant aid, be made available for the purpose of this grant program.

1. Any person associated with the program that has reasonable cause to believe that a child has been or is being abused, shall be required to report or cause report to be made with regard to the abuse as provided in O.C.G.A. 19-7-5.
2. Background investigations (Georgia Crime Information Center) are required on all persons with direct contact with children and youth. It is left to the discretion of the Partnership to determine the methodology for completing these investigations.
3. Establish/enforce an Internet Security Policy when minor participants and/or staff have online access (supervised or unsupervised). This includes any technology provided by PLC funding and technology used by participants.
4. The grantee agrees to comply with Public Law 103-227, also known as the Pro-Children Act of 1994, which requires that smoking not be permitted in any portion of any indoor facility owed or leased or contracted for by the grantee and used routinely or regularly for the provision of healthy care, day care, early childhood development site, education or library site to children under the age of 18. Failure to comply with the provisions of the law may result in the imposition of a civil monetary penalty up to \$1,000 for each violation and/or the imposition of an administrative compliance order on the grantee.

Authorizing Official:

Vannessa Daniels  
Signature

Division Manager                      6/23/11  
Title    Date

Appendix C: Scope of Work Template

RACE TO THE TOP INNOVATION FUND SCOPE OF WORK				
Name of Partnership: <i>STEM Teach for Georgia</i>				
Goal 1: Recruitment/Selection/Placement				
Activity	Implementation Steps	Timeline	Responsible Partner	Funds Source
Recruit participants	Create marketing and application materials (brochure, application, website, etc.)	9/2011 – 11/2011 and ongoing	Beth Spencer	Innovation Fund and internal resources
	Communicate with appropriate GT offices and individuals	Ongoing	Beth Spencer	Innovation Fund and internal resources
	Collaborate with appropriate departments and individuals at other universities	Ongoing	Beth Spencer	Innovation Fund and internal resources
	Hold info sessions	Several times per year	Beth Spencer	Innovation Fund and internal resources
Select participants	Review applications	March 2012 and 2013	Beth Spencer with team	Innovation Fund and internal resources
	Interview finalists	March 2012 and 2013	Beth Spencer with team	Innovation Fund and internal resources
Place participants	Review application and interview materials in conjunction with school personnel to find best matches	April 2012 and 2013	Beth Spencer with team	Innovation Fund and internal resources



Appendix C: Scope of Work Template

<b>Goal 2: Training</b>				
Activity	Implementation Steps	Timeline	Responsible Partner	Funds Source
Basic Educational Psychology training	Offer section of CETL 4001	Summer 2012 and 2013	Caroline Noyes	Tech to Teaching (existing funding)
Orientation to school district and teaching in rural Georgia	Special topics CETL course (“Regional Teaching Seminar”)	Summer 2012 and 2013	Caroline Noyes and F3 Program	Innovation Fund
<b>Goal 3: Induction</b>				
Activity	Implementation Steps	Timeline	Responsible	Funds Source
Induction Training	Develop implementation training	3/12 – 5/12	F3 Program	Innovation Funds
	Execution of training	7/12, 7/13	F3 Program	Innovation Funds
	Refinement of training	5/13	F3 Program	Innovation Funds
Professional Learning Community	Convene each cohort	6/12, 6/13	F3 Program	Innovation Funds
	Manage and support online community	Ongoing	F3 Program	GT/F3 existing infrastructure
Ongoing Professional Development	Development of needs-based learning modules	Fall 2013, Fall 2014	F3 Program	Innovation Funds
	Sustaining professional development courses	Ongoing	F3 Program	F3 Explorers Guild
Georgia Intern-Fellowships for Teachers	Place teachers in lab or industrial settings	Spring 2012 and 2013	GIFT Program	Innovation Fund and internal resources
	Teachers participate in program	Summer 2012 and 2013	GIFT Program	Innovation Fund

Appendix C: Scope of Work Template

<b>Goal 4: Pathway to Certification</b>				
Activity	Implementation Steps	Timeline	Responsible Partner	Funds Source
Help participants choose individual route to certification (MAT, GaTAPP, OYSP)	Hold Info Sessions and one-on-one advising sessions	Spring of 2012 and 2013 (and ongoing)	Beth Spencer	Innovation Fund and internal resources
	Facilitate participant selection and registration for appropriate GACE exams; MAT applicants will need to take GRE	Spring and Summer of 2012 and 2013	Beth Spencer	GT Pre-Teaching Office has GACE study materials
	Assist participants choosing MAT option with selecting program (online vs. traditional) and completing application	Spring and Summer of 2012 and 2013	Beth Spencer	Innovation Fund and internal resources
Participants join or enroll in approved teacher certification program	GaTAPP or OYSP participants will join appropriate program through RESA	Summer 2012 and 2013	SW GA RESA and/or Okefenokee RESA	Innovation Fund
	MAT participants will enroll in appropriate program at college/university or through Georgia ONmyLINE	Summer 2012 and ongoing	N/A	Innovation Fund will pay partial tuition and fees

Appendix D: Evaluation Template

Georgia benefits from a measurably stronger commitment from public and private sectors to support and advance positive academic outcomes for students.		
Indicator(s)	Data collection method(s)	Frequency of data collection/review
<p>Dollar amount raised or leveraged to support ongoing implementation of proposed initiative</p> <p>Leveraging Foundations for Future and Tech to Teaching \$\$</p> <p>School system interest in assuming the cost of the teachers based on the successful output of the program</p> <p>Local industry and non-profit organizations interest in contributing to the cost of the program based on the successful output of the program</p>	<p>Analysis of expenditures and resources used</p> <p>Satisfaction survey completed by school district personnel (e.g., school principal, school instructional lead teacher)</p> <p>Focus group addressing school and student needs</p> <p>Communication with local industries and appropriate non-profit organizations</p>	<p>Quarterly</p> <p>Yearly</p> <p>Beginning of Year 1, End of Years 2 and 3</p> <p>Ongoing</p>
Georgia benefits from an increased number and percentage of students and teachers who will have access to innovative programs, strategies, and practices related to applied learning and teacher/leader recruitment and development		
Indicator(s)	Data collection method(s)	Frequency of data collection/review
<p>Number of people served each year by the proposed initiative</p> <p>Year 1: none</p> <p>Year 2: 4 teachers, 500 students*</p> <p>Year 3: 12 teachers, 1500 students*</p> <p>* assuming each teacher teaches 5 classes @25 students/class</p> <p>Professional development modules will be open to all teachers in the school or affiliated RESA</p>	<p>Application data: matrix of recruitment strategies and demonstrated interest; analysis of interest in teaching STEM in rural counties</p> <p>Enrollment patterns in ongoing professional development modules</p>	<p>Quarterly</p> <p>End of each module</p>

Appendix D: Evaluation Template

Georgia benefits from a stronger understanding of the types of innovative programs, strategies, and practices that will lead to positive improvements in applied learning, teacher induction, and homegrown teacher pipeline efforts		
Indicator(s)	Data collection method(s)	Frequency of data collection/review
<p>Curriculum</p> <p>Pre-teaching curriculum Professional development Certification process</p>	<p>Analysis of course artifacts; course performance; satisfaction surveys, focus groups</p>	<p>Focus groups will occur at least every six months; course performance, including evaluation of artifacts will occur in all courses, at natural points in the curriculum (tests, final exams, papers, assignments, etc.); satisfaction surveys will be completed at the end of each course, professional development unit, and professional development module.</p>
<p>Induction</p> <p>Learning community Professional development modules Mentoring</p>	<p>Engagement patterns; surveys; focus groups, completion of a professional growth plan (goal setting, reflective analysis, discussion with mentor teacher); teacher self-efficacy measure</p>	<p>Engagement patterns will be monitored on an ongoing basis; focus groups will occur at least every six months; professional growth plans will be completed throughout the year, and discussed with mentors on a biweekly basis. Teacher self-efficacy will be measured during their initial coursework, at the end of their first year of teaching, and at the end of their 2<sup>nd</sup> year of teaching.</p>

Appendix D: Evaluation Template

Number and percentage of teachers and/or school leaders that earned a specified TEM score	All teacher-recruits will be expected to earn “satisfactory” TEM scores (as yet to be determined by the state)	Yearly; or as appropriate to the district they are in
Georgia benefits from improved student outcomes		
Indicator(s)	Data collection method(s)	Frequency of data collection/review
<p>Select at least one student outcome and determine the number and percentage of students that improved by a specific amount.</p> <p>Students enrolled in courses taught by <i>STEM Teach for Georgia</i> teacher-recruits will have a comparable or higher pass rate on the relevant STEM-focused End-of-Course Tests than students in courses taught by teachers at the same school with a comparable level of experience.</p>	<p>Student performance on end-of-course tests will be examined.</p> <p>Historical data will also be used as a comparison dataset.</p>	<p>Yearly</p>

**Georgia Tech Research Corporation  
Financial Statements  
With  
Independent Auditors' Report  
For the Year Ended June 30, 2010**

# Georgia Tech Research Corporation

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## Independent Auditors' Report

To the Board of Trustees of  
Georgia Tech Research Corporation:

We have audited the accompanying financial statements of the business-type activities and each major fund of the Georgia Tech Research Corporation (GTRC), a component unit of the State of Georgia, as of and for the year ended June 30, 2010, which collectively comprise GTRC's basic financial statements as listed in the table of contents. These financial statements are the responsibility of GTRC's management. Our responsibility is to express opinions on these financial statements based on our audit.

We conducted our audit in accordance with the auditing standards generally accepted in the United States of America as established by the American Institute of Certified Public Accountants and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and the significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and each major fund of GTRC as of June 30, 2010, and the respective changes in financial position and cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

In accordance with *Government Auditing Standards*, we have also issued our report dated September 17, 2010 on our consideration of GTRC's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be considered in assessing the results of our audit.



The management's discussion and analysis on pages 3 through 6 is not a required part of the basic financial statements but is supplementary information required by accounting principles generally accepted in the United States of America. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the required supplementary information. However, we did not audit the information and express no opinion on it.

Cherry, Bekaert & Holland, S.L.P.

Atlanta, Georgia  
September 17, 2010

# Georgia Tech Research Corporation

## Management's Discussion and Analysis June 30, 2010

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### Introduction

The Georgia Tech Research Corporation (GTRC) was chartered on April 13, 1937, as the Industrial Development Council, a not-for-profit corporation affiliated with the Georgia Institute of Technology (GIT), a unit of the University System of the State of Georgia. GTRC was established for the purpose of engaging in sponsored research for scientific, literary and educational purposes, or related objectives. On February 9, 1946, the corporate charter was amended and included a provision to change the name from the Industrial Development Council to the Georgia Tech Research Institute (GTRI). On April 6, 1984, GTRI amended its corporate charter to change the name to the Georgia Tech Research Corporation.

GTRC serves as the contracting entity for the GIT which performs research under the Office of Management and Budget (OMB) Circulars A-21 and A-110.

Effective July 1, 1998, the Georgia Tech Applied Research Corporation (GTARC) was established as a component of GTRC. GTARC was organized as the contracting entity for units of the GIT performing research under the cost principles of OMB Circular A-122 and Federal Acquisition Regulations (FAR) 31.2.

GTRC, and its component unit, GTARC (hereinafter collectively referred to as GTRC), enter into contracts and grant agreements with various organizations, including Federal agencies, and subcontracts with GIT to provide services in connection with these agreements. As part of the relationship, payments occur between GIT and GTRC for certain sponsored project expenditures and research administration.

In a Memorandum of Understanding (MOU) dated April 1, 1953, the Board of Regents of the University System of Georgia authorized GTRC (then GTRI) to serve as the official grantee for all contracts and grants for the conduct of sponsored research at the GIT. The MOU also assigned all intellectual property developed through the performance of contracts subcontracted to the GIT to GTRC. GTRC is the administrative organization for discoveries, innovations, inventions, patents and copyrights and is responsible for intellectual property management including patenting and licensing. The ongoing objective of GTRC is to provide services to the GIT and, through those services, to enhance GIT's programs and goals as a research institution.

### Description of the Financial Statements

The statements of net assets, revenues, expenses and changes in net assets, and cash flows are designed to provide information which will assist in understanding the financial condition and performance of GTRC. The net assets are an indicator of GTRC's financial health. Over time, increases or decreases in net assets are another measure of the changes in GTRC's financial condition when considered with other non-financial facts.

The statement of net assets presents the assets, liabilities and net assets of GTRC.

## Georgia Tech Research Corporation

### Management's Discussion and Analysis – Continued June 30, 2010

The statement of revenues, expenses and changes in net assets presents the revenues earned and the expenses incurred during the year. Activities are reported as either operating or nonoperating. The financial reporting model classifies investment earnings and changes in the fair value of investments as nonoperating revenues. As a result, the financial statements may show operating losses that are then offset by nonoperating revenues from a total financial perspective.

The statement of cash flows presents information in the form of cash inflows and outflows summarized by operating, capital and related financing activities, and investing activities.

#### Financial Highlights

The condensed statement of net assets at June 30, 2010 and 2009 is shown below:

			<u>2010</u>	<u>2009</u>
	Georgia Tech Research Corporation	Georgia Tech Applied Research Corporation	Total Business-type Activities	Total Business-type Activities
<b>Assets</b>				
Current assets	\$ 85,432,666	\$ 58,561,811	\$ 143,994,477	\$139,780,280
Noncurrent assets	<u>1,268,635</u>	<u>-</u>	<u>1,268,635</u>	<u>1,565,030</u>
Total assets	<u>\$ 86,701,301</u>	<u>\$ 58,561,811</u>	<u>\$ 145,263,112</u>	<u>\$141,345,310</u>
<b>Liabilities and Net Assets</b>				
Current liabilities	<u>\$ 70,496,233</u>	<u>\$ 37,587,661</u>	<u>\$ 108,083,894</u>	<u>\$104,923,917</u>
Net assets:				
Invested in capital assets	1,189,387	-	1,189,387	1,441,239
Unrestricted	<u>15,015,681</u>	<u>20,974,150</u>	<u>35,989,831</u>	<u>34,980,154</u>
Total net assets	<u>16,205,068</u>	<u>20,974,150</u>	<u>37,179,218</u>	<u>36,421,393</u>
Total liabilities and net assets	<u>\$ 86,701,301</u>	<u>\$ 58,561,811</u>	<u>\$ 145,263,112</u>	<u>\$ 141,345,310</u>

Current assets increased by \$4,214,197 or 3% from fiscal 2009, due primarily to an increase in research receivables. Research revenue increased, which in turn increased current receivables.

Noncurrent assets consist of investments and capital assets net of the associated accumulated depreciation. Noncurrent assets decreased by \$296,395 or 19%, primarily due to depreciation on capital assets and the net depreciation in the fair value of investments from 2009 to 2010.

## Georgia Tech Research Corporation

### Management's Discussion and Analysis – Continued June 30, 2010

Current liabilities increased \$3,106,977 or 3%, primarily due to an increase in accounts payable for direct research costs incurred and advances payments on research contracts.

Net assets represent the difference between GTRC's assets and liabilities. There was an increase in net assets of \$757,823 or 2%, which can primarily be attributed to increases in operating revenue which was partially offset by increases in operating expenses.

The condensed statement of revenues, expenses and changes in net assets for the years ended June 30, 2010 and 2009 is shown below:

			<u>2010</u>	<u>2009</u>
	Georgia Tech Research Corporation	Georgia Tech Applied Research Corporation	Total Business-type Activities	Total Business-type Activities
Operating revenues	\$ 276,976,806	\$ 196,251,214	\$ 473,228,020	\$ 419,752,951
Operating expenses	<u>(276,139,361)</u>	<u>(196,364,175)</u>	<u>(472,503,536)</u>	<u>(421,039,712)</u>
Loss (income) from operations	837,445	(112,961)	724,484	(1,286,761)
Nonoperating revenues, net	<u>20,341</u>	<u>12,998</u>	<u>33,339</u>	<u>130,797</u>
(Increase) decrease in net assets	<u>857,786</u>	<u>(99,963)</u>	<u>757,823</u>	<u>(1,155,964)</u>
Net assets, beginning of year	<u>15,347,282</u>	<u>21,074,113</u>	<u>36,421,395</u>	<u>37,577,357</u>
Net assets, end of year	<u>\$ 16,205,068</u>	<u>\$ 20,974,150</u>	<u>\$ 37,179,218</u>	<u>\$ 36,421,393</u>

Operating revenues consist primarily of research contracts, licensing fees and royalty revenues. During fiscal 2010, operating revenues increased by \$53,475,069 or 13%, primarily due to increased research project revenues.

Operating expenses increased by \$51,463,824 or 12%, primarily due to increased direct research costs resulting from increased research contract activity.

Nonoperating revenues decreased by \$97,458 or 75%, primarily due to a decrease in interest income.

# Georgia Tech Research Corporation

## Management's Discussion and Analysis – Continued June 30, 2010

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### **Economic Outlook**

The Georgia Institute of Technology received a record \$557.8 million in sponsored research awards in fiscal year 2010 continuing a trend of accelerated growth in external research support. A relatively small portion of the growth in awards is accounted for by funding through the America Recovery and Reinvestment Act (ARRA). The conclusion of the stimulus program in 2011 will not unduly influence research funding since a large component of Georgia Tech's ARRA funding involved construction of a new facility. Interest earned on deposits remains low due to the prevailing low interest rates on secure deposits. Georgia Tech continues to be proactive in working with a diverse set of public and private sponsors to support growth across a spectrum of topics. Certain areas of research continue to promise opportunities for funding for innovative research. These include energy/alternative energy, medical device innovation, nanotechnology, high performance computing and computational sciences, and medical records informatics.

### **Requests for Information**

This financial report is designed to provide a general overview of Georgia Tech Research Corporation's finances for all those with an interest in the corporation's finances. Questions concerning any of the information provided in this report or requests for additional financial information, including the separately issued financial statements for Georgia Tech Applied Research Corporation should be addressed to the Office of the Director of Accounting, Georgia Tech Research Corporation, 505 Tenth Street, Atlanta, Georgia, 30332-0415.

# Georgia Tech Research Corporation

## Statement of Net Assets

June 30, 2010

	Major funds		Total Business - Type Activities
	Georgia Tech Research Corporation	Georgia Tech Applied Research Corporation	
<b>Assets</b>			
<b>Current assets:</b>			
Cash	\$ 46,359,989	\$ 20,461,505	\$ 66,821,494
Accounts receivable:			
Research contracts - Billed	16,228,134	22,482,028	38,710,162
Research contracts - Unbilled	23,441,140	18,303,996	41,745,136
Other receivables	715,340	-	715,340
Less - allowance for doubtful accounts	<u>(2,212,880)</u>	<u>(2,086,255)</u>	<u>(4,299,135)</u>
Accounts receivable, net	38,171,734	38,699,769	76,871,503
Due from (to) component unit	599,463	(599,463)	-
Prepaid expenses	<u>301,480</u>		<u>301,480</u>
Total current assets	<u>85,432,666</u>	<u>58,561,811</u>	<u>143,994,477</u>
<b>Noncurrent assets:</b>			
Investments	79,248	-	79,248
Capital assets, net	<u>1,189,387</u>	<u>-</u>	<u>1,189,387</u>
Total noncurrent assets	<u>1,268,635</u>	<u>-</u>	<u>1,268,635</u>
Total assets	<u>\$ 86,701,301</u>	<u>\$ 58,561,811</u>	<u>\$ 145,263,112</u>
<b>Liabilities and net assets</b>			
<b>Current liabilities:</b>			
Accounts payable:			
Georgia Institute of Technology	\$ 29,203,542	\$ 14,506,435	\$ 43,709,977
Other	<u>1,450,274</u>	<u>9,066,623</u>	<u>10,516,897</u>
Accounts payable	30,653,816	23,573,058	54,226,874
Funds held on behalf of Georgia Institute of Technology	-	10,613,221	10,613,221
Deferred research contract revenue	<u>39,842,417</u>	<u>3,401,382</u>	<u>43,243,799</u>
Total current liabilities	<u>70,496,233</u>	<u>37,587,661</u>	<u>108,083,894</u>
<b>Net assets:</b>			
Invested in capital assets	1,189,387	-	1,189,387
Unrestricted	<u>15,015,681</u>	<u>20,974,150</u>	<u>35,989,831</u>
Total net assets	<u>16,205,068</u>	<u>20,974,150</u>	<u>37,179,218</u>
Total liabilities and net assets	<u>\$ 86,701,301</u>	<u>\$ 58,561,811</u>	<u>\$ 145,263,112</u>

See accompanying notes to financial statements.

# Georgia Tech Research Corporation

## Statement of Revenues, Expenses and Changes in Net Assets

For the Year Ended June 30, 2010

	Major funds		Total Business - Type Activities
	Georgia Tech Research Corporation	Georgia Tech Applied Research Corporation	
<b>Operating revenues:</b>			
Research contracts	\$ 269,472,018	\$ 196,250,192	\$ 465,722,210
Licenses and royalties	2,357,801	-	2,357,801
Lease income	5,144,433	-	5,144,433
Other	2,554	1,022	3,576
Total operating revenues	<u>276,976,806</u>	<u>196,251,214</u>	<u>473,228,020</u>
<b>Operating expenses:</b>			
Research contract costs	255,172,959	194,306,020	449,478,979
Depreciation	372,662	-	372,662
Administrative and general expenses	5,253,678	1,746,340	7,000,018
Licenses and royalties expenses	3,780,287	-	3,780,287
Lease expenses	5,144,433	-	5,144,433
Payments to or on behalf of Georgia Institute of Technology	<u>6,415,342</u>	<u>311,815</u>	<u>6,727,157</u>
Total operating expenses	<u>276,139,361</u>	<u>196,364,175</u>	<u>472,503,536</u>
<b>Income (loss) from operations</b>	837,445	(112,961)	724,484
<b>Nonoperating revenues (expenses):</b>			
Interest income	64,888	12,998	77,886
Unrealized losses on investments	<u>(44,547)</u>	<u>-</u>	<u>(44,547)</u>
Total nonoperating revenues (expenses), net	<u>20,341</u>	<u>12,998</u>	<u>33,339</u>
<b>Increase (Decrease) in net assets</b>	857,786	(99,963)	757,823
<b>Net assets, beginning of year</b>	15,347,282	21,074,113	36,421,395
<b>Net assets, end of year</b>	<u>\$ 16,205,068</u>	<u>\$ 20,974,150</u>	<u>\$ 37,179,218</u>

See accompanying notes to financial statements.

# Georgia Tech Research Corporation

## Statement of Cash Flows

As of and for the Year Ended June 30, 2010

	Major funds		
	Georgia Tech Research Corporation	Georgia Tech Applied Research Corporation	Total Business - Type Activities
<b>Cash flows from operating activities:</b>			
Receipts from grantors	\$ 271,853,354	\$ 196,546,955	\$ 468,400,309
Receipts of license fees and royalties	2,357,801	-	2,357,801
Receipts from leases	5,144,433	-	5,144,433
Miscellaneous receipts	-	1,022	1,022
Payments for licenses and royalties	(3,780,287)	-	(3,780,287)
Payments for leases	(5,144,433)	-	(5,144,433)
Payments to or on behalf of Georgia Institute of Technology	(6,415,342)	(311,815)	(6,727,157)
Payments for research contract costs	(259,369,412)	(194,649,980)	(454,019,392)
Net cash provided by operating activities	4,646,114	1,586,182	6,232,296
<b>Cash flows from capital and related financing activities:</b>			
Purchase of capital assets	(120,810)	-	(120,810)
Net cash used in capital and related financing activities	(120,810)	-	(120,810)
<b>Cash flows from investing activities</b>			
Interest income	64,888	12,998	77,886
Net cash provided by investing activities	64,888	12,998	77,886
<b>Net increase in cash</b>	4,590,192	1,599,180	6,189,372
<b>Cash and cash equivalents, beginning of year</b>	41,769,797	18,862,325	60,632,122
<b>Cash, end of year</b>	\$ 46,359,989	\$ 20,461,505	\$ 66,821,494
<b>Reconciliation of operating income (loss) to net cash provided by operating activities:</b>			
Operating income (loss)	\$ 837,445	\$ (112,961)	\$ 724,484
Adjustments to reconcile operating loss to net cash provided by operating activities:			
Depreciation	372,662	-	372,662
Provision for bad debt	1,500,000	-	1,500,000
Changes in assets and liabilities:			
Accounts receivable	430,903	296,763	727,666
Due to/from component unit	(162,356)	162,356	-
Prepaid expenses	(252,491)	-	(252,491)
Accounts payable to Georgia Institute of Technology	(107,276)	(228,258)	(335,534)
Accounts payable other	227,253	8,277,857	8,505,110
Funds held on behalf of Georgia Institute of Technology	-	(7,216,662)	(7,216,662)
Deferred research contract revenue	1,799,974	407,087	2,207,061
Net cash provided by operating activities	\$ 4,646,114	\$ 1,586,182	\$ 6,232,296
<b>Schedule of noncash investing activity:</b>			
Decrease in the fair value of investments	\$ 44,547	-	\$ 44,547

See accompanying notes to financial statements.



# Georgia Tech Research Corporation

## Notes to Financial Statements

As of and for the Year Ended June 30, 2010

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### NOTE 1 – DESCRIPTION OF ORGANIZATION

The Georgia Tech Research Corporation (GTRC) was chartered on April 13, 1937, as the Industrial Development Council, a not-for-profit corporation affiliated with the Georgia Institute of Technology (GIT), a unit of the University System of the State of Georgia. GTRC was established for the purpose of engaging in sponsored research for scientific, literary and educational purposes, or related objectives. On February 9, 1946, the corporate charter was amended and included a provision to change the name from the Industrial Development Council to the Georgia Tech Research Institute (GTRI). On April 6, 1984, GTRI amended its corporate charter to change the name to the Georgia Tech Research Corporation.

GTRC serves as the contracting entity for the GIT which performs research under the Office of Management and Budget (OMB) Circulars A-21 and A-110.

Effective July 1, 1998, the Georgia Tech Applied Research Corporation (GTARC) was established as a component of GTRC. GTARC was organized as the contracting entity for units of the GIT performing research under the cost principles of OMB Circular A-122 and Federal Acquisition Regulations (FAR) 31.2.

GTRC, and its component unit, GTARC (hereinafter collectively referred to as GTRC), enter into contracts and grant agreements with various organizations, including Federal agencies, and subcontracts with GIT to provide services in connection with these agreements. As part of the relationship, payments occur between GIT and GTRC for certain sponsored project expenditures and research administration.

In accordance with accounting principles generally accepted in the United States of America ("GAAP") applicable to governments the financial statements present the individual financial statements of GTRC and GTARC as major funds. In addition, the accompanying financial statements present a total column which represents the entity-wide financial statements of GTRC. Transactions and balances between GTRC and GTARC are eliminated in the entity-wide financial statements. Separately issued financial statements for Georgia Tech Applied Research Corporation can be obtained by contacting to the Director of Accounting, Georgia Tech Applied Research Corporation, 505 Tenth Street, Atlanta, Georgia, 30332-0415.

The State of Georgia has determined that GTRC is significant to the State of Georgia for the year ended June 30, 2010, and as such, is a discretely presented component unit in the Comprehensive Annual Financial Report of the State of Georgia.

### NOTE 2 – SIGNIFICANT ACCOUNTING POLICIES

GTRC follows guidance as to governmental proprietary funds and Financial Accounting Standards Board pronouncements issued on or before November 30, 1989. In accordance with GAAP the financial statements of GTRC have been prepared on the accrual basis of accounting and are presented in conformity with GAAP.

# Georgia Tech Research Corporation

## Notes to Financial Statements

As of and for the Year Ended June 30, 2010

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### NOTE 2 – SIGNIFICANT ACCOUNTING POLICIES (Continued)

The following is a summary of certain significant accounting policies followed in the preparation of the financial statements:

#### Revenues

Substantially all of GTRC's revenues are derived from grants and cost reimbursement contracts which provide for the recovery of direct and indirect costs. GTRC recognizes revenue associated with direct and indirect costs as the related costs are incurred for approved research activities. The recovery of indirect costs is generally recorded at fixed rates negotiated with the sponsoring agency. License and royalty revenues are recorded when earned.

GTRC and GTARC classify revenue generated from their normal operational cycle as operating income. Revenue streams such as research contracts, licenses and royalties, and lease income are examples of what are considered to be operating revenues. Revenues that are not generated during the normal operating cycle such as interest income and unrealized gains and losses on investments are classified as nonoperating revenues.

#### Unbilled Accounts Receivable and Deferred Research Contract Revenue

Unbilled accounts receivable represents costs incurred and charged to projects in excess of amounts invoiced on those projects. Deferred research contract revenue represents amounts invoiced on various projects in excess of costs incurred and charged to those projects.

#### Overhead Revenue

GTRC receives reimbursement from sponsoring agencies for indirect costs incurred. GTRC retains a portion of the indirect costs which is used for operating expenses, and the remainder, with Board of Trustee approval, is generally granted back to GIT in future periods. The overhead revenue is reported as revenue from research contracts in the accompanying financial statements.

#### Cash

At June 30, 2010, the bank balance was \$67,645,504 and the book balance was \$66,821,494. At times, cash balances may exceed federally insured amounts. GTRC mitigates this risk by depositing and investing cash with major financial institutions. GTRC has not experienced any loss in such accounts and believes it is not exposed to any significant credit risk on cash. At June 30, 2010 the bank balances were collateralized by a pool of pledged securities administered under the direction of the Georgia Office of Treasury and Fiscal Services.

#### Investments

GTRC's investments consist entirely of equity securities, which are acquired in exchange for certain licensing fees. Equity security investments are held exclusively in GTRC's name. Equity securities acquired in exchange for licensing fees are not subject to GTRC's investments policy.

# Georgia Tech Research Corporation

## Notes to Financial Statements

As of and for the Year Ended June 30, 2010

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### NOTE 2 – SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### Major Clients and Concentration of Credit Risk

During the fiscal year ended June 30, 2010, GTRC derived approximately 84% of its revenue from contracts with the U.S. Government. At June 30, 2010, approximately 49% of billed research contracts accounts receivable was from the U.S. Government. Management does not believe these receivables represent significant credit risk at June 30, 2010.

#### Federal Income Taxes

GTRC is exempt from income taxes as provided by Section 501(c)(3) of the Internal Revenue Code.

#### Allowance for Doubtful Accounts.

The allowance for doubtful accounts is determined by evaluating the prior experience, nature of the contract and credit rating of the sponsor for each contract with an outstanding balance greater than 180 days. Generally, all account balances greater than 180 days are reserved.

Changes in the allowance for doubtful accounts for the year ended June 30, 2010, were as follows:

	Major funds		
	Georgia Tech Research Corporation	Georgia Tech Applied Research Corporation	Total Business - type Activities
Beginning balance	\$ 1,606,570	\$ 2,086,279	\$ 3,692,849
Recoveries	12	18,319	18,331
Write offs	(893,702)	(18,343)	(912,045)
Provision for bad debts	1,500,000	-	1,500,000
Ending balance	<u>\$ 2,212,880</u>	<u>\$ 2,086,255</u>	<u>\$ 4,299,135</u>

#### Capital Assets

Capital assets are capitalized at cost. Donated assets, if any, are recorded at their estimated fair value at the date of the gift. GTRC has established a threshold of \$5,000 for capitalizing equipment. All capitalized assets purchased under the terms of equipment and facilities grants are donated to GIT when fully depreciated. GTRC donated fully depreciated capital assets with an original cost of approximately \$576,381 to GIT during the year ended June 30, 2010.

Depreciation is provided for in amounts sufficient to relate the cost of depreciable assets to operations over their estimated service lives which range from three to ten years. The straight-line method of depreciation is followed for all capital assets.

# Georgia Tech Research Corporation

## Notes to Financial Statements

As of and for the Year Ended June 30, 2010

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### NOTE 2 – SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### Grants to Georgia Institute of Technology

Grants of funds are made from time to time to GIT, as authorized by the Board of Trustees. Pursuant to an agreement between GTRC and the Board of Regents of the University System of Georgia, dated April 1, 1953, GTRC shall hold in trust all unrestricted net assets for GIT who shall use such revenue from time to time and in such manner as the Board of Trustees of GTRC may see fit, for the promotion of research at GIT.

#### Net Assets

GTRC's net assets are classified as follows: *Invested in capital assets* represent GTRC's total investment in capital assets, net of related depreciation. *Unrestricted net assets* represent resources derived primarily from research contracts, licensing and royalties, and lease income. These resources are used for the ongoing operations of GTRC and may be used at the discretion of the governing board to meet current expenses for those purposes and to enhance programs at GIT.

#### Use of Estimates in Preparation of Financial Statements

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

#### Subsequent Events

Subsequent events have been evaluated through September 17, 2010, the date these financial statements were available to be issued.

# Georgia Tech Research Corporation

## Notes to Financial Statements

As of and for the Year Ended June 30, 2010

### NOTE 3 – CAPITAL ASSETS

Following are changes in capital assets for the year ended June 30, 2010:

	<u>Balance June 30, 2009</u>	<u>Increases</u>	<u>Decreases</u>	<u>Balance June 30, 2010</u>
Capital assets not being depreciated:				
Historical treasures and works of art	\$ 240,735	-	-	\$ 240,735
Total capital assets not being depreciated	240,735	-	-	240,735
Capital assets being depreciated:				
Building improvements	127,331	-	-	127,331
Computer software	594,423	14,050	-	608,473
Furniture and equipment	2,785,659	106,760	576,381	2,316,038
Total capital assets being depreciated	3,507,413	120,810	576,381	3,051,842
Less accumulated depreciation for:				
Building improvements	(18,869)	12,734	-	(31,603)
Computer software	(498,431)	79,252	-	(577,683)
Furniture and equipment	(1,789,610)	280,676	576,381	(1,493,905)
Total accumulated depreciation	(2,306,909)	372,662	576,381	(2,103,190)
Total capital assets, net	<u>\$ 1,441,239</u>	<u>\$ 493,472</u>	<u>\$ -</u>	<u>\$ 1,189,387</u>

### NOTE 4 – LEASE COMMITMENTS

#### Research Facilities

GTRC is committed to an operating lease with the University Financing Foundation, Inc. for the Centennial Research Building. The lease carries successive two year terms that are automatically renewed at prevailing market rates in effect at the time of the renewal. GTRC may cancel the lease upon notice given during July of any lease year to be effective as of June 30 of the then-current lease year.

GTRC entered into a new lease agreement for the Cobb County Research Facility with TUFF Cobb Research LLC in December 2009. Pursuant to the terms of the new lease agreement, TUFF Cobb Research LLC is to complete renovations to the facility. Upon substantial completion of the renovations a new lease term of twenty five years will be effective.

In connection with these lease agreements, both facilities have been subleased to GIT. The subleases carry successive one-year terms that may be renewed upon notice given at least sixty (60) days prior to the end of the sublease term. The present monthly rental receipts on

# Georgia Tech Research Corporation

## Notes to Financial Statements

As of and for the Year Ended June 30, 2010

### NOTE 4 – LEASE COMMITMENTS (Continued)

these subleases for the Cobb County Research Facility and the Centennial Research Building approximates the monthly rental payments.

#### **Institute for BioEngineering and BioSciences Complex**

The Institute for BioEngineering and BioSciences Complex (the "Complex") was developed by Georgia Tech Facilities, Inc. (GTF), formerly Georgia Tech Foundation Facilities, Inc., and funded by the issuance of 30-year, fixed rate, Series B bonds through the Fulton County Development Authority. On December 1, 1997, GTRC agreed to guarantee these bonds by entering into an agreement to lease the Complex from GTF. On April 1, 2008 the Series 1997B Bonds were refunded by the issuance of \$19,900,000 Development Authority of Fulton County Series 2008B Revenue Bonds. In connection with the refunding GTRC guaranteed the 2008B Revenue Bonds and entered into an Amended and Restated Facility Lease Agreement with GTF. In accordance with the amended and restated lease agreement the lease will expire on September 1, 2028 or at such time as the Revenue Bonds are redeemed. GTRC is obligated to pay rent in an amount equal to the principal, premium (if any) and interest on the Series 2008B Bonds Revenue Bonds when due and upon any redemption or acceleration thereunder.

In connection with this lease agreement, GTRC subleased the complex to GIT. The sublease carries successive one-year terms that may be renewed upon notice given at least sixty (60) days prior to the end of the sublease term. The timing and amount of rental payments under the sublease are substantially the same as those under the lease agreement between GTRC and GTF.

GTRC's leases are subleased to GIT. The subleases carry successive one-year terms that may be renewed upon notice given at least sixty (60) days prior to the end of the sublease term. The timing and amount of rental payments under the subleases are substantially the same as those under their corresponding lease agreements between GTRC and third-party lessors.

Future minimum lease payments at June 30, 2010 are as follows:

Year ending June 30:			
2011	\$ 5,471,462	\$ 5,471,462	\$ -
2012	4,114,082	-	4,114,082
2013	4,344,631	-	4,344,631
2014	4,206,242	-	4,206,242
2015	3,874,505	-	3,874,505
2016-2020	17,657,544	-	17,657,544
2021-2025	17,658,037	-	17,658,037
2026-2030	14,747,265	-	14,747,265
2031-2035	10,382,400	-	10,382,400
2036-2037	2,768,640	-	2,768,640
	<u>\$ 85,224,808</u>	<u>\$ 5,471,462</u>	<u>\$ 79,753,346</u>

# Georgia Tech Research Corporation

## Notes to Financial Statements

As of and for the Year Ended June 30, 2010

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### NOTE 4 – LEASE COMMITMENTS (Continued)

Net rent expense for the year ended June 30, 2010, was as follows:

Minimum rentals	\$ 5,144,433
Less - Sublease rentals - Georgia Institute of Technology	<u>(5,144,433)</u>
Net rent expense	<u>\$ -</u>

### NOTE 5 – CONTINGENT LIABILITIES

As of June 30, 2010, GTRC guarantees approximately \$61,871 of home mortgages of new research faculty members.

Federal and state funded research projects are subject to special audits. Such audits could result in some allocated costs being disallowed or indirect cost rates adjusted. No provision has been made for any liabilities that may arise from such audits since the amounts, if any, cannot be determined at this time.

## **Appendix F: Letters of Support**

- Dougherty County Schools – Diane Daniels, Assistant Superintendent
- Ware County Schools – Joseph Barrow, Superintendent
- Okefenokee RESA – Peggy Stovall, Director
- Georgia Professional Standards Commission – Cynthia Stephens, Education Workforce Development and Recruiting



**DOUGHERTY COUNTY SCHOOL SYSTEM**

P.O. Box 1470/200 Pine Avenue  
Albany, Georgia 31702-1470  
(229) 431-1315 • FAX (229) 431-1810  
ddaniels@dougherty.k12.ga.us

**JOSHUA W. MURFREE, JR., PHD**  
SUPERINTENDENT

**DIANNE DANIELS**  
ASSISTANT SUPERINTENDENT  
CURRICULUM AND INSTRUCTION

June 23, 2011

Caroline R. Noyes, Ph.D.  
Assistant Director  
Office of Assessment  
Georgia Institute of Technology  
Atlanta, Georgia 30332

Dear Dr. Noyes:

The Dougherty County School System is interested in participating in the Georgia Tech STEM Teachers for Georgia grant proposal. Preparing students for success in STEM related courses is critical for the economic growth of our community and nation.

Math and Science teachers in the district will benefit from content and pedagogy professional learning activities. In addition, our students will benefit from receiving instruction from highly qualified teachers. Therefore, this letter of support is submitted on behalf of Dr. Joshua W. Murfree, Jr., superintendent of the Dougherty County School System.

Sincerely,

Dianne Daniels

Dianne Daniels  
Assistant Superintendent for Curriculum and Instruction  
Dougherty County School System



1301 Bailey Street  
Waycross, Georgia 31501

Joseph C. Barrow Jr., Ed.D., Superintendent

June 23, 2011

Donna C. Llewellyn, Ph.D, Director  
Center for the Enhancement of Teaching and Learning  
Georgia Institute of Technology  
Atlanta, GA 30332-0383

Dear Donna:

This letter is being sent from Ware County High School to indicate support for Georgia Tech's STEM Teachers for Georgia program. Ware County Schools is located in Ware County a small, rural southeast Georgia community with about 30,000 citizens. Our school system has approximately 6,000 students with 44% minority students. Because of our geographic and demographic makeup we struggle with finding high quality STEM teachers especially for the high school courses.

To meet these needs five years ago we began participating in Georgia's USDOE Transition to Teaching (TTT) Grant Projects, beginning with the GTFP program and continuing with the current FOCUS program. Through these programs we have developed partnerships with our local RESA to provide an array of certification paths for alternatively prepared teachers. We have also worked extensively with area colleges to provide the masters with certification option for those teachers who preferred that option. We have a system in place to track noncertified teachers as they move through the certification process and work with them to develop a timeline for meeting their certification requirements.

In the past five years 28 alternatively prepared teachers have received their clear Georgia certificate. Their certifications were in special education (14), math (3), science (3), English/language arts (3), social studies (2), Spanish (3), family and consumer science (1), physical education (1), and music (1). One of our alternatively prepared teachers had the highest End of Course Tests in the math department for the 2010-2011 School Term. However, even with all of these initiatives, as you can see, we still are in desperate need of high quality STEM teachers. As is common with most Georgia school systems, we are forecasting over 50% of our current workforce retiring in the next five years which is extremely problematic for a school with the geographic, demographic and financial characteristics of Ware County Schools.

Additionally, STEM teachers meet the goal of our academic programs in Ware County. We believe in integrating high quality instruction with authentic real-life learning, STEM teachers provide this integration. We also have a state-of-the-art Talent Development High School that is divided into smaller learning communities which provides additional support for our transitioning teachers. We are completing the third year of our Math and Science Partnership (MSP) Grant which allowed for us to build partnerships with our local colleges and provide high quality professional learning for our math and science teachers.

I strongly believe that Ware County Schools has the structures in place to be an outstanding partner with Georgia Tech in their STEM Teachers for Georgia program. Our students would be the winners in this partnership with the alternative prepared teachers and our system both benefiting from this opportunity.

If you need any additional information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Joseph C. Barrow, Jr.".

Joseph C. Barrow, Jr. Ed.D  
Superintendent of Schools

sm



**REGIONAL EDUCATIONAL SERVICES AGENCY**

**1450 North Augusta Avenue • Waycross, Georgia 31503 • (912) 285-6151 • Fax (912) 287-6650  
<http://www.okresa.org>**

**Peggy P. Stovall  
Executive Director**

**June 16, 2011**

**Dr. Caroline R. Noyes  
Assistant Director  
Office of Assessment  
Georgia Institute of Technology  
[cnoyes@gatech.edu](mailto:cnoyes@gatech.edu)**

**Dear Dr. Noyes:**

**Thank you for the opportunity to collaborate with you and Ware County Schools in the “Teach for Georgia” proposal in response to the Georgia Race to the Top STEM Innovation Fund. We understand how critical the need is for recruiting teachers into the STEM fields in the rural regions of the state.**

**We have a wonderful GaTAPP program and GaTAPP Coordinator, Ms. Rhonda Powers, here at Okefenokee RESA. You will find that teachers who receive their certification program here are well prepared to successfully teach the Georgia Performance Standards, soon to be Common Core Georgia Performance Standards. We carefully adhere to all of the rules and regulations that the Georgia Professional Standards Commission has in place in regards to our alternative certification program, GaTAPP.**

**We also have a variety of professional learning activities scheduled throughout the year and opportunities for participation in professional learning communities. We offer new teacher orientation each year which includes school law and ethics. We also offer classes in many subjects and areas. A few of our classes are: classroom management, differentiation, special education, standards-based curriculum, assessment, and instruction.**

**Please let me what documentation you need to become a partner with you in this collaboration. We are excited about the opportunity to work with you through Georgia Tech and with Ware County Schools.**

**I look forward from hearing from you soon.**

**Thank you again,**

**Peggy P. Stovall**

**[pstovall@okresa.org](mailto:pstovall@okresa.org)**

*Serving*

**ATKINSON COUNTY • BACON COUNTY • BRANTLEY COUNTY • CHARLTON COUNTY  
CLINCH COUNTY • COFFEE COUNTY • PIERCE COUNTY • WARE COUNTY**



June 22, 2011

Beth Bullock Spencer, MA, M.Ed.  
Director of Pre-Teaching  
A. French Bldg, Room 101-B  
Georgia Institute of Technology  
Atlanta, Georgia

Dear Ms. Spencer:

Congratulations on your team's effort to develop and implement the STEM Teachers for Georgia program and to seek funding through the Race to the Top STEM Innovation Fund. The Georgia Professional Standards Commission (PSC) is pleased to collaborate with you in our Transition to Teaching projects and to support your new STEM Teachers for Georgia initiative that will supply badly needed, new math and science teachers into Georgia public school classrooms from the strong academic programs at Georgia Tech.

Your STEM proposal is truly innovative for Georgia. It aligns well with teacher quality objectives in the PSC and with the five goals of the Georgia Alliance of Pre-K-20 Education Agency Heads. Specifically, we in the PSC are committed to fostering your project's intent to recruit and train students and recent graduates from Georgia Tech and other Georgia universities and colleges to prepare them for two-year positions as teachers in STEM-focused classrooms in rural public schools in south Georgia. Strong local education agency (LEA) and or other partnerships in are evident in the Georgia Tech STEM for Georgia proposal. The PSC looks forward to assisting your team to accomplish your candidates' becoming fully certified and to their remaining over time in STEM teaching careers in Georgia schools. In October, we will further our discussions to assist your accessing and/or providing state-approved non-traditional educator preparation, professional development, learning communities, clinical practice opportunities and other support during candidates' induction years.

The PSC honors the collaboration with Georgia Tech on this project. Best wishes on your success in achieving Race to the Top Innovation funding. We look forward to hearing from you to officially begin this work!

Sincerely,

Cynthia E. Stephens, Ed.D  
Director  
Educator Workforce Development and Recruitment

## Appendix G: References Cited

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