

Research Center and Institute Progress Report Protocol September 1, 2018–August 31, 2019 (Annual Review per Fiscal Year)

Submission of the compiled report as a PDF are due no later than **5 p.m. Friday, January 31, 2020** and must be submitted electronically to researchcireports@share.uh.edu

I. CENTER/INSTITUTE INFORMATION

- a. Name of center/institute: Texas Institute for Measurement, Evaluation, and Statistics (TIMES)
- b. Year established: 1999
- c. Website address for center/institute: <https://www2.times.uh.edu>

II. DIRECTOR INFORMATION

- a. Name: David J. Francis
- b. Title: Hugh Roy and Lillie Cranz Cullen Distinguished University Chair, Psychology Director, Texas Institute for Measurement, Evaluation, and Statistics
- c. Address: Health and Biomedical Sciences Building (Health 1), Room 372,
- d. Phone number: (832) 842-7036
- e. Email address: dfrancis@uh.edu

III. STATED MISSION, GOALS, OBJECTIVES, & VALUE CREATION

- a. Does the unit have a formal multi-year (3-5 years) strategy and a strategy-implementation plan? If yes, please provide.

TIMES has a one-year budget, with no written commitment of continued support from the university beyond August 31, 2020. We have been operating on one-year commitments that are made in May for the following fiscal year since we began receiving direct support from the university. We are pleased to see the transition to a 2-year budget cycle proposal and are optimistic about the changes to the proposed funding model for centers. We have continued to implement the 5-year plan that we put in place in 2007, the last time the university made a multi-year commitment to TIMES as part of a retention package for Dr. Francis, TIMES founding Director. That plan called for a commitment of space to allow TIMES to expand into a multidisciplinary research center focused on complex systems. That commitment also included the creation of wet labs for scientists from Psychology, Biology/Biochemistry, Pharmacy, and Engineering involved in neuroscience research, the recruitment of a human geneticist and the creation of space for a human genetics lab, and accommodation of aspects of psychology, particularly neuropsychology and clinical researchers focused on pediatric diseases and disorders, as well as space for computational science, including computational biology, computational physiology, and statistics (TIMES traditional foundation).

The keys to the plan were a commitment of financial support over a period of five years coming from the special items budget, the Division of Research, and the Provost's office, with ongoing support beyond that from the line item, and most importantly the creation of a space for these multidisciplinary activities. This plan eventually materialized in a 2008 decision by the Deans of Optometry (Smith) and CLASS (Antel), the Provost (Foss), the VPR

(Birks), and the VP for Finance (Carlucci) to obtain Board of Regents approval for the expansion of the HBSB to six floors from its originally planned 2 floors, which were for the College of Optometry. The four additional floors would create two floors for Animal Care Operations (ACO), and two floors for TIMES, along with a TIMES planned Animal Behavior Core (ABC) to be located inside the ACO space for neuroscience researchers involved in animal behavior models. TIMES took occupancy in the HBSB 1 in December of 2012, but the buildout of HBSB 1 was not completed until 2015 with the completion of the Human Genetics lab and the recruitment of Dr. Elena Grigorenko, Cullen Professor in Psychology, from Yale University. The ABC is now operational as a Core Facility with chargeback privileges, and this Facility has been built out with all of the necessary equipment and procedure rooms, but there is no commitment of funding from the university for personnel to operate the Core. TIMES requested funds in its 2019 budget for support of the ABC until such time as it can be supported through its own service activities, but these items were not funded. Funding for the equipment of the ABC was actually awarded to Pharmacy, but due to complexities associated with their residence in SR2 and the TMC at the time of that award, progress on the creation of an ABC had been limited. TIMES worked with Dr. Eikenburg (Pharmacy, PI on the internal award from DOR to Pharmacy) and the DOR to use the funds in the Pharmacy award to develop the ABC. These funds were not sufficient to complete the buildout, and TIMES committed \$105K to complete the development of the ABC. The ABC was originally established in HBSB1 and SR2 but has now been moved entirely to HBSB1 due to the effects of Hurricane Harvey on SR2 and the move of Pharmacy to HBSB2.

A component of the TIMES strategic plan has focused on the evolution of TIMES' Research Financial Services team as a robust and efficient administrative infrastructure for research financial services and information technology. This evolution was existential for TIMES because of the need to support more and more investigators with more and larger grants with minimal impact on the size of the administrative team. We first began by developing a joint administrative team with the Texas Learning and Computation Center (TLC2), the predecessor to CACDS, but have continued to evolve the infrastructure ever since by building tools to support research financial administration and research IT support. As a former Department Chair and as the longest serving Director of a University Level Center and Institute (ULCI), the TIMES Director has long realized that the administrative needs of the ULCIs and the Academic Departments are related, but quite different. Moreover, the total cost of research administration to the university could be reduced if the ULCI's shared resources and collaborated in meeting the administrative needs of the centers. This objective was one of the driving forces behind the creation of the joint administrative team to serve TIMES and TLC2. The other driving force was the need to professionalize the administrative services in order to provide an upward mobility path for administrative staff to reduce turnover, as well as to create workflows that allowed for cross-training of staff to meet the changing demands of center investigators over the course of the year, and when staff are sick, or on vacation. TIMES has arguably the most comprehensive and yet efficient administrative infrastructure for research financial services of any ULCI, which has been made possible through the creativity and hard work of our IT services group in collaboration with our administrative team. Together these two groups have collaborated to create automated tools for reporting and financial account administration within PeopleSoft, as well as tools to automate and/or manage workflows. At the same time, our IT group provides unparalleled support to our investigators and their research labs, while developing and maintaining the IT infrastructure of TIMES facilities.

During the current fiscal year there has been a major revision to the funding model for ULCI's that was the culmination of discussions that took place during FY 2019. This revision removes ULCIs from the distribution of IDC. On the one hand, this change effectively eliminates ULCI's ability to generate revenue that can be used to support administration and infrastructure. On the other hand, it both reduces tension at the college level over faculty participation in ULCIs and creates increased incentives for the ULCIs to work collaboratively in meeting their joint administrative needs, thereby allowing more of their university support to be allocated to programming. TIMES has tried to promote the idea for some time that, rather than the university investing repeatedly in separate administrative units for each center, the university should consolidate resources for center administration in an umbrella administrative organization, or a consortium of the ULCI administrative groups that

provides essential services to all of the ULCIs, or to subsets of ULCIs with similar needs. This change in the funding model promotes and incentivizes further development of this idea. This collaborative, or consortium would be tasked with meeting the administrative needs of multiple centers, with each center contributing proportionally to the cost of administration based on its resources and needs. Alternatively, this element would be funded separately from all of the ULCIs, and the ULCI budgets would focus exclusively on programming.

During FY 19, TIMES continued to provide research financial administrative and IT services to TIMES, the Center for Advanced Computing and Data Science (CACDS), and the HPE Data Science Institute (HPE DSI), which TIMES has supported with administrative and IT services since its inception in the fall of 2017. TIMES also continued to provide some automated reconciliation reports to the Department of Psychology, Health and Human Performance, and the College of Technology through its SAS reporting system.

In FY 2018, DOR requested that the Director and Co-Director of CACDS convert CACDS into a core facility under the HPE DSI and dissolve it as a research center. This process was completed at the start of FY 2019. Thus, in FY 2019 TIMES continued to provide financial and IT services to CACDS as a Core Facility under the auspices of the HPE DSI, which TIMES also continued to support in FY 2019. In lieu of the support for CACDS and the HPE DSI, the HPE DSI pays a percentage of the salary of those TIMES personnel who are directly involved in service delivery to CACDS and HPE DSI, allowing the HPE DSI to maintain a very small administrative group.

In FY 2019, TIMES faced an existential crisis, and it was unclear if TIMES would survive the year intact. It did, but only because of a DOR error, which overallocated IDC to TIMES, arising principally from a failure to apply the IDC exception that governed IDC distribution from the Borders Trade and Immigration Institute (BTI). Were it not for this error, TIMES would have faced a budget short fall of roughly \$102K. Because the error was a DOR error, the VPR agreed to absorb a significant portion of the error and to allow TIMES to pay back the roughly \$60K it must repay over the next three years, rather than in one year. Provided that TIMES can continue to generate grant support at the pace that it has in the past, it is hoped that these funds can be made up by increasing the number of FTE that are 100% funded on soft money. However, because TIMES has had to deplete its reserves over the last four years to maintain operations, the margin for error remains very small. The problem stems, at least in part, from the historic approach to funding the ULCIs. Historically, support has not been based on need, demand, or productivity, nor is there sufficient consideration for the difference between essential staff positions that must be supported by central funding (i.e., those staff who cannot be placed on grants, but are essential to the ULCIs operations), and those positions that can be supported on grants, but require some central support to cover non-grant responsibilities (e.g., writing new proposals) and funding shortages that arise from time to time. It is hoped that the new budgeting process will recognize these distinctions and develop a multi-year funding model that will allow TIMES and the other ULCIs to fulfill their mission and continue to contribute substantially to the university's success in research and training.

At its core, TIMES is a statistical support center. Our strategy for increasing grant funding has always been around fostering collaboration between quantitative experts and substantive experts. When substantive experts collaborate with specialists in research methods, design, and analysis, research plans are more precisely crafted to ask and answer the underlying scientific questions in more compelling and convincing ways. In addition to Ph.D. level statistical support, we provide our investigators with access to professional data management, data warehousing, programming, and project managers. Access to professionally trained research staff allow PIs to manage larger and more grants in their portfolio. If TIMES could obtain institutional support for its Ph.D. quantitative scientists to collaborate with PIs in their grant writing, we could substantially increase research funding on campus. Unfortunately, TIMES submission of a Core Proposal to create a statistical consulting service for faculty was not funded, and our budgetary request for these positions was not filled. Consequently, we are severely limited in our ability to offer services to faculty at the paper and proposal writing stage, because the research faculty with statistical expertise are funded on grants. Those grants cannot underwrite faculty time to provide services to others, or to engage in proposal writing. At UH, the demand for biostatistical and traditional

methods support is large and will only get larger as we add more faculty, especially in the health area. If we can find a way to address that demand, it could substantially increase research funding on campus.

b. If there is no formal strategy, provide the mission statement, goals, and milestones for the unit.

The primary purposes of the Texas Institute for Measurement, Evaluation, and Statistics, established at its founding, are to advance knowledge about, and to improve the behavioral, psychological, educational and developmental outcomes of children and adults through the application and development of high quality, cutting-edge research methods, and the delivery of state-of-the art research and statistical support services. In addition, TIMES' broader mission is to promote, develop, and advance statistical knowledge and its application in research and decision making, and to establish a university-based resource in measurement, evaluation, and statistics for faculty and administrators. In light of this broader mission, in addition to conducting primary research, TIMES provides essential research support services in four major areas. These include the design of advanced quasi-experimental studies, such as those used for researching developmental and educational questions in natural settings (e.g., such as children in classrooms), as well as the design of more traditional "true" experimental studies. Secondly, TIMES specializes in the application of advanced statistical models for (a) measuring longitudinal outcomes (e.g., student growth), (b) predicting risk and failure (e.g., predicting poor student outcomes at the earliest possible point in development), (c) measuring key constructs and their impact on desired outcomes (e.g., assessing the importance of teacher behaviors in advancing student achievement), and (d) modeling institutional effectiveness (e.g., evaluating the efficacy of school wide reform efforts). Third, TIMES is a leader in the use of advanced psychometric models and technology tools to create research instruments. Finally, TIMES supports the primary data collection efforts of researchers and educators through (a) automated data entry, (b) electronic data storage, (c) computerized data management, and (d) essential reporting services.

Beginning in 2007, TIMES undertook to transform itself into a multidisciplinary research center focused on the solution of complex problems in society, including health and education, maintaining an emphasis on application of advanced statistical, computational, and measurement practices as part of its core, but expanding its substantive focus beyond education and health. This transformation was seen as crucial to the future of TIMES and the University of Houston, which lacked an administrative infrastructure focused on interdisciplinary research. With that proposed transformation were plans to construct a two-story interdisciplinary research space to house TIMES substantive research laboratories. Construction on the two stories was completed in 2015 and although some remodeling to create new laboratories focused on measuring brain electrical activity were completed in the fall of 2017, the transformation of TIMES into an interdisciplinary research center is well under way.

c. Are the stated goals being met in a manner consistent with the targeted milestones? Describe by giving specific metrics, including faculty research outcomes, student training, and support.

Goals with respect to sponsored research funding, as well as faculty, student, and staff productivity are being met, with two exceptions. TIMES continues to offer support to more tenure track faculty and their students from a diverse array of colleges and departments without expansion of the number of staff. We continue to rank in the top tier of ULCIs at the University of Houston, both in terms of the amount of proposals submitted, awards made, sponsored research under management, in IDC generation, and in IDC credited to the center.

We presently manage approximately 99 cost centers for TIMES and TIMES' PIs, and 120 cost centers across TIMES, CACDS, and DSI. Because the university does not report official metrics for research productivity other than funding and IDC, it is impossible to comment on where our scholarly productivity ranks among university centers.

The exceptions to our goals are that we have not yet established a Core Facility with chargeback capabilities for Statistical Support Services (we have established the ABC as a chargeback center), nor have we significantly increased the number of interdisciplinary, multi-year, center and/or program project grants. We do have a Center proposal presently under review, one funded center (The Texas Center for Learning Disabilities), and are collaborators in the Optometry P30, and in the UH-Baylor CTSA Application.

Important dimensions of TIMES strategic plan and mission are the provision of statistical support to the campus, both as a vehicle for increasing funded research on the campus, but also to increase funding opportunities for TIMES research faculty, and the facilitation of large-scale, interdisciplinary research grants. In FY 2018 we applied for funding to create a Core Facility for statistical support services with colleagues in the Math Department, but the RSC Committee that reviewed Core Facilities proposals did not fund that proposal. In FY 2020 we requested funds in our central budget for this activity, but we did not receive the funding. We have continued to provide support to faculty colleagues from across the UH System, but we have not established a Core Facility that can be advertised with specific charge backs. This goal is seen as essential to our continuity as a center, and was viewed favorably by the Internal Advisory Committee, as was the creation of the ABC, which is now officially approved as a Core Facility under TIMES. However, we do not presently have funding to establish a Statistical Core that can be broadly advertised to campus and the UH System campuses. We are partnering with the UH Medical School in research proposals and are working to establish collaborations with the UH College of Nursing and have recently had some success in establishing new collaborations between TIMES Psychology and Engineering faculty, and between TIMES Psychology and Computer Science Faculty. However, these have been R01 level grants from NIH and NSF.

I should add that funding for the ABC was not awarded to TIMES, but to faculty in Pharmacy. However, it was ultimately TIMES faculty and administration who worked with DOR and the faculty in Pharmacy to make the ABC a reality, and to expend the funds awarded by DOR for the purchase of equipment and the establishment of the ABC. Funds for the personnel engaged in the establishment and management of the ABC have come from TIMES, not from the funds awarded to Pharmacy.

As to the pursuit of interdisciplinary grants, this year TIMES submitted a new IES Center for English Language Learners (\$10M). Preparation for the grant occurred in late FY 19, and the grant was submitted at the start of FY 20. That grant is presently under review. As mentioned above, TIMES is also a major component of the Texas Center for Learning Disabilities, an NICHD funded P50 grant. We also collaborated in the successful submission of a US Department of Education Model Demonstration Project, that is directed by Dr. Kristi Santi in the College of Education. The grant is managed by TIMES and includes other TIMES faculty (Francis, Fletcher, and Carlson). We continue to look for opportunities that can lead to successful Center proposals.

Of the ULCI on campus, TIMES has had the greatest success in obtaining funding for program project and center grants. In addition to the TCLD, BTI, and Optometry P30 grants, which TIMES faculty have either led or collaborated on, during its history TIMES has directed or collaborated on a National Center for Research and Development of English Language Learners (\$9.9M), an NICHD funded Program Project on the development of English Language Learners (\$17M), and the prior awards of the Texas Center for Learning Disabilities from 2006-2017 (\$15M), and program project grants in Spina Bifida (\$6.6M) and Math (\$4.5M), and lead the evaluation of the Texas Reading First program from 2003-2007 with an annual budget of approximately \$4.5M. These past and current successes highlight what is possible from an interdisciplinary research center with a strong quantitative/computational focus.

Our contribution to the university hinges on sustaining these efforts and building on these successes and growing the total number of such awards at the university. We continue to work to develop systems that facilitate the writing and management of such awards, but it falls to faculty to develop the proposals, and to the Director to identify opportunities and the people who can respond to them.

- d. How is the unit contributing to the accomplishment of priorities and goals of the department, college, and/or University without duplicating functions of other entities?

As a ULCI, it is only appropriate to ask this question of TIMES as it relates to the university's goals and objectives and the goals and objectives of the Division of Research. Our record of accomplishment in terms of interdisciplinary, large (over \$2M in direct costs) federally funded projects is unmatched in the university. In 2017,

the President reported on the top 10 faculty in terms of awards to the university during her first 10 years at UH (2007-2017). Four of the top six faculty in terms of awards are members of TIMES, including Drs. Jack Fletcher, Ioannis Kakadiaris, David Francis, and Coleen Carlson, and these awards do not include Dr. Francis' \$17.2M award from NICHD in 2000, \$4.1M award from IES in 2001, \$8.3M award from IES in 2003, and large scale evaluations of Reading First (\$4.5M annually from 2003-2007) from the state of Texas. These numbers also do not reflect several large grants that were awarded to other units at UH that involved TIMES as the data center, such as an award to Dr. Jerome Freiberg in the College of Education (\$3.4M), an award to Dr. Frishman in Optometry (P30 Core Grant where TIMES serves as the Biostatistics Core), and an award to Dr. Rebecca Lee in Health and Human Performance from the CDC (\$2M). No university wide center has been as consistent as TIMES in bringing in large awards to the university.

According to figures provided to TIMES by the Division of Research (Mohammad Saklayen), during FY 2019, TIMES investigators submitted 74 proposals requesting over \$113M, down in number (89 proposals), but up in amount (\$64M) from FY2018. In FY 2019, TIMES investigators received 11 awards (down from 16 in 2018). Of those new awards, sponsor commitments totaled \$6.3M in FY2019, and TIMES credited portion of the total awards was \$2.3M. Of the 74 submitted proposals involving TIMES investigators, 71 were handled by TIMES pre-award totaling \$31M. TIMES internal records show 7 proposals being awarded in FY2019 totaling \$3.4M (\$2.4M Direct; \$1.0M Indirect), of which TIMES credit for the awards totaled 2.1M in Total Costs.

We continue to work with DOR to try to resolve discrepancies, which were first noted in FY 2018, when DOR began providing us a copy of their spreadsheet. We suspect that the difference is partly attributable some proposals that do not appear in the DOR record possibly because they were first funded in earlier years, but have received new funding, as well as some inconsistency in the tallying of funding for multi-year proposals that are in the first year of funding. In some cases, the full amount of the award is reported by DOR, but only the year one funding is reported by TIMES. A significant number of the proposals submitted in FY 2019 have yet to be decided on by the funding agency reviewing the proposal. By our count, 52 of the 71 proposals submitted through TIMES pre-award group have not yet been decided on by the sponsoring agency. At the same time, some of the proposals awarded in FY 2019 were submitted in FY 2018. It is also important to keep in mind that when multi-year proposals are funded, the amount in the award is generally reported in the first year of the award, but the funds are received over time. Regardless of whether we focus on the TIMES report or the official counts from DOR, the volume of proposals submitted in FY 2019 and the number of awards reflect that TIMES is an active and productive research center that is contributing positively to the goals of the university and the Division of Research.

In FY 2019 TIMES was one of six DOR centers. As further evidence of TIMES contribution to research funding, an analysis of awards and IDC generation from grants reported out by DOR in their FY19-Research Funding Report showed that all six centers posted proposal activity, with TIMES and HEALTH submitting proposals valued at \$21M and \$23M respectively, and TCSUH submitting proposals totaling \$4.5M. Five of six centers received competitive awards in FY 2019, with TIMES credited with awards equaling \$2.3M, and the next most successful center, TCSUH, receiving awards totaling \$144K. With respect to credited research expenditures, TIMES had expenditures of \$4.3M compared to TCSUH, which had expenditures of \$1.3M, and HEALTH, which had expenditures of \$878K. Importantly, these are the proportions of proposals, awards, and expenditures that are credited to the center, not the totals associated with the grants that involve TIMES affiliated faculty. Thus, the total impact to the institutional bottom line for research proposals, awards, and expenditures which TIMES helps to make happen is substantially greater because most proposals involve multiple investigators, not all of whom are TIMES affiliated. Although TIMES is one of only six DOR centers, TIMES is disproportionately responsible for the IDC generated by the DOR centers. At the same time, in FY 2019, TIMES ranked fourth in the direct support received from DOR even though in FY 2019 TIMES' support from DOR was reduced by over 30% to \$385K, while at least some other centers saw an increase in DOR support.

- e. What are the specific outcomes of the unit that cannot be accomplished through direct faculty/department/college work without having the unit?

Whether or not multi-investigator, interdisciplinary, center and program project grants can be successfully competed and managed in academic units like Departments and Colleges, the fact of the matter is, TIMES has produced more such awards over the period of its existence than any other unit at UH. Certainly, some of our large, interdisciplinary grants could have been accomplished within academic units. For example, although TIMES managed the submission of Dr. Fletcher's Texas Center for Learning Disabilities P50 grant from NICHD, Dr. Fletcher elected to have the award managed by the Department of Psychology after the award was made, at which time he also changed the credit splits. However, even though that award is managed in Psychology, TIMES has still been the administrative unit that has coordinated the submission of the annual progress report for the grant. Even though some of these large, multi-investigator awards can be and are managed in the home departments, that does not mean that TIMES is not contributing materially to the success of those awards. In fact, the robust administrative infrastructure of TIMES makes it possible to support research faculty, students, and staff full time on grants, and to create working groups of data managers, project managers, and statisticians whose time is allocated across multiple soft money awards run by different principal investigators, so that grants only need to pay for the services that they use. Having many individuals supported 100% on soft money across multiple soft money sources with varying start and end dates creates a complexity that most departments cannot manage efficiently, making it less likely that faculty will pursue large, interdisciplinary, multi-site awards. They are just too cumbersome to manage, and the academic departments have difficulty justifying the resource allocation, because portions of the awards invariably are going to other units, both inside and outside of the university. How many departments are willing to allocate space to faculty and students from another department or college because those individuals are working on a grant with an investigator in their department? Instead, faculty member A has a lab in their department and faculty member B has a lab in their department, and they have meetings together to "collaborate", but they find it difficult to truly "work" together because of the problem of distance. At TIMES, a psychologist using EEG to study infants' cognitive development and response to traumatic experiences has a lab next door to an Engineer who is using evoked responses to control robotic hands for individuals who have lost a limb in an accident, and an Engineer who is studying deep brain stimulation in Parkinson's disease. Nearby are computational researchers who are able to share expertise on making sense of the large volumes of data created in these labs. This proximity creates opportunities to discuss diverse work and look for points of common interest that allows for novel combinations of substantive and disciplinary expertise to attack difficult problems from novel, interdisciplinary perspectives. It's possible the psychologist and the engineer could meet with labs in different buildings, and it's possible they could develop an idea for collaboration, but it is much less likely to happen. We are still settling in to our new space, but it is the promise of collaboration that comes from having researchers with varied interests from different disciplines in close proximity to one another, utilizing independent and shared resources that makes TIMES unique. Nowhere else on campus are such diverse colleges and departments represented in close proximity to one another. If faculty remain in their disciplinary silos, then we will have failed in our mission, but we will still have succeeded in creating shared resources which allows the university to support faculty with lower total cost of investment. That is, it is less expensive to have psychology, engineering, biology, and pharmacy faculty working in the same wet lab area in close proximity to ACO and managed by a single entity whose singular interest is to make sure that all faculty are successful, regardless of their departmental or collegiate affiliation than it would be to build separate facilities for each group based on their department or college, or to have a shared facility with no group tasked with managing the facilities. However, it is not our goal simply to provide more cost-effective space management, but to utilize shared space and equipment to catalyze research synergies across disciplines and allow multi-disciplinary research to flourish at UH. This kind of research is not happening in departments to the degree that it is happening at TIMES. While

we continue to branch out and seeking to create new partnerships, such as with the Colleges of Medicine, Nursing, and Pharmacy, and the Graduate School of Social Work, we feel the evidence indicates that we are contributing positively to the research environment at UH in ways that the Departments and Colleges are not able to on their own.

IV. MEASURES OF PARTICIPATION AND PERFORMANCE – FISCAL YEAR FY2019

a. Personnel and Scope

1. Number of tenure-track FTE faculty members: **32**

(Definition of a member: access to center resources and/or grants administered by center and/or space provided by the center but **must** credit split with center)

NOTE: TIMES only requires credit splits for faculty members whose labs are either housed in center space, or if TIMES is managing the grant, or when the grant makes use of TIMES resources. Some members housed outside of TIMES space have grants that are not using TIMES resources and are not managed by TIMES. We also list faculty members who may not have active grants but consider themselves members of TIMES.

2. Number of non-tenure-track FTE faculty: **19**
(supported wholly or in part through grants and activities administered through the center)

3. Number of staff: **21**

16 TIMES Staff (Admin - 7, IT - 3, Data Management – 3, Project/Facilities Mgmt. - 3).

NOTE: The current number of TIMES Staff is 15 (6 in Admin, 3 in IT, 3 in Data Management, and 3 in Project Management). One Admin staff position was eliminated in January 2019. Data Managers and Project Managers are intended to be supported on grant money, whereas IT and Admin positions generally are hard money supported.

5 staff positions work in faculty labs.

In FY 2018, there were a total of 30 Staff positions, 19 in TIMES and 11 in faculty labs.

4. Number students who participated in center research activities where at least 50% of the student effort was center-related:

(a) Postdoctoral fellows **9**

(b) Doctoral students **77**

(c) Masters students *(graduate students are not broken down within the center and most, if not all, are students in Ph.D. programs (e.g., Psychology only admits students for the Ph.D., but students earn an MA in Psychology as part of the program).*

(d) Undergraduates **130**

5. Provide a list of all personnel in items 1 to 4; give full name, title, University affiliation, and specific role in the unit.

Directory of TIMES Members, Staff, Post Doctoral Fellows, and Students for FY 2019

Last Name	First Name	Description	Type	Department
Rea	Michael	Professor	Faculty - Tenure Track	Biology/Bioch.
Ziburkus	Jokubas	Associate Professor	Faculty - Tenure Track	Biology/Bioch.
Francis	Joseph T.	Assistant Professor	Faculty - Tenure Track	BME

Nice	Nuri	Assistant Professor	Faculty - Tenure Track	BME
Zhang	Yingchun	Assistant Professor	Faculty - Tenure Track	BME
Bunta	Ferenc	Associate Professor	Faculty - Tenure Track	COMD
Castilla-Earls	Anny	Associate Professor	Faculty - Tenure Track	COMD
Johnsson	Lennart	Cullen Professor	Faculty - Tenure Track	Computer Sci.
Kakadiaris	Ioannis A.	Cullen Professor	Faculty - Tenure Track	Computer Sci.
Pavlidis	Ioannis	Eckerd Pfeiffer Professor	Faculty - Tenure Track	Computer Sci.
Vilalta	Ricardo	Professor	Faculty - Tenure Track	Computer Sci.
Horn	Cathy	Professor	Faculty - Tenure Track	DELPS
Kent	Shawn	Assistant Professor	Faculty - Tenure Track	DELPS
Santi	Kristi	Associate Professor	Faculty - Tenure Track	DELPS
Tejada-Simon	MariVi	Associate Professor	Faculty - Tenure Track	Pharmacy
Keller-Margulis	Milena	Associate Professor	Faculty - Tenure Track	PHLS
Alfano	Candice	Professor	Faculty - Tenure Track	Psychology
Alward	Beau	Assistant Professor	Faculty - Tenure Track	Psychology
Bick	Johanna	Assistant Professor	Faculty - Tenure Track	Psychology
Cirino	Paul	Associate Professor	Faculty - Tenure Track	Psychology
Fletcher	Jack M.	Cullen Professor	Faculty - Tenure Track	Psychology
Francis	David	Cullen Professor	Faculty - Tenure Track	Psychology
Gallagher	Matthew	Assistant Professor	Faculty - Tenure Track	Psychology
Grigorenko	Elena	Cullen Professor	Faculty - Tenure Track	Psychology
Hannay	Julia	Emeritus Professor	Faculty - Tenure Track	Psychology
Leasure	J. Leigh	Associate Professor	Faculty - Tenure Track	Psychology
Lee	Sunbok	Associate Professor	Faculty - Tenure Track	Psychology
Mehta	Paras	Associate Professor	Faculty - Tenure Track	Psychology
Sharp	Carla	Professor	Faculty - Tenure Track	Psychology
Steinberg	Lynne	Associate Professor	Faculty - Tenure Track	Psychology
Viana	Andres	Assistant Professor	Faculty - Tenure Track	Psychology
Lindner	Peggy	Assistant Professor	Faculty - Tenure Track	Technology
Hein	Sascha	Affiliate Member	Faculty - Non-Tenure Track	Free Univ. of Berlin
Price	Dan	Faculty	Faculty - Non-Tenure Track	Honors
Benoit	Julia	Research Assistant Professor	Faculty - Non-Tenure Track	Optometry
Semendeferi	Ioanna	Research Professor	Faculty - Non-Tenure Track	Physics
Ahmed	Yusra	Research Assistant Professor	Faculty - Non-Tenure Track	Psychology
Barr	Chris	Research Faculty	Faculty - Non-Tenure Track	Psychology
Carlson	Coleen	Associate Director	Faculty - Non-Tenure Track	Psychology
Davidson	Kevin	SAS Warehouse	Faculty - Non-Tenure Track	Psychology
Haile	Colin	Research Assistant Professor	Faculty - Non-Tenure Track	Psychology
Hart	Lesley	Clinical Associate Professor	Faculty - Non-Tenure Track	Psychology
Keo-Meier	Colton	Non-UH RF	Faculty - Non-Tenure Track	Psychology
Kosten	Therese	Professor	Faculty - Non-Tenure Track	Psychology
Kulesz	Paulina	Research Assistant Professor	Faculty - Non-Tenure Track	Psychology
McIntyre	Teresa	Adjunct Faculty	Faculty - Non-Tenure Track	Psychology
Miciak	Jeremy	Fletcher Group	Faculty - Non-Tenure Track	Psychology
Naumova	Oxana	Research Assistant Professor	Faculty - Non-Tenure Track	Psychology
Reich	Jodi	Research Assistant Professor	Faculty - Non-Tenure Track	Psychology
Taylor	Pat	Research Assistant Professor	Faculty - Non-Tenure Track	Psychology
Tolar	Tammy	Research Assistant Professor	Faculty - Non-Tenure Track	Psychology

Post Doctoral Fellows and Students

Last Name	First Name	Description	Department
An	Junmo	J. Francis Post Doctoral Fellow	BME
Palo	Amanda	Post Doctoral Fellow	Psychology
McIlraith	Autumn	D. Francis Post Doctoral Fellow	Psychology
Palmer	Cara	Alfano Post Doctoral Fellow	Psychology
Cortez	Ibdanelo	Leasure Post Doctoral Fellow	Psychology
Vaughan	Kelly	Bick Post Doctoral Fellow	Psychology
Chinn	Lisa	Grigorenko Post Doctoral Fellow	Psychology
Burenkova	Olga	Grigorenko Post Doctoral Fellow	Psychology
Khalaf	Shiva	Francis/Ahmed/Grigorenko Postdoc	Psychology

Graduate Students in FY 2019

Name	Description	Student's Home Department
Musa Ozturk	Ince PhD	BME
Priscella Asman	Ince PhD	BME
Sheng Khang	JFrancis Masters Student	BME
Jaganth Nivas Asok Kumar	JFrancis MS Research Assistant	BME
Mohammad Badri Ahmadi	JFrancis Phd	BME
Taruna Yadav	JFrancis PhD /Lab Manager/ Research Assistant	BME
Md Moin Atique	JFrancis PhD Research Assistant	BME
Michael Houston	Zhang Masters RA	BME
Chuan Zhang	Zhang PhD Student	BME
Feng Fang	Zhang PhD Student	BME
Nicholas Dias	Zhang PhD Student	BME
Rihui Li	Zhang PhD Student	BME
Yang Liu	Zhang PhD Student	BME
Abraham Bautista	CBL Grad Student	COMPUTER SCIENCE
Ha AnhVu Le	CBL Grad Student	COMPUTER SCIENCE
Mengjun Leng	CBL Grad Student	COMPUTER SCIENCE
Nikolaos Sarafianos	CBL Grad Student	COMPUTER SCIENCE
Timothy Burt	CBL Grad Student	COMPUTER SCIENCE
Xiang Xu	CBL Grad Student	COMPUTER SCIENCE
Charles Livermore	CBL Grad Student	COMPUTER SCIENCE
Lei Shi	CBL Grad Student	COMPUTER SCIENCE
Janaat Vijayakumar	CPL Grad Student	COMPUTER SCIENCE
Amanveer Wesley	CPL Grad Student	COMPUTER SCIENCE
MD Tanim Hasan	CPL Grad Student	COMPUTER SCIENCE
Shaila Zaman	CPL Grad Student	COMPUTER SCIENCE
Mohammed Emtiaz Ahmed	CPL Grad Student	COMPUTER SCIENCE
Mouad Rifai	Johnsson Grad Student	COMPUTER SCIENCE
Suyash Bakshi	Johnsson Grad Student	COMPUTER SCIENCE
Amirhossein Azarabadi	Johnsson Grad Student	COMPUTER SCIENCE
Nazaninalsadat Beheshti	Johnsson Grad Student	COMPUTER SCIENCE

Shiva Khalaf	D. Francis Grad Student	PHLS
Nan Li	Grigorenko Grad RA	PHLS
Alexandra Slaughter	Hein - Grad Student	PHLS
Andreea Dragomir-Davis	Hein - Grad Student	PHLS
Joanne Bower	Alfano - Researcher 1	PSYCHOLOGY
Christine So	Alfano PhD - Lab Manager	PSYCHOLOGY
Jessica Meers	Alfano Phd Student	PSYCHOLOGY
Rogelio Gonzalez	Alfano Phd Student	PSYCHOLOGY
Andrew Hoadley	Alward Lab Manager	PSYCHOLOGY
Simon Lau	Alfano Grad Student	PSYCHOLOGY
Kristen Stauffer	Bick Grad Student	PSYCHOLOGY
Brian Biekman	Bick RA PhD	PSYCHOLOGY
Anthony Gioia	Cirino Grad Student	PSYCHOLOGY
Natalie Ridgely	Cirino Grad student	PSYCHOLOGY
William Lacey	Cirino Grad Student	PSYCHOLOGY
Kelly Halverson	Cirino PhD	PSYCHOLOGY
Kelly Macdonald	Cirino Phd	PSYCHOLOGY
Colleen Phillips	Gallagher Grad Student	PSYCHOLOGY
Johann D'Souza	Gallagher PhD	PSYCHOLOGY
Angela Richardson	Gallagher PhD Student	PSYCHOLOGY
Michelle Clementi	Grad Student	PSYCHOLOGY
Joe Pirozzolo	Graduate Student -Francis	PSYCHOLOGY
Mei Tan	Grigorenko Grad Research Asst	PSYCHOLOGY
Jessica Garcia	Grigorenko Grad Student	PSYCHOLOGY
Marina Zhukova	Grigorenko Graduate Student	PSYCHOLOGY
Julia Kovalenko	Grigorenko Phd	PSYCHOLOGY
Irina Ovchinnikova	Grigorenko phd student	PSYCHOLOGY
Steven Nieto	Kosten Graduate Student	PSYCHOLOGY
Shadab Forouzan	Kosten PhD	PSYCHOLOGY
Emma C Perez	Leasure Grad	PSYCHOLOGY
Rebecca West	Leasure Grad	PSYCHOLOGY
Diana Bravo	Leasure PhD	PSYCHOLOGY
James Rigby	Mehta - Grad RA	PSYCHOLOGY
Erin Reid	Miciak PhD; Ahmed Project	PSYCHOLOGY
Salome Vanwoerden	Sharp Grad - Assistant Lab Director	PSYCHOLOGY
Kiana Wall	Sharp Grad RA	PSYCHOLOGY
Jessica Hernandez	Sharp Grad Student	PSYCHOLOGY
Sophie Kerr	Sharp Grad Student	PSYCHOLOGY
Jacob Leavitt	Sharp PhD	PSYCHOLOGY
Francesca Penner	Sharp PhD RA	PSYCHOLOGY
Eric Sumlin	Sharp RA Grad	PSYCHOLOGY
Veronica McLaren	Sharp RA grad	PSYCHOLOGY
Haley Conroy	Viana Grad	PSYCHOLOGY
Erika Trent	Viana Grad Student	PSYCHOLOGY
Elizabeth Raines	Viana Graduate Research Assistant	PSYCHOLOGY
Abigail Hanna	Viana Research Assistant, PhD	PSYCHOLOGY

Undergraduate Students in FY 2019¹

Name	Lab Affiliation
Mamisi Gordon	Ahmed RA
Guadalupe Sanchez	Ahmed Undergrad RA
Erika Sanchez	Alfano RA Volunteer
Christie Ga-jing Tsao	Alfano Research Assistant - Cowie
Bryce Clausen	Alfano Vol RA
Gabrielle Pendleton	Alfano Vol RA
Islal Yuksel	Alfano Vol RA
Jocelyn Villalobos	Alfano Vol RA
Laura De Leon	Alfano Vol RA
Sabrina Thomas	Alfano Vol RA
Sarah Abobaker	Alfano Vol RA
Zulema Jimenez	Alfano/Palmer - Volunteer RA
Kristen Stauffer	Bick Grad Student
Ainash Montgomery	Bick Undergrad RA
Catherine Ramos	Bick Undergrad RA
Cody Plant	Bick Undergrad RA
Edith Martinez	Bick Undergrad RA
Emmanuel A. Oketunmbi	Bick Undergrad RA
Flor Carrillo	Bick Undergrad RA
Hana Mohamad	Bick Undergrad RA
Laura Delgado-Guzman	Bick Undergrad RA
Maiah Jackson	Bick Undergrad RA
Marie Douge	Bick Undergrad RA
Miranda Dominguez	Bick Undergrad RA
Natalie Hosseini	Bick Undergrad RA
Mary Koontz	Bick Undergrad RA (Kate)
Camila Quintero	Bick Vol RA
Don Duong	Bick Volunteer RA
Manoj Kumar Cebol Sundarraja	CACDS TA
Kennetch Castro	CBL Assistant Lab Coordinator (CWS)
Abinavraj Ganesh Sudhakar	CBL Intern
Ayzhamal Zhamangaraeva	CBL Intern
Elena Dyadkin	CBL Intern
Erick Platero	CBL Intern

¹ Departmental affiliations/majors of undergraduates are not known by TIMES, only the faculty member lab to which the student is assigned.

Harsh Kachhadia	CBL Intern
Ochuko Adiotomre	CBL Intern
Christos Smailis	CBL Undergraduate RA
Andrea Ochoa Lopez	Cirino Undergrad
Christopher Blank	CPL Intern
Salah Taamneh	CPL Lab Member
Vitalii Zhukov	CPL RA
Rubayat Jinnah	CPL Teaching Assistant
Han Pham	CPL Undergrad RA
Laura Long	Gallagher Research/Teaching Assistant
Heang Sundermann	Gallagher Undergrad RA
Nina Glover	Gallagher Undergrad RA
Pelin Cunningham-Erdogdu	Gallagher Undergrad RA
Lydia Tesfaye	Gallagher Vol RA | Former Palmer/Bower RA
Cheri Stahl	Grigorenko - Contractor
Gloria Ramirez	Grigorenko - Marina Undergrad RA
Christina Thomas	Grigorenko - RA
Connor Cheek	Grigorenko RA
Dung Nguyen	Grigorenko RA
Ieandro Iedesma	Grigorenko Undergrad RA
Anthony Artiga	Grigorenko Vol RA
Rajah Rosario	Grigorenko/Tan Vol RA
Hechmi Kilani	Grigorenko/Zhukova Vol RA
Jenny Flick	Grigorenko Undergrad RA
Luis Nieto	Grigorenko Undergrad RA
Marshall Short	Hart - Undergrad RA
Stephanie Velasco	Ince RA
Oman Magana	JFrancis
Matthew Perry	JFrancis RA
Nikolaos Sarafianos	Kakadiaris Grad Students
Keely McGrew	Kosten Grad RA
Hailey Walters	Kosten RA
Ashley Acuna	Kosten Undergrad RA
Uzma Maknojia	Kosten Undergrad RA
Veronica Morgan	Kosten Undergrad RA
Marium Waqar	Leasure RA
Caitlin Kennedy	Leasure TA
Ashira Santos	Leasure Undergrad RA
Erisa Met-Hoxha	Leasure Undergrad RA
Marcelle Olvera	Leasure Undergrad RA
Meena Shirazi	Leasure Undergrad RA
Nathalie Ulrich	Leasure Undergrad RA
shammah Ike	Leasure Undergrad RA
Priel Meir	Palmer/Bower RA
Tiffany Tran	Palmer/Bower RA
Helen Nguyen	Price Temporary Staff

Cara Shokler	Program Coordinator - Price
Cindy Paz	Program Coordinator - Price
Maribel Hernandez	Research Assistant
Raima Siddiqui	Rodger Undergard RA
Roman Torres	Rodgers - Vol RA
Tayyaba Masood	Rodgers - Vol RA
Delia Gomez	Rodgers - Volunteer RA
Emily Oldridge	Rodgers RA
Daniel Phu	Rodgers Undergrad RA
Justin Aickareth	Rodgers Undergrad RA
Reshma Jose	Rodgers Undergrad RA
Rhea Neycheril	Rodgers Undergrad RA
Aksa Prasad	Rodgers Vol RA
Kiana Wall	Sharp Grad RA
Laura Garcia	Sharp Guest Researcher
Omer Akca	Sharp Guest Researcher
Frances Saubon	Sharp RA
Jacqueline Chamberlain	Sharp RA
Lauren Palmer	Sharp RA
Nabeeha Asim	Sharp RA
James Wang	Sharp RA - Vol
Miana Graves	Sharp RA - Volunteer
Hui Song	Sharp Undergrad RA
Jenna Jones	Sharp Undergrad RA
Madison Hutzler	Sharp Undergrad RA
Onyinyechi Obi-Obasi	Sharp Undergrad RA
Shreya Aggarwal	Sharp Undergrad RA
Samantha Annab	Sharp Undergrad RA - lab manager
Caroline Pearson	Sharp Undergrad RA (formerly Bick)
Charlie McGill	Sharp Vol RA
Dakota Broadway	Sharp Vol RA
Kathleen DiBacco	Sharp Vol RA
Leticia Ntela	Sharp Vol RA
Piper Reilly	Sharp Vol RA
Riley McAllister	Sharp Vol RA
Audrey Miller	SPSS user
Karrie Hilliard	Tolar -Algebra Measure II
Dania Amarneh	Viana RA
Katy Barger	Viana RA - Undergrad
Emily Crossman	Viana Undergrad RA
Erika De La Cerda	Viana Undergrad RA
Mahnoor Ahmad	Viana Undergrad RA
Reagan Hylton	Viana Undergrad RA
Desiree Gomez	Viana Vol RA
Amy Barton	Yusra Ahmed - Research Assistant
Bin Chen	Zhang Visiting Students

Wei Huang
Yuejing Hu
Yueying Cao

Zhang Visiting Students
Zhang Visiting Students
Zhang Visiting Students

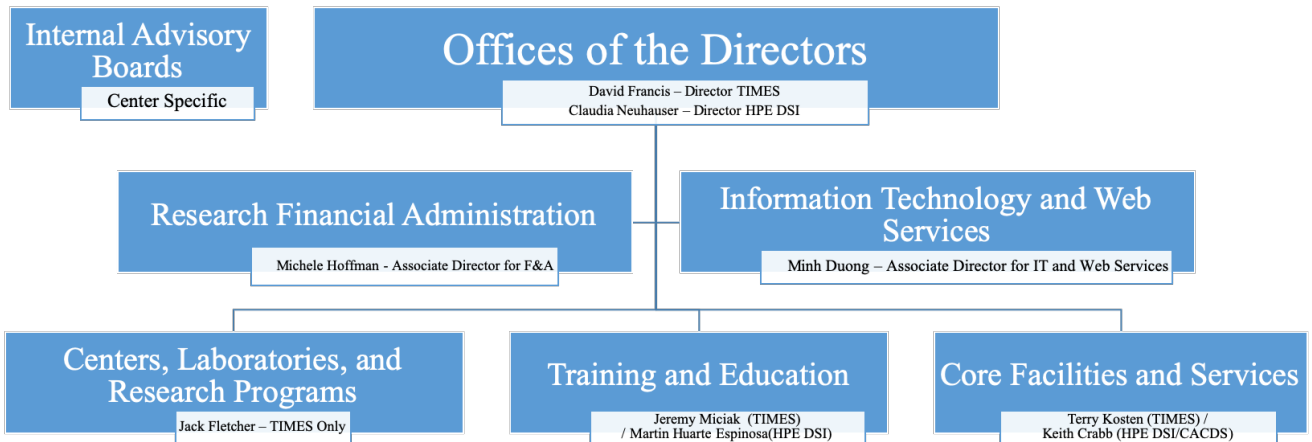
TIMES Staff Positions for FY 2019²

Last Name	First Name	Supervisor	Position
Baker	Miah	Haile	Lab Staff
Sanchez	Sergio	Haile	Lab Staff
Kotis	Konstantinos	Kakadiaris	Lab Staff
Gomez	Delia	Rodgers	Lab Staff
Oldridge	Emily	Rodgers	Lab Staff
Gill	Bertha	Admin	TIMES Staff
Hernandez	Virginia	Admin	TIMES Staff
Hoffman	Michele	Admin	TIMES Staff
Lozano	Helen	Admin	TIMES Staff
Nisar	Fauzia	Admin	TIMES Staff
Vargas	Adilia	Admin	TIMES Staff
Dwaik	Noor	Admin Assistant	TIMES Staff
Nguyen	Thanh	Data Manager	TIMES Staff
Vigilla	Laudemer	Data Manager	TIMES Staff
Garcia	Henry	Data Mangager	TIMES Staff
Alexander	Jeremy	IT	TIMES Staff
Anderson	Martin	IT	TIMES Staff
Duong	Minh	IT	TIMES Staff
Barcnas	Griselda	Project Manager	TIMES Staff
Hernandez	Maria	Project Manager	TIMES Staff
Nieser	Ken	Project Manager	TIMES Staff

6. Provide a current organizational chart (include advisory board/committee if applicable).

² TIMES Staff position for Noor Dwaik was eliminated in January 2019.

TIMES / HPE DSI Joint Organizational Chart

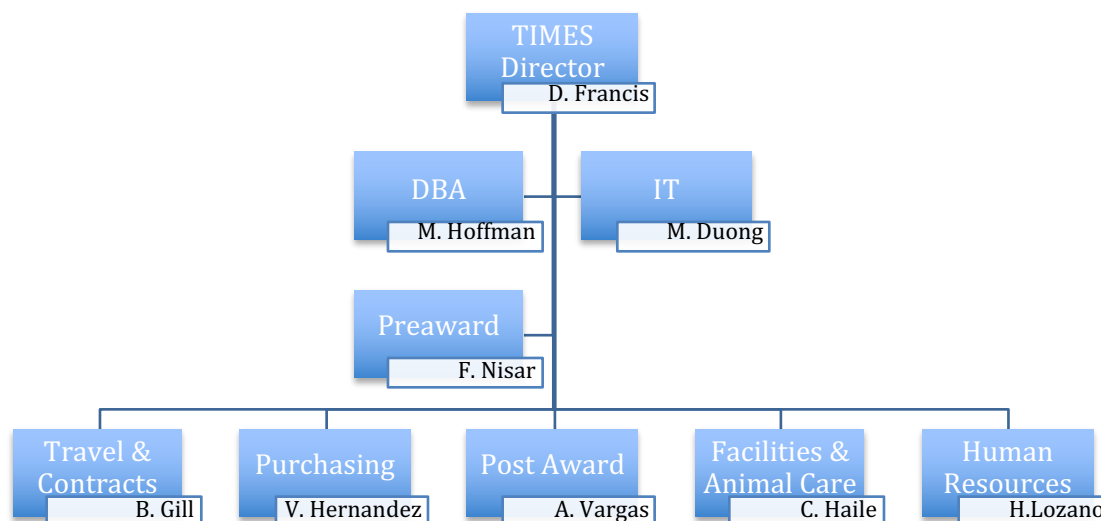


The organizational chart above reflects the joint administrative structure of TIMES and HPE DSI/CACDS, which was operational during FY 2019. This chart changed slightly during FY 2019 because of the dissolution of CACDS from a DOR Center to a Core Facility and the shared administrative structure between TIMES and HPE DSI with CACDS absorbed under HPE DSI as a Core Facility. Each center has its own Advisory Board. The TIMES IAB consists of the following individuals.

During the reporting period, TIMES admin group worked to assist in the transition of CACDS from a ULCI to a Core Facility embedded within the HPE DSI. TIMES Admin group also continued to provide support to AMI and TORC until TORC was officially closed as a ULCI and made a Departmental Center under Health and Human Performance and until management of AMI was taken over by the Department of Mechanical Engineering. Services continued for roughly one quarter of the reporting period.

TIMES Administration Organizational Chart

(Serving TIMES/ HPE DSI in FY 2019)



Above we provide an organizational chart for the Research Financial Administrative Services component of the organizational chart. In FY 2019 this group provided services to TIMES and HPE DSI/CACDS. The group existed within TIMES and then TIMES and CACDS merged their administrative groups in 2015. In the Chart above, not pictured is Helaine Guillory, who serves exclusively under HPE DSI/CACDS as Dr. Neuhauser's Executive Administrative Assistant. Also not pictured in the chart are Jeremy Alexander and Martin Anderson, additional IT staff who report to Minh Duong. Michele Hoffman, Adilia Vargas, Bertha Gill, Fauzia Nisar, and Minh Duong were members of the TIMES administrative infrastructure prior to the merger, in addition to the person who held Helen Lozano's position (Sandra Simiens), and Kevin Winoske, the person who managed the TIMES wet labs and ABC Core. Colin Haile, a Research Faculty member, is presently serving in that capacity because we lack funding for a staff position to carry out this management activity.

TIMES INTERNAL ADVISORY BOARD 2019

Member Name	College	Department	
Bond, Richard	Pharmacy	Pharm. And Pharmaceut. Sciences	
Frishman, Laura	Optometry		
Harold, Michael	Engineering	Chemical Engineering	
Horn, Cathy	Education	Ed. Leadership and Policy Studies	TIMES Member
Grigorenko, Elena	CLASS	Psychology	TIMES Member
Price, Dan	Honors	Dean of the Honors College	TIMES Member
Subhlok, Jaspal	NSM	Computer Science	

Ex Officio			Serving As
Neuhauser, Claudia	NSM	Math	Delegate VP/VC for Research
Fletcher, Jack	CLASS	Psychology	TIMES, Assoc. Dir., Research
Hoffman, Michele		TIMES	TIMES, Assoc. Dir. Fin. Svc.
Kosten, Terry	CLASS	Psychology	TIMES, Sci. Dir., ABC
Neuhauser, Claudia	NSM	Math	HPE DSI, Director

7. Provide a list of outside agencies or entities with which this center/institute interacted and specify the nature of the interaction.

We have interacted with Aid to Victims of Domestic Abuse (AVDA), Small Steps Preschool Program, WT Grant, the Duncan Family Foundation (in conjunction with UH Development), NICHD, NSF, and IES, as governmental/not-for-profit funders of research activities at TIMES. We have not engaged in any lobbying activities. As faculty, we have interacted with numerous professional societies, and served on various advisory boards, including grant review panels of not-for-profit and governmental agencies, such as IES and NICHD, as well as the National Research Council. We have also interacted with the Duncan Family Foundation, which has provided funding to TIMES through gifts to Drs. Fletcher and Francis in support of the Texas Consortium on High Risk Children and the Texas Center for Learning Disabilities. TIMES does not interact directly with outside agencies other than granting agencies for the purposes of submitting grant proposals.

b. Financial support (funds received during FY2019)

- | | |
|--|--------------------------------|
| 1. State appropriations through the DOR: | \$358,428 |
| 2. Total external support from grants and contracts: | \$4,275,336³ |
| 3. IDC returned: | \$347,299⁴ |

³ This number reflects funds expended on grants in FY19 as reported to TIMES by DOR (M. Sakalayan). The number reflects the portion of expenditures credited to TIMES. Total grant expenditures were equal to \$15,930,963. Total grant support exceeds this number but is somewhat meaningless as a measure of annual support because grant funds must be expended on grant activities and must be expended over the grant year, not the fiscal year.

⁴ TIMES actually received an IDC distribution of \$449,805 but should only have received \$347,299. The error was identified by DOR after the funds had been expended over the course of FY 2019. A portion of this difference (\$61,729) will have to be repaid by TIMES over the following three years. These funds reflect the return to TIMES based on expenditures in FY 2018. The error was caused by misapplication of the BTI exception. This refers to IDC generated by activities carried out in TIMES but promised by VPR Bose to be given back to BTI. The rule was misapplied, and the funds were actually returned to TIMES rather than to BTI.

4. All other support from the DOR and the UH Administration (e.g., cost sharing, patent & licensing revenue, University allocations, administrative commitments, salary):

Administrative Costs Paid by HPE DSI/CACDS **\$142,278**

Director's 2/9ths salary stipend **\$58,987**

5. Total gifts to the unit: No new gifts were received in FY2019 **\$0**

6. Total of all support: **\$5,182,328**

7. Is current funding of the unit sufficient to continue its operations (give specific details)?

This question is asked every year, and the answer remains the same. No, the funding is not sufficient. Each year, the Director faces a shortfall that places the unit in jeopardy. Only through partnering with other units on campus to pick up some funding shortfalls, bartering with investigators who have residual funds, and scrambling to bring in contracts and grants to cover short falls for staff funded on soft money do we manage to survive more or less in tact from one year to the next. We have had significant reductions in staff, but most of the budgetary benefits from these reductions accrued to the CACDS budget, which is now paying substantially less for administration, while TIMES costs have remained roughly the same.

In considering the funds available to support TIMES operations, one must ignore the funding under 2, external grant awards. These funds are not fungible. These are funds awarded competitively to perform specific research projects. They do not directly support the cost of operations, but rather reflect the volume of our research expenditures. They cannot be used to pay the DBA, the purchasing personnel, the IT staff, except in rare instances, to provide the general-purpose software, servers, etc. that support TIMES infrastructure. These funds only support direct research costs that are incurred by specific projects that pay for them.

TIMES has been able to maintain operations only through IDC generation, residual funds, and the brokering of deals to provide services to other centers in exchange for those centers paying for the administrative services that they use. It is really quite simple arithmetic. The cost of TIMES administrative group (6 admin and 3 IT personnel) is \$764,543. This does not include support for anyone to manage the Animal Behavior Core, no funds for software, replacement computers, storage, or any kinds of operational support. It also does not include any support for soft money supported staff who might fall short of 100% funding in a given fiscal year, nor does it include any money for programming, i.e., initiatives to try to increase funding, professional development money for faculty, or staff. The direct support that TIMES receives from DOR (\$358,428) covers only 46% of that portion of TIMES annual operating costs. When the funds are committed from state appropriations, they cover a somewhat higher percentage because of the inclusion of fringe, separate from the \$358,428, but the shortfall for covering the main staff positions remains substantial.

I reported last year that if support was not increased, we would not make it through the year intact. Funding was not increased, and we only made it through the year with a significant reduction in force because a DOR error put \$102K extra in our IDC account.

Direct support to TIMES from DOR is insufficient to fund TIMES base operation without substantial additional funding from IDC generation, deal making with other centers, and residual accounts from past work and gifts to the center, and reliance on Dr. Francis' and Dr. Fletcher's Cullen Chair Accounts. It is impossible for TIMES to expand services so that we could provide more support to the university community at large who are not in a position to pay for services rendered, such as statistical support, data management or data warehousing, to offer free workshops on statistical techniques, or to provide new investigators with access to the Animal Behavior Core through TIMES funded seeded grants. If we had sufficient funding to pick up the equivalent of 1.0 FTE of statistical support and/or data management support, and/or to create a seed grant program for junior faculty, we could open up more service lines to the greater university community. This additional support would have to be over and above the support needed for TIMES admin/IT positions and costs of operations (routinely in the neighborhood of \$200,000 annually). We are also looking at ways to monetize the support that we are offering to academic departments and colleges on electronic reporting of cost centers used in reconciliation, but such efforts will not be sufficient to fund TIMES base operations.

TIMES annual cost of operations (non-grant expenditures to pay salaries of administrative staff, infrastructure supports, software, etc.) is approximately \$1.2M. These costs have been reasonably stable since moving to HBSB1. Up until FY 2019, DOR had provided \$550,000 in direct support per year, and TIMES had to cover the difference through recovered IDC, direct grant support for administrative personnel where possible, such as IT support staff providing services to specific grants, and through negotiated agreements with other centers to cover percentages of administrative salaries through their DOR allocations and recovered IDC. In FY 2019, our state appropriation was reduced by over 30% to \$358,428. Through FY 2018, we were able to make up the difference between administrative costs and direct support from the university through IDC returned to TIMES and through the negotiated support from CACDS, and TORC, and from BTI, and from various residual accounts. However, in FY 2019 BTI was no longer managed by TIMES, and the balances in our residual funds are effectively depleted. I have been warning DOR and the RSC that this day of reckoning was coming, and it arrived in FY 2019. We escaped because of a DOR error, but in FY 2020, we are required to begin paying back that error.

It is difficult to say what will happen in the last half of FY 2020. DOR has graciously absorbed a portion of the error and has agreed to allow us to pay back the error over three years, but the bottom line is that beginning in FY 2020 we have no means for generating additional revenue. No matter how much IDC we help to generate, TIMES receives \$0 IDC beginning in FY 2020 due to the new distribution policy. In short, we must pay DOR back out of the funding that DOR has allocated to us.

With the new IDC policy, if TIMES state appropriation remains as it was for FY 2019, TIMES is out of business. The base funding amount (\$358,428) would cover the salary of the DBA, the pre-award staff member, the head of IT, and one post-award person. If we have to pay both salary and fringe out of that amount, we would have to reduce even further, and that would leave no funding for the cost of operations, which runs about \$200K per year. We cannot make up the short fall by reducing costs without destroying the center. Please note, it is not that TIMES does not generate sufficient revenue to fund its operations; TIMES does not receive enough of the revenue that it generates to fund its operations.

In the long run, the current model is unsustainable because the funding model violates the fundamental principles of running an effective business operation, namely, alignment of revenues and costs.

Going forward, HPE DSI/CACDS have the funding to contribute to the cost of administrative operations proportional to their portion of the TIMES administrative workload. BTI and AMI underpaid in all of their years of support, significantly, but without DOR intercession, which coupled with chronic underfunding of TIMES in comparison to other centers and TIMES' workload has led to TIMES' reserves being depleted. I cannot explain the rationale for the chronic underfunding of TIMES, nor the decisions not to require some centers to pay for the services they use. But it is clear that there is a lack of alignment of costs and revenues. Consider the fact that AMI received in FY 2018 an amount of direct annual support from DOR roughly equal to the amount received by TIMES (\$500,000), and with that support they had no responsibility to pay any of the associated costs of running AMI as a business unit within the university. In FY 2019, AMI funding was increased by 50% so that AMI could be managed by the Department of Mechanical Engineering when TIMES could have provided that management for 10% of the existing AMI funding (\$50,000). In FY 2019, TIMES received \$358,428 in direct support on which TIMES generated \$4.3M in direct research expenditures, 90% of which are based on federal awards. Again, \$4.3M is the proportion of over \$15M in research expenditures that are directly credited to TIMES investigators (i.e., TIMES share of the expenditures). Other centers received much higher funding but generated far less in research expenditures and indirect costs, and thus could allocate more dollars absolutely and proportionally to program related costs, as opposed to administrative costs. Because IDC generation based on FY 2019 expenditures have not yet been reported, I can only estimate IDC generation based on these expenditures.

The RSC believes that Centers should be "self-sufficient", which is a laudable goal, but not a business model. With the change in the funding model for centers, it is virtually impossible for any center to generate the revenue needed to support its operations, because general operations cannot be expensed to grants. Even under the prior funding model, it was a challenge to be self-supporting. Under the old funding model, for TIMES to generate enough revenue to support its costs of operations (\$1.2M), it would need to generate annually, \$5.5M in recovered indirect costs using the prior recovery formula and distribution model. Given the former distribution

policy, TIMES would need to generate about \$42M in annual research expenditures to generate \$5.5M in IDC to return \$1.2M in IDC to TIMES. Put another way, each of TIMES 32 Tenure Track faculty members and 18 Non-Tenure Track faculty members would need to be generating \$842,000 in research expenditures annually, about 2.8 times the productivity of the College of Engineering faculty. But of course, to generate \$42M in research expenditures almost certainly means that the number of support staff and the operational costs of the center would also need to increase. I simply do not see how it is physically possible to achieve the goal of self-sufficiency, but I do believe that every center should be enabling the generation of more IDC than its cost of operations.

We will continue to write more large grants to generate research expenditures and revenue for UH from recovered IDC. TIMES is operating more closely to the goal of self-sufficiency than any other center on campus. In the final analysis, DOR and UH must decide if they want interdisciplinary research centers, what they are willing to invest for those centers to exist, and what they expect from the centers concretely in terms of research productivity as measured in publications, grants, research expenditures, and IDC recovery, among other suitable metrics.

8. What would be the minimum level of DOR support below which the unit cannot function and would be phased out?

This number remains unknown and depends entirely on our success in writing grants, managing costs, and identifying new revenue streams, but also on the funding model that DOR plans to apply in the future, especially as it relates to the funding of administrative operations of the centers as a group. We operated for many years at the outset of our existence without direct annual support from the university, but only returns from IDC. It is very difficult to sustain operations on IDC alone, when IDC from grants is distributed across many units and taxed centrally. We were able to survive in this way in the early years because we had several very large grants, each providing multiple millions in annual expenditures. One project alone was \$5M annually. There are few such projects that we can compete for today. Surviving on IDC generation requires many large grants and very efficient operations, and a minimum of funds going out in subcontracts, which makes winning the awards more challenging. The biggest variables in our ability to sustain operations at the FY 2019 funding level are our success in writing grants and in negotiating with other centers to share in the cost of administration and infrastructure, both of which vary from year to year. I believe that our infrastructure is a key to our investigators' success, especially in competing for larger awards. Our ability to operate at lower levels of support also depends on policies and decisions that affect the return of IDC to the generating units. It is not necessary that TIMES receive a portion of the IDC that it generates, but only if its costs of operations that are not directly billable to grants are being paid centrally. We are confident in our ability to manage our non-grant costs, build ways to operate more efficiently each year, and identify new streams of grant revenue, but none of these things can pay for the infrastructure and administration costs of the center – the non-billable, indirect costs of operations. We will deal with our budget whatever it is, but we do feel that our success merits support from the university beyond IDC recovery, and the level of support received in FY 2019 created an existential crisis that was only averted through an error in IDC distribution.

- c. Contracts and grants to the unit (must involve credit split; include entire amount of award) for FY 2019 only
 1. Number of proposals submitted (and total funds requested)

SPONSOR_TYPE	Number of Proposals	Total F&A Requested	Total Budget Request
Federal	41	\$15,412,368	\$61,556,322
Private Not for Profit	7	\$386,406	\$1,822,975
Private for Profit	6	\$444,262	\$1,282,492
State Agency	2	\$57,696	\$1,290,502

SPONSOR_TYPE	Number of Proposals	Total F&A Requested	Total Budget Request
State Institute	4	\$274,779	\$793,230
University	14	\$1,537,889	\$5,082,141
TIMES Proposal Activity for 2019 as Reported by DOR			

2. Number of external awards received; must be verifiable through PS

SPONSOR_TYPE	Number of Awards	Committed Amount	Projected Award Amount
Federal	4	\$2,148,752	\$5,231,450
Private Not for Profit	1	\$191	\$30,000
Private for Profit	3	\$531,439	\$531,460
State Agency	1	\$400,000	\$400,000
University	2	\$145,960	\$165,350
TIMES Award Activity for 2019 as Reported by DOR			

3. Dollar amount of external awards received (including IDC recovered; indicate start date and duration); must be verifiable through PS

Please see table above which shows the committed amount and the total projected award for proposals awarded in 2019.

4. Provide a table listing the title, PI, sponsor, start and end dates, amount of funding, and indirect cost (IDC) recovered for each award, new or ongoing, supported in FY2019. Identify specifically any multi-PI interdisciplinary awards.

The tables provided below are based on an analysis of grant expenditures provided to TIMES by M. Sakalayan in DOR. The first table lists a summary of expenditures by Award Type and includes the expensed amount as well as the share of the total expenditures that are attributed to TIMES via credit split. The table also provides a summary of the Total IDC Recovered on grants of that type, the total returned to generating units, and the portions of the recovered and returned IDC for which TIMES is credited. All numbers in the table are based on grants in which TIMES investigators play a role. The second table provides the detailed table requested by individual project and lists the Project Number and the expenditures in FY 2019 for all grants credit splitting with TIMES. The second table includes all external accounts with research expenditures, regardless of IDC generation on that award.

We do not list the PI of the Grant or the Title in this Table as that information is not included in the Expenditures spreadsheet provided by DOR because that spreadsheet lists the credit going to each Co-Investigator on the project. If knowing the PI, title, and beginning and ending dates of the awards would truly be helpful to the RSC in evaluating TIMES, I can combine different reports from DOR to produce the desired table for the 73 projects reported on in the second table.

SPONSOR_TYPE	Awards with Expenditures	Expensed Amount	TIMES Share of Expensed Amount	Total IDC Recovered	Total IDC Returned	TIMES IDC Recovered	TIMES IDC Returned
Federal	42	\$5,898,160	\$3,362,842	\$1,343,465	\$699,231	\$725,379	\$377,537
Private Not for Profit	3	\$51,479	\$35,383	\$16,670	\$8,676	\$11,675	\$6,077
Private for Profit	10	\$527,291	\$321,508	\$112,997	\$58,811	\$62,437	\$32,496
State Agency	2	\$508,207	\$254,104	\$13,320	\$6,933	\$6,660	\$3,466
State Institute	9	\$73,177	\$66,177	\$7,203	\$3,749	\$5,762	\$2,999
University	7	\$428,653	\$235,323	\$116,205	\$60,481	\$64,690	\$33,669
TIMES Research Expenditures and IDC Recovery for 2019 as Reported by DOR							

Project	Sponsor Name	Sponsor Type	Expense Amount	TIMES Expense Amount
G0500064	National Institute on Aging	Federal	124197.34	99357.87
G0500261	U.S. Department of Homeland Security	Federal	17367.75	8683.88
G0500680	National Science Foundation	Federal	354668.86	212801.32
G0500806	National Institute of Child Health and Human Development	Federal	187432.91	148072.00
G0500836	National Institute of Child Health and Human Development	Federal	59971.95	29985.98
G0500837	National Institute of Child Health and Human Development	Federal	5474.14	2737.07
G0500838	National Institute of Child Health and Human Development	Federal	260820.25	130410.13
G0500839	National Institute of Child Health and Human Development	Federal	531576.52	265788.26
G0500840	National Institute of Child Health and Human Development	Federal	149899.42	74949.71
G0500841	National Institute of Child Health and Human Development	Federal	81609.15	40804.58
G0500842	National Institute of Child Health and Human Development	Federal	306996.68	153498.34
G0500843	National Institute of Child Health and Human Development	Federal	333715.46	166857.73
G0500844	National Institute of Child Health and Human Development	Federal	155751.20	77875.60
G0501064	National Science Foundation	Federal	60316.76	45237.57
G0501222	National Institute on Alcohol Abuse and Alcoholism	Federal	96712.81	27079.59
G0501227	National Institute of Child Health and Human Development	Federal	404481.62	202240.81
G0501229	Institute of Education Sciences	Federal	136850.44	44476.39
G0501837	U.S. Department of Homeland Security	Federal	-3976.46	-994.12
G0502646	Michael E. DeBakey Veterans Affairs Medical Center in Houston	Federal	34193.62	23935.53

Project	Sponsor Name	Sponsor Type	Expense Amount	TIMES Expense Amount
G101918	Institute of Education Sciences	Federal	14503.80	11603.04
G103586	Centers for Disease Control and Prevention	Federal	-681.52	-163.50
G104661	National Institute of Child Health and Human Development	Federal	0.00	0.00
G104664	National Institute of Child Health and Human Development	Federal	-1046.36	-721.99
G107513	U.S. Department of Education	Federal	8504.07	1955.94
G107557	National Eye Institute	Federal	372316.94	18615.85
G108632	Institute of Education Sciences	Federal	34017.90	34017.90
G108758	NASA Johnson Space Center	Federal	15834.41	6650.45
G108951	National Institute on Alcohol Abuse and Alcoholism	Federal	-28658.83	-14329.42
G109103	U.S. Department of Homeland Security	Federal	-15213.86	-7606.93
G109491	National Library of Medicine	Federal	0.00	0.00
G110537	Institute of Education Sciences	Federal	119671.60	57442.37
G111135	Michael E. DeBakey Veterans Affairs Medical Center in Houston	Federal	-58.72	-41.10
G111322	U.S. Department of Homeland Security	Federal	470924.79	470924.79
G111469	National Institute on Deafness and Other Communication Disorders	Federal	198076.26	99038.13
G112167	Institute of Education Sciences	Federal	353156.37	264867.28
G112168	Institute of Education Sciences	Federal	243566.17	182674.63
G112172	Institute of Education Sciences	Federal	166497.04	133197.63
G112211	U.S. Department of Homeland Security	Federal	-5345.73	-2672.87
G112607	National Science Foundation	Federal	131647.25	65823.63
G112817	National Institute on Alcohol Abuse and Alcoholism	Federal	369279.18	258495.43
G113263	National Science Foundation	Federal	7624.99	3812.50
G113435	National Institute on Drug Abuse	Federal	145483.93	25459.69
G0501654	The American Institutes for Research	Private Not for Profit	47930.79	33551.55
G0502512	Colorado Department of Education	Private Not for Profit	191.25	153.00
G109851	Research Foundation of the State University of New York	Private Not for Profit	3357.28	1678.64
C106149	Repsol Services Company	Private for Profit	-31421.16	-15710.58
C111623	Enterprise Products Company	Private for Profit	2880.33	2016.23
C112686	Enterprise Products Company	Private for Profit	16481.24	16481.24
G0501281	ABT Associates Inc	Private for Profit	31151.04	24920.83

Project	Sponsor Name	Sponsor Type	Expense Amount	TIMES Expense Amount
G0501735	Enterprise Products Company	Private for Profit	262721.83	131360.92
G0501928	Secure Planet, Inc	Private for Profit	64742.02	32371.01
G0501962	Repsol Services Company	Private for Profit	3985.53	0.00
G0502478	Research Triangle Institute	Private for Profit	62362.71	44277.52
G111704	Research Triangle Institute	Private for Profit	103743.65	77807.74
G111706	Kadvax Technologies, Inc	Private for Profit	10643.91	7982.93
G0500630	Texas Education Agency	State Agency	117002.19	58501.10
G0502328	Texas Education Agency	State Agency	391205.18	195602.59
C107580	University of Houston - Residual Funds	State Institute	665.15	665.15
C108421	University of Houston - Residual Funds	State Institute	2730.97	2730.97
C108855	University of Houston - Residual Funds	State Institute	39.88	39.88
G0503070	University of Houston - Residual Funds	State Institute	33308.17	33308.17
G0503564	University of Houston - Residual Funds	State Institute	11.59	11.59
G0503594	University of Houston - Residual Funds	State Institute	1420.44	1420.44
G100232	University of Texas at Austin	State Institute	-0.01	-0.01
G107463	University of Texas at Austin	State Institute	-150.50	-120.40
G110312	University of Texas at Austin	State Institute	35151.39	28121.11
G0501154	University of Alberta	University	1437.00	1005.90
G0501228	Baylor College of Medicine	University	253017.37	94881.51
G0502231	University of South Florida	University	111955.76	89564.61
G0502463	Rice University	University	610.13	488.10
G0502863	Tulane University	University	30246.19	17996.48
G112109	Harvard University	University	0.00	0.00
G112602	Harvard University	University	31386.88	31386.88

Project	IDC Recovered	IDC Returned	IDC Recovered Credited to TIMES	IDC Returned Credited to TIMES
G0500064	36577.43	19037.40	15229.92	29261.94
G0500261	.	.	.	.
G0500680	118193.32	61515.90	36909.54	70915.99
G0500806	64927.72	33792.83	26696.34	51292.90
G0500836	14823.07	7714.94	3857.47	7411.54

Project	IDC Recovered	IDC Returned	IDC Recovered Credited to TIMES	IDC Returned Credited to TIMES
G0500837	.	.	.	.
G0500838	84680.50	44073.53	22036.77	42340.25
G0500839	124259.39	64673.10	32336.55	62129.70
G0500840	33386.41	17376.58	8688.29	16693.21
G0500841	15383.91	8006.84	4003.42	7691.96
G0500842	40808.59	21239.59	10619.79	20404.30
G0500843	52770.10	27465.18	13732.59	26385.05
G0500844	52262.02	27200.74	13600.37	26131.01
G0501064	20894.05	10874.70	8156.02	15670.54
G0501222	33501.83	17436.65	4882.26	9380.51
G0501227	68989.95	35907.10	17953.55	34494.98
G0501229	10552.74	5492.37	1785.02	3429.64
G0501837	-1377.46	-716.92	-179.23	-344.37
G0502646	.	.	.	.
G101918	-47.47	-24.71	-19.77	-37.98
G103586	.	.	.	.
G104661	.	.	.	.
G104664	-2.94	-1.53	-1.06	-2.03
G107513	-1463.89	-761.91	-175.24	-336.69
G107557	112443.06	58523.07	2926.15	5622.15
G108632	7019.49	3653.42	3653.42	7019.49
G108758	5313.21	2765.36	1161.45	2231.55
G108951	-9616.41	-5005.04	-2502.52	-4808.21
G109103	.	.	.	.
G109491	.	.	.	.
G110537	14750.28	7677.06	3684.99	7080.13
G111135	.	.	.	.
G111322	.	.	.	.
G111469	14672.37	7636.51	3818.25	7336.19
G112167	118501.09	61676.09	46257.06	88875.82
G112168	81728.28	42537.00	31902.75	61296.21
G112172	12333.24	6419.06	5135.25	9866.59

Project	IDC Recovered	IDC Returned	IDC Recovered Credited to TIMES	IDC Returned Credited to TIMES
G112211	.	.	.	.
G112607	36760.49	19132.68	9566.34	18380.25
G112817	127920.31	66578.49	46604.95	89544.22
G113263	2558.54	1331.64	665.82	1279.27
G113435	49961.80	26003.54	4550.62	8743.32
G0501654	16603.44	8641.57	6049.10	11622.41
G0502512	66.25	34.48	27.58	53.00
G109851	.	.	.	.
C106149	-3240.76	-1686.71	-843.36	-1620.38
C111623	.	.	.	.
C112686	.	.	.	.
G0501281	10790.88	5616.31	4493.05	8632.70
G0501735	.	.	.	.
G0501928	22796.86	11865.05	5932.52	11398.43
G0501962	22796.86	11865.05	0.00	0.00
G0502478	21602.78	11243.57	7982.93	15337.97
G111704	34811.08	18118.07	13588.55	26108.31
G111706	3439.37	1790.08	1342.56	2579.53
G0500630	-56.92	-29.63	-14.81	-28.46
G0502328	13376.82	6962.21	3481.11	6688.41
C107580	.	.	.	.
C108421	.	.	.	.
C108855	.	.	.	.
G0503070	.	.	.	.
G0503564	.	.	.	.
G0503594	.	.	.	.
G100232	-0.01	-0.01	-0.00	-0.01
G107463	-50.50	-26.28	-21.03	-40.40
G110312	7253.44	3775.19	3020.15	5802.75
G0501154	.	.	.	.
G0501228	84899.56	44187.55	16570.33	31837.34
G0502231	23102.02	12023.87	9619.10	18481.62

Project	IDC Recovered	IDC Returned	IDC Recovered Credited to TIMES	IDC Returned Credited to TIMES
G0502463	.	.	.	.
G0502863	66.25	34.48	3244.65	6234.09
G112109	-0.00	-0.00	-0.00	-0.00
G112602	8137.33	4235.22	4235.22	8137.33

d. Publications and presentations (count contributions by members only unless affiliates credit split). Only count and include material that is either in press or published.

1. Peer-reviewed journal articles: **215**
2. Peer-reviewed journal articles that acknowledge center/institute affiliation or support: **Not tracked**
3. Non-peer-reviewed (NPR) articles & book chapters: **We do not track this activity.**
4. NPR articles & book chapters that acknowledge center/institute affiliation or support: _____
5. Books: **2**
6. Books that acknowledge center/institute affiliation or support: _____
7. Research presentations and abstracts: _____
8. Research presentations & abstracts that acknowledge center/institute affiliation or support: _____
9. Provide a list of all items counted in 1 to 8; give complete citations.

Please note that the counts above reflect the total article publication count across all TIMES investigators and thus involve some overcounting due to collaboration among TIMES investigators (same article appearing on CV's of different investigators). Also, we do not track research presentations or published conference proceedings except for our computer scientists and engineers, where these outlets are considered more important than in the social sciences. Consequently, these are not tallied in the table above, but are included for the computer scientists and engineers in the detailed scholarly output report below.

Intellectual Contributions

TIMES Investigators - University of Houston
Fiscal Year 2019

Ahmed, Yusra

Refereed Journal Articles

- Miciak, J., Cirino, P., Ahmed, Y., Reid, E., & Barnes, M. (2019). Executive functions and response to interventions: Identification of struggling readers. *Learning Disabilities Quarterly*, 42(1), 17-31.
- Wall, K., Ahmed, Y., & Sharp, C. (2019). Parent-adolescent concordance in borderline pathology and why it matters. *Journal of Abnormal Child Psychology*, 47(3), 529-542.

Other Intellectual Contributions: Book Chapters

- Ahmed, Y. & Wagner, R. (in press). A "simple" illustration of a joint model of reading and writing using meta-analytic structural equation modeling (MASEM). In Alves, R., Limpo, T. & Joshi, M. (Eds.) *Reading-Writing Connections: Towards Integrative Literacy Science*.

Other Intellectual Contributions: Conference Proceedings

- Ahmed, Y., Khalaf, S., Miciak J., Taylor, P. & Francis, D. F. (2019). What is reading comprehension? Poster presented at the *Society for the Scientific Study of Reading*, Toronto, Canada.
- Kent, S., Ahmed, Y. & Cirino, P. (2019). Model specification & empirical validation of the not-so-simple view of writing. Panel presentation (Laura Shapiro, Discussant) at *Scientific Society of Reading Research*, Toronto, Canada.

Alfano, Candice

Refereed Journal Articles

- Connaboy, C, Johnson, CD, LaGoy, AD, Pepping, GJ, Simpson, RJ, Eagle, SR, Flanagan, SD, Deng, Z, Ma, L, Bower, JL & Alfano, CA. (2019). Inter-session Reliability and Within-session Stability of a Novel Perception-Action Coupling Task Software. *Aerospace Medicine and Human Performance*, 90, 1-7.
- Smith, L.J., Bartlett, B.A. Tranb, J.K., Gallagher, M.W., Alfano, C.A. & Vujanovic, A.A. (2019). Sleep Disturbance among Firefighters: Understanding Associations with Alcohol Use and Distress Tolerance. *Cognitive Therapy and Research*, 43, 66–77.
- Bower, J.L., McLaughlin, M., Connaboy, C. Simpson, R. & Alfano, C.A. (2019). Factor Structure and Validation of the Mental Health Checklist (MHCL) for use in Isolated, Confined and Extreme Environments. *Acta Astronautica*, 61, 405-414
- Moreno, J. Crowley, S.J., Alfano, C.A., Hannay, K.M., Thompson, D. & Baranowski, T. (2019). Potential Circadian and Circannual Rhythm Contributions to the Obesity Epidemic in Elementary School Age Children. *International Journal of Behavioral Nutrition and Physical Activity*, 16, 25.
- Walker, R.L., Talavera, D.T., Nomamiukor, F., Madubata, I., J., Alfano, C.A. & Vujanovic, A.A. (2019). Sleep-related problems and suicide behavior and ideation among Black and White trauma-exposed psychiatric inpatients. *Comprehensive Psychiatry*, 91, 22-28.
- Patriquin, M., Alfano, C.A., Schanzer, B., Palmer, C., Shepard, C., Rufino, K., Hartwig, E. & Mathew, S. (2019). Trajectories of self-reported sleep disturbance across inpatient psychiatric treatment predicts clinical outcome in comorbid major depressive disorder and generalized anxiety disorder. *Journal of Affective Disorders*, 15, 248-255.
- Meir, P., Alfano, C.A., Lau, S., Hill, R.M. & Palmer, C.A. (2019), Sleep Patterns and Anxiety in Children Interact to Predict Later Suicidal Ideation. *Children's Health Care*, 48, 372-393.
- Scott, B., Alfano, C.A., Russell, J. & Weems, C. (2019). Heart rate variability and anxious arousal: Unique relations with sleep-related problems in stress-exposed adolescents. *Developmental Psychobiology*, 61, 1180-1190

- Johnson, CD, LaGoy, AD, Pepping, G-J, Eagle, SR, Beethe, AZ, Bower, JL, Alfano, CA, Simpson, RJ, Connaboy, C. (2019). Action boundary proximity effects on perceptual-motor judgements. *Aerospace Medicine and Human Performance*, 90, 1000-1008.
- Meers, J., Bower, J.L. & Alfano, C.A. (in press). Poor Sleep and Emotion Dysregulation Mediate the Association between Depressive and Premenstrual Symptoms in Young Adult Women. *Archives of Women's Mental Health*.
- Palmer, C.A., Alfano, C.A., & Bower, J.L. (in press). Adolescent sleep patterns are associated with the selection of positive and negative emotional situations. *Journal of Sleep Research*.
- Palmer, C. & Alfano, C.A (in press). Anxiety Modifies the Emotional Effects of Sleep Loss. *Current Opinion in Psychology*.
- Moreno, J.P., Crowley, S.J., Alfano, C.A., Thompson, D. (in press). Physiological Mechanisms Underlying Children's Circannual Growth Patterns and their Contributions to the Obesity Epidemic in Elementary School Age Children. *Obesity Reviews*.

Other Intellectual Contributions: Book Chapters

- Alfano, C.A., Gonzalez, R. & Meers, J (2019). Treatment of Comorbid Disorders including Sleep Disorders. In T. Ollendick, L. Farrell & P. Muris, *Innovations in CBT for Childhood Anxiety, OCD, and PTSD: Improving Access & Outcomes*. Cambridge University Press.
- Palmer, C.A., Bower, J. & Alfano, C.A. (2019). Sleep, mood, and emotion In. S. Hupp & J. Jewell (eds.), *Encyclopedia of Child & Adolescent Development*. Wiley Blackwell.

Benoit, Julia

Refereed Journal Articles

- Benoit JS, Hannay JH, Yamal JM, Francis D, Aisiku I, Robertson C. Longitudinal Changes in Disability Rating Scale Scores: A secondary analysis among patients with severe TBI enrolled in the Epo Clinical Trial. *Journal of the International Neuropsychological Society* (2019) Mar; 25(3):293-301. doi: 10.1017/S1355617718001078.
- Ravikumar A, Benoit JS, Marsack, JD and Anderson HA. Image quality metric derived refractions predicted to improve visual acuity beyond habitual refraction for patients with Down syndrome. *Translational Vision Science and Technology*. 2019;8(3):20. Published 2019 May 20. doi:10.1167/tvst.8.3.20
- Yamal JM, Hannay HJ, Gopinath S, Aisiku IP, Benoit JS, Tilley BS, and Robertson CS. Glasgow Outcome Scale Measures and Impact on Analysis and Results of a Randomized Clinical Trial of Severe TBI. *Journal of Neurotrauma*. 2019. 36(17).
- Marsack JD, Benoit JS, Kollbaum PS, Anderson HA. Keratoconus Detection Metrics Applied to Eyes of Individuals with Down Syndrome. *Optometry & Vision Science*(2019); 96(9): 664-669.
- Cheref S, Benoit JS, Walker R. Refining Psychological, Substance Use, and Sociodemographic Predictors of Suicide Ideation and Attempts in a National Multi-Ethnic Sample of Adults, 2008-2013. *Journal of Nervous and Mental Disease* (2019) Aug; 207(8):675-682.
- Benoit JS, Ravikumar A, Marsack JD, Anderson HA. Understanding the impact of individual perceived image quality features on Visual Performance. *Translational Vision Science and Technology* (Accepted Nov. 2019).
- Anderson HA, Ravikumar A, Benoit JS, Marsack JD. Impact of Pupil Diameter on Objective Refraction Determination and Predicted Visual Acuity. *Translational Vision Science and Technology* (Accepted Oct. 2019)

Bick, Johanna

Refereed Journal Articles

- Bick, J., Lipschutz, R., Lind, T., Zajac, L., and Dozier, M. (2019). Associations between early home environment and trajectories of disruptive behavior among preschoolers reared in CPS-referred families. *Developmental Child Welfare*.

- Kosten, T.A., Bick, J. (2019) Introduction to the special issue on translational evidence of behavioral and biological consequences of early life experience. *International Journal of Developmental Neuroscience*, 78, 96.
- DeMaster, D., Bick, J., Johnson, J., Montroy, J., Landry, S., Duncan, A. (2019) Nurturing the preterm infant brain: Leveraging neuroplasticity to improve neurobehavioral outcomes, Invited Paper to *Pediatric Research*, Annual Review Issue.
- Bick, J., Burdwood, E., Zajac, L., Simons, R., Dozier, M. (2019). Early Parenting Intervention and Adverse Family Environments Affect Neural Function in Middle Childhood. *Biological Psychiatry*.
- Glasper, E., Kenkel, W., Bick, J., & Rilling, J. (2019) More than must mothers: The neurobiological and neuroendocrine underpinnings of allomaternal caregiving. *Frontiers in Neuroendocrinology*, 53, <https://doi.org/10.1016/j.yfrne.2019.02.005>

Other Intellectual Contributions: Book Chapters

- Lipschutz, R., Bick, J. Neurobiological outcomes for children with early psychosocial deprivation experience. (In press). In Wrobel, G, Helder, E., and Marr, (Eds). *The Routledge Handbook of Adoption*.

Other Intellectual Contributions: Conference Proceedings.

- Lipschutz, R., Bick, J., Tabachnik, A., Dozier, M., (2019, November). *Associations between institutional rearing and adoption duration with EEG patterns in middle childhood*. Poster presented at the meeting of International Society of Developmental Psychobiology, Chicago, IL.
- Lipschutz, R., Eligebelli, G., Biekman, B., Laplante, D., King, S., Bick, J., (2019, April). *Infant Emotional Outcomes Post Hurricane Harvey: prenatal maternal risk and resilience factors*. Poster presented at the University of Houston Department of Psychology Research Showcase, Houston, TX. (This is also being presented at Anxiety depression conference in March as a oral presentation)
- King, S., Voisard, B., Elgbeili, G., Laplante, D.P., Bick, J., & Olson, D. (2019) *Test of an online Expressive Writing intervention to reduce psychopathology following a disaster: The Hurricane Harvey Mom Project*. Poster presented at the annual meeting of the Society for Research in Psychopathology, Buffalo, NY, September 19-22, 2019.

Bunta, Ferenc

Refereed Journal Articles

- Sosa, A., & Bunta, F. (2019). Speech production variability in monolingual and bilingual children with cochlear implants: A comparison to their peers with normal hearing. *Journal of Speech, Language, and Hearing Research*, 62, 2601-2616. doi: 10.1044/2019_JSLHR-S-18-0263
- Francis, D. J., Rojas, R., Gusewski, S., Santi, K. L., Khalaf, S., Hiebert, L., & Bunta, F. (2019). Speaking and reading in two languages: On the identification of reading and language disabilities in Spanish-speaking English learners. *New Directions for Child and Adolescent Development*, 166, 15-41. doi: 10.1002/cad.20306
- Santi, K.L., Khalaf, S., Bunta, F., Rojas, R., & Francis, D. J. (2019). IQ-Achievement discrepancy for identification of disabilities in Spanish-speaking English learners. *New Directions for Child and Adolescent Development*, 166, 111-143. doi: 10.1002/cad.20304
- Khalaf, S., Santi, K., Kulesz, P., Bunta, F., & Francis, D. J. (2019). Bilingual phonological awareness: Construct validation of grade 1 Spanish-speaking English learners. *New Directions for Child and Adolescent Development*, 166, 79-110. doi: 10.1002/cad.20303

Other Intellectual Contributions: Book Chapters

- Bóna, J., Jordanidis, Á., Auszmann, A., & Bunta, F. (in press). Phonetic characteristics of filled pauses in English-Hungarian bilingual and Hungarian monolingual speech. In Fangfang Li, Karen Pollock, and Robinn Gibb (Eds.), *Research in Child Second Language Acquisition: Towards an Integrated Understanding*.
- Francis, D., Santi, K., Khalaf, S., Bunta, F., Rojas, R., Gusewski, S., & Hiebert, L. (in press). Identification of disabilities in Spanish-speaking children in English-speaking contexts. In E. Grigorenko, E., Y. Shtyrov, & P. McCardle (Eds.), *All about Language: Science, Theory, and Practice*. Brookes Publishing.

Carlson, Coleen D.**Refereed Journal Articles**

- Barr, C., Reutebusch, C., Carlson, C. D., Vaughn, S. R., Farnicis, D. (2019) Explaining Variation in Findings from Efficacy and Effectiveness Studies for English Reading Interventions for English Learners. *Journal of Research on Educational Effectiveness* 12(1):116-134. DOI: [10.1080/19345747.2018.1529211](https://doi.org/10.1080/19345747.2018.1529211)

Other Intellectual Contributions: Book Chapters

- Carlson, C. (2019; In print editing). English Language Learners and Fluency. In E. Cardenas-Hagan (Ed.) *Teaching English Language Learners: The Foundation of Literacy*. Baltimore, MD: Brookes Publishing Co.

Cirino, Paul**Refereed Journal Articles**

- Church, J.A., Cirino, P.T., Miciak, J., Juraneck, J., & Fletcher, J.M. (2019). Cognitive, intervention, and neuroimaging perspectives on executive functions in children with reading disabilities. *New Directions for Child and Adolescent Development*, 165, 25-54.
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- Warren, E., Child, A., Cirino, P.T., Viana, A., Minard, C., & Kahalley, L. (2019, February). *Cognitive predictors of social adjustment in pediatric brain tumor survivors: A comparison of proton and photon radiation therapy groups*. Poster presented at the 47th annual meeting of the International Neuropsychological Society, New York, NY.

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Ince, Nuri F.

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Kosten, Therese

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- Arora, R, Haile CN, Kosten TA, Wu Y, Ramakrishnan M, Hawkins LD, Orson FM, Kosten TR. Preclinical efficacy of an anti-methamphetamine vaccine using E6020 adjuvant. *American Journal on Addictions*, 28:119-126, 2019.
- Walters H, Kosten TA. Early life stress and the propensity to develop addictive behaviors, *International Journal of Developmental Neuroscience*, 78:156-169, 2019.
- Nieto SJ, Kosten TA. Who's your daddy? Behavioral and epigenetic consequences of paternal drug exposure. *International Journal of Developmental Neuroscience*, 78:109-121, 2019.
- Cortez I, Rodgers SP, Kosten TA, Leasure JL. Sex and age effects on brain damage induced by binge alcohol. *Brain Plasticity*, in press.
- Forouzan S, Nieto SJ, Kosten TA. Persistence of operant responding for food after prior cocaine exposure in Fischer 344 but not Lewis rats. *American Journal of Addictions*, in press.
- Kosten TA Bick J. Introduction to the special issue on translational evidence of behavioral and biological consequences of early life experiences. Editorial, *International Journal of Developmental Neuroscience*, 78:98-99, 2019.

Other Intellectual Contributions: Conference Proceedings

- Kosten TA, Nieto SJ, Meisch RA. Paternal alcohol exposure prior to conception decreases motivation for alcohol in offspring. Paper presentation, International Study Group Investigating Drugs as Reinforcers. San Antonio TX, June 2019.
- Nieto SJ, Meisch RA, Kosten TA. Paternal alcohol exposure reduces reinstatement of alcohol seeking in rat offspring. Poster presentation, College on Problems on Drug Dependence, San Antonio TX, June 2019.
- Haile CN, Cuny G, Duddupudi A, Walters H, Orson F, Kogan K, Kosten TA, Kosten TR. Novel strategies for the treatment of opioid use disorder: Anti-fentanyl vaccine. Paper presentation, College on Problems on Drug Dependence, San Antonio TX, June 2019.

Kulesz, Paulina A.

Refereed Journal Articles

- Cirino, P.T., Kulesz, P.A., Child, A.E., Ware, A.L., Barnes, M.A., Fletcher, J.M., Dennis, M. (2019). The role of neurocognitive factors in academic fluency for children and adults with spina bifida myelomeningocele. *Journal of the International Neuropsychological Society*, 25(3), 249-265.
- Kulesz, P.A., Ware, A.L., Orkisz, J.S., Williams, V.J., Juranek, J., & Fletcher J.M. (2019). Are primary and secondary types of brain anomalies exclusive factors affecting the attention networks in individuals with spina bifida? *Neuropsychology*.
- Khalaf, S., Santi, K. L., Kulesz, P.A., Bunta, F., & Francis, D.J. (2019). Bilingual phonological awareness: Construct validation of grade 1 Spanish-speaking English learners. *New Directions for Child and Adolescent Development*.
- Sullivan, K.L., Kulesz, P.A., Woods, S.P. (2019). Psychometrics and validity of the survey of memory-related quality of life in HIV disease. *Archives of Clinical Neuropsychology*.
- Ware, A.L., Kulesz, P.A., Orkisz, J.S., Arrington, C.N., Bowman, R.M., & Fletcher J.M. (2019). Better neuropsychological outcomes in spina bifida with sequential as opposed to simultaneous myelomeningocele repair and shunt placement. *Journal of the International Neuropsychological Society*.

Other Intellectual Contributions: Conference Proceedings

- Kulesz, P.A. (2019, July). Application of explanatory item response models in literacy research. Symposium organized for the 2019 Twenty-Sixth Annual Meeting Society for the Scientific Study of Reading, Toronto, Canada.
- Kulesz, P.A., McIlraith, A., Lawrence, J. F., Francis, D.J. (2019, April). Differential performance on academic vocabulary assessments for English Language Learners: Exploring models and tested words to understand word learning challenges. Paper presented at the 2019 AERA Annual Meeting, Toronto, Canada.
- Francis, D.J, Kulesz, P.A., Benoit, J.S. (2019, February). Extending the simple view of reading to account for variation within readers and across texts: The complete view of reading (CVR_i). Paper presented at the 2019 Pacific Coast Research Conference, San Diego, CA.
- Kulesz, P.A., Francis, D.J. (2019, February). Understanding effects of reader-text interactions on reading comprehension: Explanatory item response study. Poster presented at the 2019 Pacific Coast Research Conference, San Diego, CA.
- Sullivan, K. L., Kulesz, P.A., & Woods, S. P. (2019, February). Psychometrics and construct validity of the Survey of Memory-Related Quality of Life in HIV disease. Poster presented at the meeting of the International Neuropsychological Society, New York, NY.

Leasure, J. Leigh

Refereed Journal Articles

- Perez EC, Bravo DR, Rodgers SP, Khan AR & Leasure JL (2019) Shaping the adult brain: The role of exercise during development. *International Journal of Developmental Neuroscience*, 78:147-155.
- West RK, Wooden JI, Barton EA & Leasure JL (2019) Recurrent binge ethanol is associated with significant loss of dentate gyrus granule neurons despite concomitant increase in neurogenesis. *Neuropharmacology*, 148:272-283.

Other Intellectual Contributions: Book Chapters

- West RK, Najjar LZ & Leasure JL. Exercise-driven restoration of the alcohol-damaged brain. In Kwok-Fai S & Suk-yu S (Eds.), *International Review of Neurobiology, Volume 147: Exercise & Brain Health*, 2019, pp. 219-267.

Miciak, Jeremy

Refereed Journal Articles

- Miciak, J., & Fletcher, J. M. (in press). The critical role of instructional response for identifying dyslexia and other learning disabilities. *Journal of Learning Disabilities*.
- Roberts, G. J., Vaughn, S., Roberts, G., & Miciak, J. (2019). Problem behaviors and response to reading intervention for upper elementary students with reading difficulties. *Remedial and Special Education*, online first doi: 10.1177/0741932519865263
- Vaughn, S., Martinez, L. R., Williams, K. J., Miciak, J., Fall, A. M., & Roberts, G. (2019). Efficacy of a high school extensive reading intervention for English learners with reading difficulties. *Journal of Educational Psychology*, 111(3), 373.
- Cirino, P. T., Miciak, J., Ahmed, Y., Barnes, M. A., Taylor, W. P., & Gerst, E. H. (2019). Executive function: Association with multiple reading skills. *Reading & Writing*, 32, 1819-1846.
- Church, J. A., Cirino, P. T., Miciak, J., Juranek, J., Vaughn, S., & Fletcher, J. M. (2019). Cognitive, intervention, and neuroimaging perspectives on executive function in children with reading disabilities. *New directions for child and adolescent development*, 2019(165), 25-54.
- Vaughn, S., Roberts, G. J., Miciak, J., Taylor, W. P., & Fletcher, J. M. (2019). Effects of a word reading and comprehension intervention on 4th and 5th grade struggling readers. *Journal of Learning Disabilities*, 52, 31-44.
- Vaughn, S., Roberts, G. K., Capin, P., Miciak, J., Cho, E., & Fletcher, J. (2019). How Initial Status Affects Reading Comprehension Outcomes for Students with Significant Reading Difficulties. *Exceptional Children*, 85, 180-196.
- Miciak, J., Cirino, P. T., Ahmed, Y., Reid, E., & Vaughn, S. (2019). Executive functions and response to intervention: Identification of students struggling with reading comprehension. *Learning Disabilities Quarterly*, 42, 17-31.

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- Cirino, P. T., Church, J. A., Miciak, J., & Fletcher, J. M. (2019). The role of executive functions in reading development, reading disability, and intervention response. In E. L. Grigorenko, Y. Shtyrov, & McCardle, P. *All about language: Science theory & practice*. Baltimore, MD: Paul Brooks Publishing Co.
- Miciak, J., & Fletcher, J. M. (2019). The identification of reading disabilities. In D. A. Kilpatrick, R. M. Joshi, & R. K. Wagner (Eds.), *Reading Development and Reading difficulties: Bridging the gap between research and practice*. New York, NY: Springer

Miciak, J., & Fletcher, J. M. (2019). The identification of learning disabilities: PSW vs. RTI Methods, In M. K. Burns (Ed.), *Introduction to school psychology: Controversies and current practice*. Oxford University Press.

Naumova, Oxana

Refereed Journal Articles

- Burenkova, O., Zhukova, M., Naumova, O., Grigorenko, E.L. (2019). The role of genetic and epigenetic factors in modulating the influence of early adverse experiences on development. *Psikhologicheskii zhurnal* 40 (5), 74-83
- Naumova, O.Y., Odintsova, V.V., Arincina, I.A., Rychkov, S.K. (2019). Language outcomes in adults with a history of institutionalization: behavioral and neurophysiological characterization. *Scientific reports* 9 (1), 1-13
- Hein, S., Thomas, T., Naumova, O., Luthar, S.S., Grigorenko, E.L. (2019). Negative parenting modulates the association between mother's DNA methylation profiles and adult offspring depression. *Developmental psychobiology* 61 (2), 304-310
- Kornilov, S.K., Tan, M., Aljughaiman, A., Naumova, O.Y., Grigorenko, E.L. (2019) Genome-Wide Homozygosity Mapping Reveals Genes Associated With Cognitive Ability in Children From Saudi Arabia. *Frontiers in Genetics* 10, 888
- Naumova, O. Yu., Odintsova, V.V., Arincina, I.A., Rychkov, S. Yu., Muhamedrahimov, R.J., Shneider, Yu. V., Grosheva, A.N., Zhukova, O.V., Grigorenko, E.L. (2019) A Study of the Association between Breastfeeding and DNA Methylation in Peripheral Blood Cells of Infants. *Russian Journal of Genetics*. 55 (6), 749–755
- Grigorenko, E.L., Hart, L., Kovalenko, J., Naumova, O. Yu. (2019). Improved Educational Achievement as a Path to Desistance. *New Directions for Child and Adolescent Development*, 1-25
- Grigorenko E.L., Naumova O.Y., Rychkov S.Y., Kornilov S.A., Odintsova V.V., Anikina V.O., Solodunova M.Y., Arincina I.A., Zhukova M.A., Ovchinnikova I.V., Burenkova O.V., Zhukova O.V., Muhamedrahimov R.J. (2019). Effects of early social deprivation on epigenetic statuses and adaptive behavior of young children: A study based on a cohort of institutionalized infants and toddlers. *PLoS ONE* 14 (3), e0214285
- ЕЛГ О.Ю. Наумова, В.В. Одинцова, И.А. Аринцина, С.Ю. Рычков, Р.Ж... (2019) Исследование ассоциации между грудным вскармливанием и метилированием ДНК в клетках периферической крови младенцев *Генетика* 55 (6), 707-713

Pavlidis, Ioannis

Refereed Journal Articles

- Majeti, D, E Akleman, ME Ahmed, AM Petersen, B Uzzi, and I Pavlidis (Dec. 2019). Scholar Plot: Design and evaluation of an information interface for faculty research performance. *Frontiers in Research Metrics and Analytics* 4.
- Zaman, S, A Wesley, DRDC Silva, P Buddharaju, F Akbar, G Gao, G Mark, R Gutierrez-Osuna, and I Pavlidis (Nov. 2019). Stress and productivity patterns of interrupted, synergistic, and antagonistic office activities. *Scientific Data* 6, 264. [Journal Impact Factor 5.929].
- Akbar, F, G Mark, I Pavlidis, and R Gutierrez-Osuna (Aug. 2019). An empirical study comparing unobtrusive physiological sensors for stress detection in computer work. *Sensors* 19(17), 3766. [Journal Impact Factor 3.031].

- Pavlidis, I, I Garza, P Tsiamyrtzis, M Dcosta, JW Swanson, T Krouskop, and JA Levine (May 2019). Dynamic quantification of migrainous thermal facial patterns – A pilot study. *IEEE Journal of Biomedical and Health Informatics* 23(3), 1225–1233. [Journal Impact Factor 4.217].
- Panagopoulos, G and I Pavlidis (Apr. 2019). Forecasting markers of habitual driving behaviors associated with crash risk. *IEEE Transactions on Intelligent Transportation Systems*, 1–11. [Journal Impact Factor 5.744].
- Pavlidis, I, D. Zavlin, A.R. Khatri, A. Wesley, G Panagopoulos, and A. Echo (Feb. 2019). Absence of stressful conditions accelerates dexterous skill acquisition in surgery. *Scientific Reports* 9(1), 1747. [Journal Impact Factor 4.122].

Other Intellectual Contributions: Conference Proceedings

- Akbar, F, AE Bayraktaroglu, P Buddharaju, DR Da Cunha Silva, G Gao, T Grover, R Gutierrez-Osuna, NC Jones, G Mark, **I Pavlidis**, K Storer, ZWang, AWesley, and S Zaman (May 2019). Email makes you sweat: Examining email interruptions and stress using thermal imaging. In: *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. CHI '19. Glasgow, Scotland UK: ACM, pp.668:1–668:14. <http://doi.acm.org/10.1145/3290605.3300898>. [CORE Rank A*].

Santi, Kristi L.

Refereed Journal Articles

- Santi, K.L., *Khalaf, S., Bunta, F., Rojas, R., & Francis, D.J. (2019). *IQ-Achievement discrepancy for identification of disabilities in Spanish-speaking English learners*. *New Directions for Child and Adolescent Development*.
- Francis, D.J., Rojas, R., Gusewski, S, Santi, K.L., *Khalaf, S., Hiebert, L., & Bunta, F. (2019). *Speaking and reading in two languages: On the identification of Reading and Language Disabilities in Spanish-speaking EL students*. *New Directions for Child and Adolescent Development*.
- *Khalaf, S., Santi, K.L., Kulesz, P.A., Bunta, F., & Francis, D.J. (2019) *Bilingual phonological awareness: Construct validation of grade 1 Spanish-speaking English learners*. *New Directions for Child and Adolescent Development*.

Other Intellectual Contributions: Book Chapters in Edited Books

- Santi, K.L., *Flores, L.M., *Flores, A., & *Peet-Gleason, C. (2019). Managing Your Stress: Tips for a Successful Collaboration for Better Student Outcomes. In N.D. Young, A.C. Fain, & T. Citro (Eds.), *Mastering the art of Co-Teaching: Building more collaborative classrooms*. Vernon Press
- *Nekoobahr, F., Hawkins, J., Santi, K.L., Antonelli, J.R., & Thorpe, J.L. (in press). Identifying and evaluating language learning technology tools. In *Encyclopedia of Organization Knowledge, Administration, and Technologies*. IGI Global
- Francis, D.J., Santi, K.L., Khalaf, S*, Bunta, F., Rojas, R, Gusewski, S., & Hiebert, L. (2019). *Identification of Disabilities in Spanish-Speaking Children in English-Speaking Contexts*. In Grigorenko, E., Shtyrov, Y, & McCardle, P. (Eds.) *All about Language: Science, Theory, and Practice*. Brookes Publishing.
- Santi, K.L., Hawkins, J.M., & Jones, S.J. (2019). Teaching to the Common Core State Standards while emphasizing Social Justice: Classroom strategies and practices that work. In Young, N.D., Jean, E., & Citro, T.A. (Eds.) *Acceptance, Understanding, and the Moral Imperative of Promoting Social Justice Education in the Schoolhouse*. Vernon Press.
- *Gleason-Peet, C. & Santi, K.L. (2019). Barriers between the Theory and Implementation of Inclusion and Resources to Remove these Obstacles. In O'Connor, J. (Ed) *Cultivating Inclusive Practices in Contemporary K-12 Settings*. IGI Global: Hershey, PA
- Hawkins, J.M., *Henry, G.A., Jones, S.J., Santi, K.L., & Butcher, K.A. (2019). Implementing Professional Learning Communities: Improvement Required. In Crow, R, Hinnant-Crawford, B., & Spaulding, D. (Eds.) *The Educational Leader's Guide to Improvement Science: Data, Design, and Cases for Reflection*. Myers Publishing: Maine

*indicates work with graduate student

Other Intellectual Contributions: Book Review

Santi, K.L. (2019). Review: Creating the Path to Success in the Classroom. *Teachers College Record*, Date Published: July 11, 2019 <https://www.tcrecord.org> ID Number: 22967

Sharp, Carla

Refereed Journal Articles

- Sharp, C.** (in press). Adolescent personality pathology and the AMPD: Self development as nexus. *Psychopathology*.
- Sharp, C.** (in press). What's in a name? The importance of adolescent personality pathology for adaptive psychosocial function. Invited editorial. *Journal of the American Academy for Child and Adolescent Psychiatry*. [IF: 6.391]
- Beck, E., Bo, S., Poulsgaard Jørgensen, M., Gondan, M., Poulsen, S., Storebø, J., Andersen, C.F., Folmo, E., **Sharp, C.**, Pedersen, J., & Simonsen, E. (in press). Mentalization-based Therapy in Groups for Adolescents with Borderline Personality Disorder: A Randomized Controlled Trial. *Journal of Child Psychology and Psychiatry*. [IF: 6.129]
- Winsper, C., Wolke, D., Scott, J., **Sharp, C.**, Thompson, A., Marwaha, S. (in press). Psychopathological Outcomes of Adolescent Borderline Personality Disorder (BPD) Symptoms. *Australian and New Zealand Journal of Psychiatry*. [IF: 5.084]
- *Mellick, W., Kroska, E.B., Calarge, C., **Sharp, C.**, & Dindo, L. (in press). Experiential avoidance predicts persistence of major depressive disorder and generalized anxiety disorder in late adolescence. *Journal of Clinical Psychiatry*. [IF: 5.498]
- *Mellick, W., **Sharp, C.**, & Sumlin, E. (2019). Trust and general risk-taking in externalizing adolescent inpatients versus non-externalizing psychiatric controls. *Scandinavian Journal of Child and Adolescent Psychiatry*, 7, 92-96.
- *Penner, F., Gambin, M., & **Sharp, C.** (2019). Childhood maltreatment and identity diffusion among inpatient adolescents: The role of reflective function. *Journal of Adolescence*, 76, 65-74. doi: 10.1016/j.adolescence.2019.08.002 [IF: 2.938].
- Mulay, A., Waugh, M., Filauer, J.P., Bender, D., Bram, A., Cain, N., Caligor, W., Forbes, M., Goodrich, L., Kamphuis, J., Keeley, J., Krueger, R., Kurtz, J., Jacobsson, P., Lewis, K., Rossi, G., Ridenour, J., Roche, M., Sellbom, M., **Sharp, C.**, & Skodol, A. (in press). Borderline Personality Disorder Diagnosis in a New Key. *Borderline Personality Disorder/Emotion Dysregulation*.
- *Orme, W., *Bowersox, L., *Vanwoerden, S., Fonagy, P., **Sharp, C.** (2019). The Relation Between Epistemic Trust and Borderline Pathology in an Adolescent Inpatient Sample. *Borderline Personality Disorder and Emotion Dysregulation*, 6(13), 1-9.
- *Penner, F., *McLaren, V., *Leavitt, J., Akca, O. F., & **Sharp, C.** (in press). Implicit and explicit metallizing deficits in adolescent inpatients: Specificity and incremental value of borderline pathology. *Journal of Personality Disorders*. [IF: 3.796]
- *Penner, F., *Vanwoerden, S., & Borelli, J. L. & **Sharp, C.** (in press). Discrepancies in mother-adolescent reports of parenting practices in a psychiatric sample: Associations with age, psychopathology, and attachment. *Journal of Abnormal Child Psychology*. [IF: 3.406]
- Akca, O.F., Bilgic, A., Karagoz, H., Cikili, Y., Kocak, F., & **Sharp, C.** (in press). Social media use and personality disorders. *Anatolian Journal of Psychiatry*.

- Rider, N., Berg, D., Keo-Meier, C., **Sharp, C.**, Olson-Kennedy, J., Prado, S., Calvetti, S., & Tran, K. (in press). Using the Child Behavior Checklist (CBCL) with Transgender/Gender Nonconforming Children and Adolescents. *Clinical Practice in Pediatric Psychology*.
- Ballespi, S., Vives, J., Tobar, A., Barrantes-Vidal, N., & **Sharp, C.** (in press). Hypermentalizing in social anxiety: evidence for a context-dependent relationship. *Frontiers in Psychology*.
- *Hatkevich, C., Venta, A., & **Sharp, C.** (in press). Theory of mind and suicide ideation and attempt in adolescent inpatients. *Journal of Affective Disorders*. [IF: 4.084]
- *Penner, F., *Wall, K., Jardin, C., Brown, J. L., Sales, J. M., & **Sharp, C.** (2019). A study of risky sexual behavior, beliefs about sexual behavior, and sexual self-efficacy in adolescent inpatients with and without borderline personality disorder. *Personality Disorders: Theory, Research and Treatment*, 10(6), 524-535. [IF: 3.289]
- *Jones, J., *Penner, F., Schramm, A.T., **Sharp, C.** (in press). Experiential avoidance in adolescents with borderline personality disorder: Comparison with psychiatric and healthy controls. *Cognitive Behavior Therapy*.
- *McLaren, V., *Vanwoerden, S., & **Sharp, C.** (2019). The Basic Empathy Scale: Factor structure and validity in a sample of inpatient adolescents. *Psychological Assessment*, 31(10), 1208-1219. [IF: 3.371]
- Skinner, D., **Sharp, C.**, Marais, L., Serekoane, M., & Lenka, M. (2019). A qualitative study on teachers' perceptions of their learners' mental health problems in a disadvantaged community in South Africa. *Curationis*, 42(1).
- *Muñoz, C., *Abate, A., **Sharp, C.**, & Venta, A. (in press). Confirmatory Factor Analysis and convergent validity of the Youth Psychopathic Traits Inventory in clinical and forensic samples. *Psychiatry Research*.
- Charak, R., Byllesby, B.M., Fowler, C.J., **Sharp, C.**, Elhai, J.D., & Frueh, B.C. (in press). Factor Structure and Measurement Invariance of the Revised Difficulties in Emotion Regulation Scale among Adolescents and Adults with Severe Mental Illness. *Psychiatry Research*. [IF: 2.682]
- Ballespi, S., Vives, J., Alonso, N., **Sharp, C.**, Salvadora, M., Fonagy, P., Barrantes-Vidal, N. (in press). To know or not to know? Mentalization as protection from somatic complaints. *PLoS One*. [IF: 2.766]
- *Lind, M., *Vanwoerden, S., *Penner, F., & **Sharp, C.** (2019). Inpatient adolescents with BPD features: Identity diffusion and narrative incoherence. *Personality Disorders: Theory, Research, and Treatment*, 10(4), 389-393. [IF: 3.289]
- Boylan, K., Chahal, J., Courtney, D.B., **Sharp, C.**, Bennett, K. (in press). An Evaluation of Clinical Practice Guidelines for Self-Harm in Adolescents: The Role of Borderline Personality Pathology. *Personality Disorders: Theory, Research, and Treatment*. [IF: 3.289]
- Somma, A., Ferrara, M., Terrinoni, A., Frau, C., Ardizzone, I., **Sharp, C.**, Fossati, A. (in press). Hypermentalizing as a marker of Borderline Personality Disorder in Italian adolescents: A cross-cultural replication of Sharp and colleagues' (2011) findings. *Borderline Personality Disorder/Emotion Dysregulation*.
- *Mellick, W., **Sharp, C.**, & Ernst, M. (in press). Depressed adolescent girls exhibit atypical social decision-making in an iterative trust game. *Journal of Social and Clinical Psychology*, 38(3), 224-244. [IF: 1.304]
- *Mellick, W., *Hatkevich, C., Venta, A., Hill, R., Elhai, J., & **Sharp, C.** (in press). Measurement invariance of the Beck Depression Inventory-II across race/ethnicity in adolescent psychiatric inpatients. *Psychological Assessment*. [IF: 3.371]
- *Vanwoerden, S., *Leavitt, J., Gallagher, M., Temple, J., & **Sharp, C.** (2019). Dating violence victimization and borderline personality pathology: Temporal associations from late adolescence to early adulthood. *Personality Disorders: Theory, Research and Treatment*, 10(2): 132-142. [IF: 3.289]
- Sharp, C.**, *Penner, F., & Ensink, K. (2019). Reflective function and borderline traits in adolescents. *Journal of Personality Disorders*, 33, 1-16. [IF: 3.158]
- Lind, M., *Vanwoerden, S., *Penner, F., & **Sharp, C.** (in press). Narrative identity in adolescence: Relations with attachment, mentalization, and psychopathology. *Journal of Personality Assessment*. [IF: 2.571]
- *Vanwoerden, S., *Garey, L., *Furgeson, T., Temple, J., & **Sharp, C.** (2019). The Borderline Personality Features Scale for Children-11 (BPFS-C-11): Measurement invariance during transition into adulthood and

across gender in a diverse community sample of adolescents. *Psychological Assessment*, 31(1): 114-119. [IF: 3.922]

- Sharp, C.**, Steinberg, L., Michonski, J., *Kalpakci, A., Fowler, C., Frueh, C., & Fonagy, P. (2019). DSM borderline criterion function across age groups: A cross-sectional mixed-method study. *Assessment*, 26(6), 1014-1029.
- Ballespi, S., Perez-Domingo, A., Vives, J., **Sharp, C.**, & Barrantes-Vidal, N. (in press). Behavioral inhibition in childhood is associated with impaired mentalizing in adolescence. *PLOS ONE*. [IF: 2.806]
- Borelli, J.L., Palmer, A., *Vanwoerden, S., & **Sharp, C.** (2019). Convergence in parent-child reports of adolescents' psychopathology: A Focus on Disorganized Attachment and Reflective Functioning. *Journal of Clinical Child and Adolescent Psychology*, 48(4): 468-581. [IF: 4.396]
- Venta, A., *Ha, C., *Vanwoerden, S., Newlin, E., Strathearn, L. & **Sharp, C.** (2019). Intranasal oxytocin enhances trust in inpatient adolescents. *Journal of Clinical Child and Adolescent Psychology*, 48(5): 706-715. [IF: 4.396]
- Gandy, K., Kim, S., **Sharp, C.**, Dindo, L., Maletic-Savatic, M., & Calarge, C. (in press). Pattern Separation: A Potential Marker of Impaired Hippocampal Adult Neurogenesis in Major Depressive Disorder. *Frontiers in Neuroscience*. [IF: 3.013]
- Saxena K, Verrico CD, Kahlon RS, Amin P, Arvind R, Patel M, **Sharp C**, Williams L, Shah A. (in press). Borderline features in youth with bipolar spectrum disorders. *Adolescent Psychiatry*.
- Wong, C. C. Y., Paulus, D. J., Lemaire, C., Leonard, A., **Sharp, C.**, Neighbors, C., ... Zvolensky, M. J. (in press). Emotion dysregulation: An explanatory construct in the relation between HIV-related stigma and hazardous drinking among persons living with HIV/AIDS. *Stigma and Health*.
- *Hatkevich, C., *Penner, F., & **Sharp, C.** (2019). Difficulties in emotion regulation and suicide ideation and attempt in adolescent inpatients. *Psychiatry Research*, 271, 230-238. [IF: 2.837]
- Sharp, C.**, *Penner, F., Marais, L., Skinner, D. (2019). School connectedness as psychological resilience factor in children affected by HIV/AIDS. *AIDS Care*, 1-8. [IF:2.095]
- *Vanwoerden, S., Greiner, I., Ensink, K., & **Sharp, C.** (2019). The relations between self- and caregiver- focused reflective function and theory of mind in the context of borderline pathology in adolescence. *Psychiatry Research*, 274-280.

Other Intellectual Contributions: Book Chapters

- Sharp, C.**, *Kerr, S., & Chanen, A. (in press). *Early identification and prevention of personality pathology: An AMPD informed model of clinical staging*. The American Psychiatric Association Textbook of Personality Disorders. Washington: APA.
- Sharp, C.** (in press). *Putting the person back into person(ality) disorder*. In T. Widiger (Ed.). Oxford Handbook of Personality Disorder, 2nd edition. Oxford: Oxford University Press.
- *McLaren, V., & **Sharp, C.** (in press). What is mentalizing? In Williams, L., & Muir, O. (Eds.) *Adolescent Suicide and Self-Injury - Mentalizing Theory and Treatment*. Springer.
- DeClercq, B. & **Sharp, C.** (in press). Bridging Diverging Perspectives: Rejoinder to Vernberg and Abel and Beauchaine. In K. Gratz and C. Lejeuz (Eds.). *Handbook of Personality Disorders*. Cambridge University Press.
- Sharp, C.**, & DeClercq, B. (in press). Personality pathology in children and adolescents. In K. Gratz and C. Lejeuz (Eds.). *Handbook of Personality Disorders*. Cambridge University Press.
- Sharp, C.**, & Rossouw, T. (2019). Working with borderline teens. In A. Bateman and P. Fonagy (Eds.). *Handbook of mentalizing in mental health practice (3rd edition)* (pp. 281-300). New York: Wiley.
- Sharp, C.**, Shohet, C., Givon, D., Marais, L., & Boivin, M. (2018). Early childhood interventions: A focus on responsive caregiving. In M. Tomlinson, A. Stevenson, and C. Hanlon (Eds.). *Child and adolescent development in Africa in the context of the sustainable development goals* (pp.245-270). Cape Town: UCT Press.
- *Wall, K., *Leavitt, J., & **Sharp, C.** (in press). Personality disorders in adolescence. In S. Hupp & J. Jewell (Eds.). *The Encyclopedia for Child and Adolescent Development*. New York: Wiley.

Other Intellectual Contributions: Conference Proceedings

- *Vanwoerden, S., De Clercq, B., & **Sharp, C.** (2019, October). The development of Criterion A: The relevance of social functioning for young adult self- functioning. Talk presented as part of the Symposia entitled *Expanding the Research Base of the Alternative Model* at the 2019 Congress for the International Society for the Study of Personality Disorders (ISSPD), Vancouver.
- Sharp, C.**, & *Wall, K. (2019, October). Current standards in the assessment of BPD in adolescents. Part of the symposium entitled "Early diagnosis of BPD including low- and middle-resource settings" presented at the XVIth International Congress of the International Society for the study of Personality Disorders (ISSPD). Vancouver, Canada. October 15-18, 2019.
- Sharp, C.**, & *Wall, K. (2019, October). Personality diagnostic systems: One-size-does-not-fit-all. Part of symposium entitled "Embracing New Horizons: Theory, Measurement, and Applications of Dimensional Models of Personality Pathology" presented at the XVIth International Congress of the International Society for the study of Personality Disorders (ISSPD). Vancouver, Canada. October 15-18, 2019.
- *Wall, K., Steinberg, L., Ahmed, Y., & **Sharp, C.** (2019, October). The hierarchical factor structure of the Personality Inventory for DSM-5 (PID-5). Part of the symposium entitled "Expanding the Research Base of the Alternative Model" presented at the XVIth International Congress of the International Society for the study of Personality Disorders (ISSPD). Vancouver, Canada. October 15-18, 2019.
- Sharp C.**, & *Sumlin, E. (2019, May) *Differentiation between self-harmers and non self-harmers in Borderline Personality Disorder*. Paper presented at the 2019 Annual Meeting of the American Psychiatric Association, San Francisco, CA.
- *Vanwoerden, S., Mehta, P., & **Sharp, C.** (2019, April) *Evaluating informant effects and associations with youth psychopathology: A multi-trait multi-method analysis*. Talk presented to students and faculty at the Clinical Psychology Graduate Program Research Showcase Day, Department of Psychology, University of Houston, Houston, TX.
- *Wall, K., & **Sharp, C.** (2019, April). The BPD diagnosis in youth and the parental perspective. Speed data talk given at the 2019 Annual Conference for the North American Society for the Study of Personality Disorders (NASSPD). New York. April 11-13, 2019.
- *Penner, F., *McLaren, V., *Leavitt, J., & **Sharp, C.** *Implicit and explicit mentalizing deficits in adolescent inpatients: Specificity and incremental value of borderline pathology*. Speed talk to be presented at the 2019 meeting of the North American Society for the Study of Personality Disorders (NASSPD), Pittsburgh, PA.
- Sharp, C.** & *Vanwoerden, S. (2019, April). *A community-based age invariance study of maladaptive identity in adolescents*. Talk presented at the 2019 Annual Conference for the North American Society for the Study of Personality Disorders (NASSPD), Pittsburgh, PA.
- *Vanwoerden, S. & **Sharp, C.** (2019, April). *Development and validation of an observational coding system of parent-adolescent mentalizing*. Talk presented at the 2019 Annual Conference for the North American Society for the Study of Personality Disorders (NASSPD), Pittsburgh, PA.
- Brown, J.L., Marais, L., Sales, J.M., **Sharp, C.**, Cloete, J., Lenka, M., & Rani, K. (2019, March). *A Cultural Consensus Modeling Approach to Examine the Family Planning and HIV Prevention Needs of South African Adolescent Girls*. Paper to be presented at the Society of Behavioral Medicine's Annual Meeting, Washington, DC.
- Hatkevich, C., *Penner, F., Hill, R., & **Sharp, C.** (2019). A latent profile analysis of chronic life stress in ethnoracially diverse inpatient adolescents. Oral presentation accepted for presentation to the 2019 AAS Annual Conference in Denver, Colorado.
- Mulay, A. L., Fillauer, J. P, Waugh, M. H., Bender, D. S., Bram, A., Cain, N. M., Caligor, E., Forbes, M., Goodrich, L., Jacobsson, P., Kurtz, J. E., Keeley, J., Kamphuis, J. H., Lewis, K., Ridenour, J., Roche, M., Rossi, G. M. P., Sellbom, M., **Sharp, C.**, & Skodol, A. (2019, March). *DSM-5 borderline personality disorder criteria in the metrics of the Alternative Model for Personality Disorders*. Paper to be presented at the Society for Personality Assessment Annual Meeting, New Orleans, LA
- Sharp, C.** & *Vanwoerden, S. (2019, February). *How mentalizing shapes the development of personality pathology during adolescence*. Talk presented at the 2019 Annual Convention for the Society of Personality and Social Psychology (SPSP), Portland, OR.

Invited Presentations:

- Sharp, C.** (2019, September). Learning to mentalize in the attachment context: A mediational approach. Attachment, Relationships and Psychotherapy 2019 Conference. McLean Hospital/Harvard University, Boston.
- Sharp C.** (2019, May). Overview of BPD in adolescents: Assessment, diagnosis and treatment. Invited talk at the Global Alliance for Prevention and Early Intervention for BPD (GAP). McLean Hospital/Harvard University, Boston.
- Sharp C.** (2019, June). This is “me”: How mentalizing shapes adaptive (and maladaptive) personality development. Keynote address at Global Alliance for Prevention and Early Intervention for BPD (GAP). Brescia, Italy.
- Sharp, C.** (2019, June). Borderline Personality Disorder in Adolescents: Theory, research and treatment. Invited 3-day workshop for Maryland Association of School Psychologists. Rehoboth, Delaware.
- Sharp, C.** (2019, March). Houston Strong: Building resiliency in children affected by Intimate Partner Violence. Innovations and Interventions Domestic Violence Symposium. Harris County Domestic Violence Coordinating Council, Houston, TX.
- Sharp, C.** (2019, March). Borderline Personality Disorder in Adolescents: Why should we care and what should we target? Global Alliance for the Prevention and Early Intervention of BPD Workshop. Clearview Treatment Programs, Los Angeles.

Other Intellectual Contributions: Conference Proceedings-Posters

- McLaren, V., Wall, K., & **Sharp, C.** (2019, October). *Unique Variance in Psychopathology due to Maladaptive Personality*. Poster presented at the 2019 Congress of the International Society for the Study of Personality Disorders, Vancouver, BC.
- *Lind, M., *Vanwoerden, S., *Penner, F., & **Sharp, C.** *Narrative identity in adolescence: Relations with attachment, mentalization, and psychopathology*. Poster to be presented at the 2019 meeting of the International Society for the Study of Personality Disorders (ISSPD), Vancouver, BC.
- Brown, J.L., Marais, L., Sales, J.M., **Sharp, C.**, Cloete, J., Lenka, M., Rani, K., Gause, N.K., & Hitch, A.E. (2019, April). *Family Planning and HIV Prevention Intervention Needs of South African Adolescent Girls: Cultural Consensus Modeling Approach*. Poster to be presented at the Society of Behavioral Medicine's Annual Meeting.
- Yunusova, A., Pettit, C., *Penner, F., Pourmand, V., Froidevaux, N. M., Metcalf, S., Borelli, J. L., **Sharp, C.** (2019, May). The Links Between Adversity and Dating Violence Among Adolescents Hospitalized for Psychiatric Treatment: Parental Validation as a Protective Factor. Poster to be presented at the Western Psychological Association Annual Convention, Pasadena, CA.
- *Sumlin, E., Hatkevich, C., & **Sharp, C.** (2019, October) *Examining Maternal Attachment Security, Perceived Burdensomeness, and Suicidal Ideation in Hispanic, African American, and Non-Hispanic White Adolescents*. Poster presented at the 2019 IASR/AFSP International Summit on Suicide Research. Miami, FL.
- *Sumlin, E., & **Sharp, C.** (2019, October), *The Effect of Ethnic Minority Status in the Relationship between Borderline Personality Features, Thwarted Belongingness, and Suicidal Ideation in Adolescents*. Poster presented at the 2019 Congress of the International Society for the Study of Personality Disorders, Vancouver, BC.
- *Lind, M., *Vanwoerden, S., *Penner, F., & **Sharp, C.** *Inpatient adolescents with BPD features: Identity diffusion and narrative incoherence*. Poster presented at the 2019 meeting of the North American Society for the Study of Personality Disorders (NASSPD), Pittsburgh, PA.
- *McLaren, V., Vanwoerden, S., Goth, K., & **Sharp, C.** (2019, April). Evidence for the external construct validity of the AIDA: Data from two clinically and developmentally relevant age groups. Poster presented at the annual conference of the North American Society for the Study of Personality Disorders, Pittsburgh, PA, April 11-13, 2019.
- *Wall, K., & **Sharp, C.** (2019, March) *The psychometric properties of the Personality Inventory for DSM-5 Brief Form (PID-5-BF) in two adolescent samples*. Poster presented at the 2019 Annual Convention of the Society for Personality Assessment (SPA), New Orleans, LA, March 20-24, 2019.

Gause, N.K., Brown, J.L., Marais, L., **Sharp, C.**, & Sales, J.M. (2019, March). Acceptability of Efficacious Pregnancy and HIV/STI Prevention Methods among South African Adolescent Females. Poster to be presented at the Society of Behavioral Medicine's Annual Meeting, Washington, D.C.

Taylor, William P.

Refereed Journal Articles

- Ahmed, Y., Cirino, P.T., Miciak, J., & **Taylor, W. P.** (In Press) Modeling the academic year growth and summer loss variability in language proficiency of bilingual children using longitudinal models of change. *Neuropsychology*
- Nugiel, T., Roe, M.A., **Taylor, W. P.**, Cirino, P.T., Vaughn, S. R., Fletcher, J. M., Juranek, J. J., & Church, J. A. (2019) Brain activity in struggling readers before intervention relates to future reading gains. *Cortex*, 111, 286-302. doi: 10.1016/j.cortex.2018.11.009
- Cirino, P. T., Miciak, J., Ahmed, Y., Barnes, M. A., **Taylor, W. P.**, & Gerst, E. H. (2019). Executive Function: Association with Multiple Reading Skills. *Reading and Writing*, 32, 1819-1846. doi: 10.1007/s11145-018-9923-9
- Vaughn, S., Roberts, G., Miciak, J., **Taylor, W. P.**, & Fletcher, J. (2019) Efficacy of a word- and text-based intervention for students with significant reading difficulties. *Journal of Learning Disabilities*, 52, 1, 31-44. doi: [10.1177/0022219418775113](https://doi.org/10.1177/0022219418775113)

Viana, Andres G.

Refereed Journal Articles

- Viana, A. G., Raines, E. M., Woodward, E. C., Hanna, A. E., Walker, R., & Zvolensky, M. J. (2019). The relationship between emotional clarity and suicidal ideation among trauma-exposed adolescents in inpatient psychiatric care: Does distress tolerance matter? *Cognitive Behaviour Therapy*, 48, 430-444.
- Trent, E. S., Viana, A. G.,* Raines, E. M., Woodward, E. C., Storch, E. A., & Zvolensky, M. J. (2019). Parental threats and adolescent depression: The role of emotion dysregulation. *Psychiatry Research*, 276, 18-24.
- Raines, E. M., Viana, A.G.,* Trent, E. S., Woodward, E. C., Candelari, A. E., Zvolensky, M. J., & Storch, E. A. (2019). Effortful control, interpretation biases, and child anxiety symptom severity in a sample of children with anxiety disorders. *Journal of Anxiety Disorders*, 67, 102-136.
- Trent, E. S., Viana, A. G.,* Raines, E. M., Woodward, E. C., Zvolensky, M. J., & Hannah, A. E. (2019). Exposure to parental threatening behaviors and internalizing psychopathology among adolescents: The mediating role of difficulties engaging in goal-directed behaviors. *Journal of Nervous and Mental Disease*, 207, 969-976.
- Paulus, D. J., Tran, N., Gallagher, M. W., Viana, A. G., Bakhshaie, J., Garza, M., Ochoa-Perez, M., Lemaire, C., & Zvolensky, M. J. (2019). Examining the indirect effect of posttraumatic stress symptoms via emotion dysregulation on alcohol misuse among trauma-exposed Latinx in primary care. *Cultural Diversity & Ethnic Minority Psychology*, 25, 55-64.
- Manning, K., Rogers, A. H., Bakhshaie, J., Viana, A. G., Lemaire, C., Garza, M., Ochoa-Perez, M., & Zvolensky, M. J. (2019). Heart focused anxiety among Latinx in primary care: Relations to anxiety, depression, pain, and functional impairment. *Journal of Nervous and Mental Disease*, 207, 651-658.
- Zvolensky, M. J., Shepherd, J. M., Bakhshaie, J., Garey, L., Viana, A. G., & Peraza, N. (2019). Emotion dysregulation and cigarette dependence, perceptions of quitting, and problems during quit attempts among Spanish-speaking Latinx adult smokers. *Addictive Behaviors*, 96, 127-132.

- Zvolensky, M. J., Shepherd, J. M., Bakhshaie, J., Garey, L., Viana, A. G., & Peraza, N. (2019). Emotion dysregulation and smoking outcome expectancies among Spanish-speaking Latinx adult cigarette smokers in the United States. *Psychology of Addictive Behaviors*, 33, 574-579.
- Berenz, E. C., McNett, S., Rappaport, L., Vujanovic, A. A., Viana, A. G., Dick, D., & Amstadter, A. B. (2019). Age of alcohol use initiation and psychiatric symptoms among young adult trauma survivors. *Addictive Behaviors*, 88, 150-156.
- Rogers, A.H., Bakhshaie, J., Ditre, J.W., Manning, K., Mayorga, N.A., Viana, A.G., & Zvolensky, M.J. (2019). Worry and rumination: Explanatory roles in the relation between pain and anxiety and depressive symptoms among college students with pain. *Journal of American College Health*, 67, 275-282.
- Zvolensky, M. J., Bakhshaie, J., Shepherd, J. M., Peraza, N., Garey, L., Viana, A. G., Glover, N., Brown, J. T., & Brown, R. A. (2019). Anxiety sensitivity and smoking among Spanish-speaking Latinx smokers. *Addictive Behaviors*, 90, 55-61.
- Paulus, D. J., Rodriguez-Cano, R., Garza, M., Ochoa-Perez, M., Lemaire, C., Bakhshaie, J., Viana, A. G., & Zvolensky, M. J. (2019). Acculturative stress and alcohol use among Latinx recruited from a primary care clinic: Moderations by emotion dysregulation. *American Journal of Orthopsychiatry*, 89, 589-599.
- Bakhshaie, J., Rogers, A. H., Mayorga, N. A., Ditre, J., Rodriguez-Cano, R., Ruiz, A. C., Viana, A. G., Garza, M., Lemaire, C., Ochoa-Perez, M., Lemaire, C., Bogiaizian, D., & Zvolensky, M. J. (2019). Perceived racial discrimination and pain intensity/disability among economically disadvantaged Latinos in a Federally Qualified Health Center: The role of anxiety sensitivity. *Journal of Immigrant and Minority Health*, 1-9.

Other Intellectual Contributions: Book Chapters

- Glostou, G., Sustaita, M. A., Ramirez, A. C., Weinzimmer, S., Viana, A. G., Storch, E. A., & Schneider, S. C. (in press). Cognitive Behavioral Therapy in Children with Anxiety Disorders. In C. Martin, V. R. Preedy, & R. Rajendram (Eds.), *Diagnosis and Management of Neurodevelopmental Disorders*: Elsevier.

Other Intellectual Contributions: Conference Proceedings

- Raines, E. M., Trent, E. S., Woodward, E.C., Candelari, A. E., & Viana, A. G. (2019, November) *Effortful control, anxiety sensitivity, and child anxiety and depression symptom severity in a sample of children with anxiety disorders*. Poster presentation submitted to the 53rd Annual meeting of the Association for Behavioral and Cognitive Therapies, Atlanta, GA.
- Woodward, E.C., Raines, E. M., Candelari, A. E., Trent, E. S., & Viana, A. G. (2019, November) *Emotional Nonacceptance, Distraction Coping and PTSD Symptoms in a Trauma-Exposed Adolescent Inpatient Sample*. Poster presentation submitted to the 53rd Annual meeting of the Association for Behavioral and Cognitive Therapies, Atlanta, GA.
- Woodward, E.C., Raines, E. M., Trent, E. S., Candelari, A. E., & Viana, A. G. (2019, November) *Ethnic Differences in Children's Fear Reactivity and Physiological Arousal*. Poster presentation submitted to the 53rd Annual meeting of the Association for Behavioral and Cognitive Therapies, Atlanta, GA.
- Trent, E. S., Raines, E. M., Woodward, E. C., Candelari, A. E., Viana, A. G., Storch, E. A., & Zvolensky, M. J. (2019, November). *The Role of Parasympathetic Nervous System Reactivity in the Association Between Interpretive Biases and Childhood Anxiety Symptom Severity*. Poster presentation submitted to the 53rd Annual meeting of the Association for Behavioral and Cognitive Therapies, Atlanta, GA.
- Trent, E. S., Raines, E. M., Woodward, E. C., Candelari, A. E., Viana, A. G., Storch, E. A., & Zvolensky, M. J. (2019, November). *Childhood Anxiety Sensitivity, Fear Responding, and Fear Regulation: Vagal Suppression as a Moderator of Risk*. Poster presentation submitted to the 53rd Annual meeting of the Association for Behavioral and Cognitive Therapies, Atlanta, GA.
- Trent, E. S., Raines, E. M., Woodward, E. C., Candelari, A. E., & Viana, A. G. (2019, June) *The role of parasympathetic nervous system reactivity in the association between interpretive bias and comorbid depression symptoms among clinically anxious youth*. Poster presentation submitted to the Journal of Clinical Child and Adolescent Psychology (JCCAP) Future Directions Forum, Washington, D.C.

- Candelari, A. E., Woodward, E.C., Raines, E. M., Trent, E. S., & Viana, A. G. (2019, April). *Maternal Minimizing Reactions Moderate the Relationship Between Frustration Intolerance and Anxiety Symptoms in Late Childhood*. Poster to be presented at the 4th Annual Clinical Psychology Graduate Research Showcase, Houston, TX.
- Raines, E. M., Trent, E. S., Woodward, E. C., Candelari, A.E., & Viana, A. G. (2019, April). *Effortful Control, Interpretation Biases, and Child Anxiety Symptom Severity in a Sample of Children with Anxiety Disorders*. Poster to be presented at the 4th Annual Clinical Psychology Graduate Research Showcase, Houston, TX.
- Trent, E. S., Raines, E. M., Woodward, E. C., Candelari, A. E., & Viana, A. G. (2019, April). *The interactive effects of childhood exposure to parental threatening behaviors and emotional clarity in relation to depression symptoms among trauma-exposed adolescents*. Oral presentation submitted to the 4th Annual Clinical Psychology Graduate Research Showcase, Houston, TX.
- Woodward, E.C., Raines, E. M., Trent, E. S., Candelari, A. E., & Viana, A. G. (2019, April). *Ethnic Differences in Children's Fear Reactivity and Physiological Arousal*. Poster to be presented at the 4th Annual Clinical Psychology Graduate Research Showcase, Houston, TX.
- Anjum, S., Bakhshaie, J., Shepherd, J.M., Peraza, N., Viana, A.G., Walker, R.L., Garza, M., Ochoa-Perez, M., Lemaire, C., Zvolensky, M.J. (March 2019). *Anxiety sensitivity and acculturative stress: Concurrent relations to mental health among Spanish-speaking Latinx in primary care*. Poster to be presented at the 2019 annual conference of the Anxiety and Depression Association of America, Chicago, IL.

Zhang, Yingchun

Refereed Journal Articles

- Li, R., Rui, G., Zhao, C., Wang, C., Fang, F., and Zhang, Y*. (2019) Functional Network Alterations in Patients with Amnesic Mild Cognitive Impairment Characterized Using Functional Near-infrared Spectroscopy. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*. IF: 3.48
- Wu, Z., Peng, Y., Xu, D., Wu, D., and Zhang Y*. (2019) Construction of brain structural connectivity network using a novel integrated algorithm based on ensemble average propagator. *Computers in Biology and Medicine*. IF: 2.1.
- Yao, B., Peng, Y., Zhang, X., Zhang, Y., and Zhou, P. The Influence of Common Feedback on Myoelectric Pattern Recognition. *Journal of International Medical Research*. In Press. IF: 1.35.
- Ma, Y., Chen, B., Li, R., Wang, C., Wang, J., She, Q., Luo, Z., and Zhang Y*. Driving Fatigue Detection from EEG Using a Modified PCANet Method. *Computational Intelligence and Neuroscience*. In Press. IF: 1.65.
- Dias, N., Zhang, C., Li, X., Neshatian, L., Orejuela, F. J., and Zhang, Y*. (2019) Neural control properties of the external anal sphincter in young and elderly women. *Neurourology and Urodynamics*. In Press. IF: 3.26.
- Wu, Z., Xu, D., Potter, T., and Zhang Y*. (2019) Effects of Brain Parcellation on the Characterization of Topological Deterioration in Alzheimer's Disease. *Frontiers in Aging Neuroscience*, 11, 113. IF: 3.6.
- Ning, Y., Dias, N.C., Li, X., Jie, J., Li, J., and Zhang, Y*. (2019) Improve computational efficiency and estimation accuracy of multi-channel surface EMG decomposition via dimensionality reduction. *Computers in biology and medicine*, 112, 103372. IF: 2.1.
- Gao, Y., Su, H., Li, R., and Zhang Y*. (2019) Synchronous Analysis of Brain Regions Based on Multiscale Permutation Transfer Entropy. *Computers in Biology and Medicine*. In Press. IF: 2.1.
- Huang, C., Klein, C.S., Meng, Z., Zhang, Y., Li, S., and Zhou, P. (2019) Innervation Zone Distribution of the Biceps Brachii Muscle Examined Using Voluntary and Electrically-Evoked High-density Surface EMG. *Journal of NeuroEngineering and Rehabilitation*. In Press. IF: 3.9.
- Zhang, C., Dias, N., He, J., Zhou, P., Li, S., and Zhang Y*. (2019) Global innervation zone identification with high-density surface electromyography. *IEEE Trans on Biomedical Engineering*. IF: 4.3.
- Zhang, C., Chen, Y. T., Liu, Y., Zhou, P., Li, S., & Zhang, Y*. (2019). Three dimensional innervation zone imaging in spastic muscles of stroke survivors. *Journal of neural engineering*, 16(3), 034001. IF: 4.6

- Li, R., Potter, T., Wang, C., Wang, J., Shi, Z., Yang, L., Chan, R., Zhang, Y*. (2019) Cortical Hemodynamic Response and Connectivity Modulated by Subthreshold High-Frequency Repetitive Transcranial Magnetic Stimulation. *Frontiers in Human Neuroscience*. 13, 90. IF: 3.2.
- Nguyen, T[†], Zhou, T[†], Potter, T., Zou, L., and Zhang, Y*. (2019) The Cortical Network of Emotion Regulation: Insights from Advanced EEG-fMRI Integration Analysis. *IEEE Transactions on Medical Imaging*. IF: 6.1.
- Li, X., Zhang, C., Dias, N., Liu, J., Hu, F., Yang, S., Zhou, Y., and Zhang, Y*. (2019) Effects of delivery mode and age on motor unit properties of the external anal sphincter in women. *International Urogynecology Journal*. 1-6. IF: 2.1.
- Liu, J., Peng, Y., Li, L., Chen, Z., and Zhang, Y. (2019) A Fuzzy Reasoning Model for Cervical Intraepithelial Neoplasia Classification using Temporal Grayscale Change and Textures of Cervical Images during Acetic Acid Tests. *IEEE Access*, 7, 13536-13545. IF: 3.56.
- Liu, J., Peng, Y., Li, L., Chen, Z., and Zhang Y*. (2019) Better resource utilization and quality of care for cervical cancer screening in low-resourced districts using an internet-based expert system. *Journal of Healthcare Engineering. Technology and Health Care*. 1-11. IF: 0.77.
- Liu, J., Du, H., Lu, H., Peng, Y., Li, L., & Zhang, Y*. (2019). Comparison of Classifier Configurations for the Classification of Cervical Intraepithelial Neoplasia Using Acetic Acid Test Images. *Journal of Medical Imaging and Health Informatics*, 9(6), 1103-1111. IF: 0.55.
- Wu, Z., Potter, T., Wu, D., and Zhang, Y*. (2019) Denoising high angular resolution diffusion imaging data by combining singular value decomposition and non-local means filter. *Journal of Neuroscience Methods*. IF: 2.7.

Other Intellectual Contributions: Conference Proceedings

- Li, R., Zhao, C., Wang, C., Rui, G., and Zhang, Y*. Diagnostic Utility of fNIRS for the Early Detection of Alzheimer's Disease. *Proc. of Annual Int. Conf. of IEEE-EMBS*, Berlin, Germany, 2019.
- Hu, Y., Zhang, Q., Li, R., Potter, T., and Zhang, Y.* Graph-based Brain Network Analysis in Epilepsy: an EEG Study. *9th International IEEE/EMBS Conference on Neural Engineering (NER'19)*. San Francisco, CA. 2019.
- Zhao, C., Li, R., Wang, C., Huang, W., and Zhang, Y.* EEG-based brain network analysis in stroke patients during a motor execution task. *9th International IEEE/EMBS Conference on Neural Engineering (NER'19)*. San Francisco, CA. 2019.
- Fang, F., Houston, M., Walker, S., Nguyen, T., Potter, T., Zou, L., and Zhang, Y.* Underlying modulators of frontal global field potentials in emotion regulation: an EEG-informed fMRI study. *9th International IEEE/EMBS Conference on Neural Engineering (NER'19)*. San Francisco, CA. 2019.
- Cicalese, P.A., Li, R., and Zhang Y*. An EEG-fNIRS Hybridization Technique in the Four-Class Classification of Alzheimer's Disease. The 4th Annual Scientific Conference on Machine Intelligence in Medical Imaging (C-MIMI) of the Society for Imaging Informatics in Medicine (SIIM). Austin, TX, USA 2019.
- Huang, W., Gao, Y., Roh, J., and **Zhang Y***. Alteration in intermuscular coordination and EMG-EMG coherence in the human upper extremity after stroke. 2019 Annual Meeting of The American Society of Neurorehabilitation (ASNR). Chicago, IL, 2019.
- Chen, Y., Zhang, C., Monica Verduzco-Gutierrez, E.M., Francisco, G.E., Zhou, P., **Zhang, Y.**, and Li, S. Biomechanical and electrophysiological assessment of the effect of botulinum neurotoxin injection in stroke survivors with spastic hypertonia. Annual Meeting of the Society of Neuroscience (SfN), Chicago, IL, 2019.
- Li, R., Potter, T., Nguyen, T., and **Zhang, Y***. Investigating the Dynamic Changes in Functional Networks during Emotion Regulation using fMRI-informed EEG Source Localization. Annual Meeting of the Society of Neuroscience (SfN), Chicago, IL, 2019.
- Cao, Y., Li, R., Gao, F., and **Zhang, Y***. Improving the repeatability of MUNIX using multi-channel surface electromyography. Annual Meeting of the Society of Neuroscience (SfN), Chicago, IL, 2019.
- Dias, N., Zhang, C., Li, X., and **Zhang, Y***. Aging Related Alterations of Neural Control Properties of the External Anal Sphincter. SUFU 2019 Winter Meeting, Miami, FL. (**SUFU Clinical Science Essay Competition Winner**).

e. Technology Transfer Activity

1. Invention disclosures: David Francis and Jack Fletcher have been working to create a screening test for dyslexia and to adapt this new screening test and a set of assessments already available through UT-Houston/UH for use by Amira Learning. The final license agreement is not yet completed.
2. Patent applications (filed & pending): _____
3. Patents received: _____
4. Licenses (current & pending): Texas Primary Reading Inventory; Tejas LEE Reading Assessment for Spanish-Speaking Students; Progress Monitoring Assessments for Kindergarten to Grade 3 in English and in Spanish.
5. Spin-off companies: _____
6. Are there industry members and partnerships with external organizations (please provide details)?

f. Describe the community outreach and service of the center/institute.

V. PLANNED CHANGES FOR PROGRAM IMPROVEMENT

- a. Size (personnel, space) – Does the unit require additional space and/or resources for continued operation?

No changes are planned in space or personnel at this time.

- b. Administrative structure and governance (provide projected new organizational chart).

No changes are planned. We await the decision of DOR on the centralization of research administration and TIMES role in the collaborative.

- c. Any changes to the mission, goals, or objectives?

No changes are planned.

- d. New/updated metrics?

No changes are planned.

VI. CENTERS OR INSTITUTES PROPOSING DISCONTINUATION

- a. Reason for discontinuation.
- b. Proposed activities for phase-out period.
- c. Effective date for discontinuation.