

Office of Research Development and Administration
Award Report, July, August, September, 2018
\$6,378,017

Tsu-Yin Wu, School of Nursing

US Department of Health and Human Services (\$140,718)

Evidence-based strategies for navigators in Federal Facilitated Exchange (FFE): Michigan model for left-behind Asian Pacific American Population (A19-0014-001): The goal of this project is to decrease the number of uninsured individuals and improve access to and utilization of health care services among underserved Asian Pacific Americans (APA) and ultimately promote health and well-being and decrease health disparities for left-behind populations in Michigan. Healthy Asian Americans Project (HAAP) is a nonprofit organization that adheres to the CLAS Principle Standard of providing effective, equitable, understandable, and respectful quality care and services in response to diverse culture, health beliefs, and practices. HAAP will provide targeted assistance for left-behind populations in the APA community; namely, APA refugees (who have high uninsured rates), APAs with low English Proficiency and/or health literacy who lack a general knowledge about affordable health insurance options and how to enroll, and APAs who are hourly wage workers or are self-employed.

Michigan Department of Health and Human Services (\$35,000)

Michigan Asian American Violence Intervention & Prevention (MI-AAVIP) Program (A19-0016-001): This project engages multi-sector partner organizations and agencies to design, plan, and implement a culturally-appropriate violence prevention program to reduce community violence and build community resilience and capacity with the ultimate goal of reducing the burden of violence for Asian American communities. Through working with many levels of partners (community, healthcare, health-related professions, law-enforcement, schools), the program deepens the level of resident engagement in community building, increase social cohesion and organize community members around a set of positive and supportive goals that increase informal social controls and reinforce a culture of non-violence over long-term periods.

Michigan Department of Health and Human Services (\$40,000)

A culturally-sensitive, linguistically-appropriate intervention for outreach and increased CRC screening among Asian Americans in Michigan (A17-0050-002): The objective is to reduce health disparities related to colorectal cancer screening experienced by uninsured Asian Americans (AA) in Michigan. Specific aims are to utilize evidence-based strategies and implement a culturally and linguistically appropriate program to outreach for AA communities, promote awareness, provide patient navigation and refer eligible AAs to Michigan CRC Early Detection Program (MCRCEDP) screening sites in metro Detroit areas and Grand Rapids to ultimately increase colorectal cancer screening for Asian Americans in Michigan.

David Wait, College of Technology, Dean's Office

Michigan Department of Education (\$60,000)

Michigan Office for Skills USA (A16-0014-004): Application to continue operating the Michigan Office for Skills USA. The purpose of Skills USA is to provide high school students and their teachers with activities and programs that motivate students and that develop students' leadership, individual, social, teamwork, decision making, problem solving, and technical skills

as it relates to various trade and industrial career paths that students may pursue in secondary education.

Michigan Department of Education (\$60,000)

Michigan DECA (A16-0015-004): Renewal to administer the statewide management and leadership of the secondary Michigan DECA Career and Technical Student Organization. The purpose of the Michigan DECA is to sustain and advance the career and leadership organization as a vital component of the vocational marketing education curriculum and to fulfill the mission of the career education and leadership organizations in Michigan.

Michigan Department of Education (\$44,000)

Michigan Family, Community, and Career Leaders of America (FCCLA) (A16-0017-004): Renewal to be the host for the statewide Michigan Family, Career, & Community Leaders of America. This program provides state leadership to local FCCLA programs, providing students and teachers with activities and programs that promote personal growth and development through family and consumer sciences education.

Wendy Thomas, Small Business Development Center

Grand Valley State University (\$27,685)

Michigan Small Business Development Center (SBDC) Host, Supplement (A15-0012-008): The Michigan Small Business Development Center (MI-SBDC) at Eastern Michigan University is part of a statewide program that is primarily funded by the U.S. Small Business Administration to provide assistance to entrepreneurs at start up stage and existing businesses seeking to grow and improve their operations. The MI-SBDC offers one-on-one counsel, training seminars and secondary research support to its clients. Funding will expand SBDC counseling and training services to targeted industries within specific underserved markets in SE Michigan. This region currently has several business consultants with expertise in finance serving Wayne, Oakland, and Macomb counties. The supplemental funding will be used to hire a consultant with expertise in marketing.

He Tang, School of Engineering Technology

Fiat Chrysler Automobiles (\$40,000)

New Technologies for Throughput of Manufacturing Development (A19-0015-001): Contract with FCA to investigate manufacturing technology.

Eric Reed, Institute for the Study of Children, Families, and Communities

US Department of Education (\$242,136)

Eastern Michigan University TRIO SSS Regular Program, Year 4 (A16-0010-007): The EMU TRIO SSS program supports first generation students, low income students, and students with disabilities. The goal is to increase college retention and graduation rates for these students. The program offers tailored support that includes academic tutoring, advice and assistance in course selection, counseling to improve financial literacy, information and assistance in applying for Federal Student Aid, and assistance in applying for admission to graduate school. Funding provides support for 140 students per year. The program succeeds through partnership with collaborating offices across campus.

Steven Pernecky, College of Arts and Sciences, Dean's Office

Ellene Contis, Chemistry

US Department of Education (\$403,695)

Strengthening the STEM Curriculum at Eastern Michigan University by Institutionalizing the CSIE Program, Year 5 (A15-0024-004): This is year 5 of 5 years of funding. The project will implement the innovation and effective CSIE program across STEM disciplines. The focus is on faculty professional development, curricular reform, and improved student connections to STEM faculty, peers, and the community through experiential community-based research activities.

Eric Paradis, Physics and Astronomy

National Science Foundation (\$24,515)

Electric fields, shock-fronts and structures in laser-induced magnetized plasmas, Year 2 (A17-0049-002): Plasmas that are cold or strongly coupled or magnetized occur, for instance, in astrophysical environments, magnetic-confinement fusion and ion trapping experiments. Further, the presence of a large magnetic field leads to novel phenomena such as magnetic pressure, anisotropic expansion/trapping in both astrophysical plasmas as well as plasma within fusion devices and magneto-hydrodynamic generators. The study of such plasmas is challenging; some are too remote while others may be inaccessible to diagnostic probes. Although laboratory studies of cold plasmas have been conducted in weak magnetic fields, the strong magnetic-field regime is still poorly understood. One outstanding goal is to reach the regime of strong coupling for both electronic and ionic components of the plasma. The proposed work focuses on the preparation and diagnostics of small-scale, easy-to-access laboratory plasmas that emulate the plasma systems above.

Hitomi Oketani, World Languages

Japanese School of Detroit (\$2,361)

Japanese School of Detroit Teaching Contract Supplement (A15-0021-007): A supplement to increase funding for the educational affiliation between JSD and EMU. EMU will provide JSD with qualified student(s) who will teach Japanese language at the off-campus location of Detroit Ringo Kai, Japanese School of Detroit.

Mary Motherwell, WEMU FM Public Radio

Corporation for Public Broadcasting (\$140,475)

Radio Community Service Grant (A19-0005-001): This grant supports WEMU's mission of service to the community through the broadcast of news, information, music, and cultural programming.

Stephen McGregor, School of Health Promotion and Human Performance

Impellia (\$26,467)

Phase II of Impellia, Inc. Mocap/EMU project (A19-0008-001): This project will use machine learning and artificial intelligence to identify movement events in wearable sensors and enhance range of motion accuracy and reliability assessment. This project will validate a previously developed machine learning and artificial intelligence (AI) approach. The goal of using machine learning and AI approaches is to improve validity and reliability of range of motion measures using wearable sensors. Impellia LLC has developed the initial range of motion algorithms as

well as the machine learning/AI approaches that will improve upon the initial range of motion results.

Lynn Malinoff, Institute for the Study of Children, Families, and Communities

US Department of Education (\$675,000)

21st CCLC Cohort J Year 2 2018-2019 Bright Futures (A18-0017-002): For 10 years, Eastern Michigan University Bright Futures (EMUBF) has developed a strong culture of best practices including positive youth development (youth voice, choice, and engagement), embedded academics, social emotional learning (SEL), and family engagement. Students will receive targeted academic support, and experience project-based clubs resulting in new experiences, career exploration, learned academic content, and skills to transition to the next level. Community partners, university students, and experts will facilitate clubs in technology, music, martial arts, theater, art, and leadership. EMU partners include the College of Education, Social Work, Communication and Theater Arts, Academic Service Learning, Leadership and Counseling, biology, and world languages. UM partners include the Kinesiology and French departments, School of Education, and College of Pharmacy. Two Ypsilanti Community Schools (Ypsilanti Community Middle School and Ford Early Learning Center) and three Wayne Westland Community Schools (Hicks, Schweitzer, and Taft-Galloway) are the focus of this Bright Futures project.

US Department of Education (\$675,000)

21st Century CCLC Cohort I-one, Year 5, 2018-2019 Bright Futures (A16-0008-004): One Bright Futures program will serve students in Wayne Westland Community Schools (Wayne Memorial High School) and four Bright Futures programs will serve students in Ypsilanti Community Schools (Estabrook, Erickson, Adams, and Holmes Elementary Schools). There are limited after school opportunities in these schools making them ripe for 21CCLC programs. Students will participate in daily academic activities, mentoring, service learning and a rotating menu of clubs and activities focused on cultural arts and technology, supported by many collaborators. University partners include Eastern Michigan University College of Education, Communication and Theater Arts, Academic Service-Learning, Leadership and Counseling, and the UM School of Education. Clubs will integrate writing skills, youth development, and skills for a successful transition from elementary to middle school and middle to high school.

US Department of Education (\$675,000)

21st Century CCLC Cohort I-two, Year 5 2018-2019 Bright Futures (A16-0009-004): Three Bright Futures programs will serve students in Wayne Westland Community Schools (Franklin Middle School and Hoover and Marshall Upper Elementary Schools) and four Bright Futures programs will serve students in Ypsilanti Community Schools (Perry Early Learning Center and Ypsilanti Community High School). There are limited after school opportunities in these schools making them ripe for 21CCLC programs. Students will participate in daily academic activities, mentoring, service-learning and a rotating menu of clubs and activities focused on cultural arts and technology, supported by many collaborators. University partners include Eastern Michigan University College of Education, Communication and Theater Arts, Academic Service-Learning, and Counseling and Leadership, and the UM School of Education. Clubs will integrate writing skills, youth development, and skills for a successful transition from elementary to middle school and middle to high school.

US Department of Education (\$675,000)

21st Century Community Learning Centers (CCLC) Bright Futures Cohort K one (A19-0009-001): This grant provides out of school time programming to students and families at five sites including four in Wayne Westland Community Schools (Adams Upper Elementary, Hamilton Elementary, Elliott Elementary, and Edison Elementary) and one site in Romulus Community Schools (Romulus Elementary). EMUBF has a strong culture of positive youth development, embedded academics, social emotional learning (SEL), and family engagement. Students receive meals and academic support and experience project-based clubs with embedded academics resulting in new experiences, career explorations, and skills to transition to the next level. EMUBF meets after school for 2.5 hours Monday through Thursday, 32 weeks/school year and 6 weeks in summer. Community and university partners facilitate clubs in topics of high interest to students many of which are STEM-related (for example, computer coding, mad scientists, design thinking, environmental clubs, etc.). Three family events annually at each site focus on SEL, health and supporting academic achievement.

US Department of Education (\$675,000)

21st Century Community Learning Centers (CCLC) Bright Futures Cohort K two (A19-0010-001): This grant provides out of school time programming to students and families at five sites including three in Wayne Westland Community Schools (Roosevelt/McGrath, Stevenson Middle, and John Glenn High) and two sites in Romulus Community Schools (Hale Creek Elementary and Romulus Middle). EMUBF has a strong culture of positive youth development, embedded academics, social emotional learning (SEL), and family engagement. Students receive meals and academic support and experience project-based clubs with embedded academics resulting in new experiences, career explorations, and skills to transition to the next level. EMUBF meets after school for 2.5 hours Monday through Thursday, 32 weeks/school year and 6 weeks in summer. Community and university partners facilitate clubs in topics of high interest to students many of which are STEM-related (for example, computer coding, mad scientists, design thinking, environmental clubs, etc.). Three family events annually at each site focus on SEL, health and supporting academic achievement.

Ethan Lowenstein, Teacher Education

Bay and Paul Foundation (\$25,000)

Providing high quality professional learning for place-based educators in the Detroit area (A19-0001-001): The purpose of the project is to support place-based educators through intensive professional development including curriculum coaching. The objective is to increase interdisciplinary curriculum coaching as well as further involve SEMIS Coalition members in co-facilitating PD. We expect that increased curriculum coaching and member involvement in PD will lead to more rigorous student place-based projects. The SEMIS Coalition works with teachers from 30 schools and over 25 community partner organizations.

National Science Foundation (\$46,351)

Urban STEM Stewards: Expanding career interests through citizen science with community partners, sub-award from University of Wisconsin (A19-0011-001): The project will implement an innovative model of citizen-science in which teachers, Science, Technology, Engineering and Mathematics (STEM) professionals, and middle-high school students from groups

underrepresented in STEM work together, applying STEM learning to address environmental issues in their communities (storm water runoff, energy savings from trees). The civic-science nexus, which links STEM with civic contribution, offers unique possibilities for exploring STEM career pathways with students from marginalized communities. Middle- and high-school students will participate as citizen-scientists in place-based investigations into urban ecological issues, working alongside teachers and STEM community partners, to address local environmental issues. Students will develop hypotheses, collect and analyze data during field investigations, build knowledge and skills through supplementary classroom activities, take local stewardship actions, and communicate project results in public forums. Teachers and STEM partners will participate in the professional development (PD) program that trains them in facilitating student inquiry-driven, place-based stewardship projects. They will also share resources on-line, and form a learning community in the process. The aim of the project is to understand the mechanisms whereby local place-based inquiry can build interest in STEM and STEM careers.

Renee Lajiness-O'Neill, Psychology

Judith Brooks, Dietetics

Angela Lukomski, School of Nursing

National Institutes of Health (\$824,291)

PediaTrac: Web-based measure to screen and track infant/toddler developmental trajectories (A19-0007-001): The need for an efficient, low-cost, yet comprehensive measure to evaluate and track infant/toddler development and treatment outcomes is vital. Such a measure, coupled with a systematic method to gather this information, does not exist. The NICHD Child Development and Behavior Branch identified this need as a research priority, further noting the importance of a measure that can be linked with developmental changes in the brain. We will develop and test a novel measure that collects consistent data from parents/caregivers to characterize infant/toddler development over time, similar to growth curves for height and weight. The overall objective is to further develop and validate PediaTrac™, a web-based measure designed to engage parents/caregivers in the gathering of longitudinal, real-time, multi-domain data on infant/toddler development beginning at birth. Our long-term goal is to develop the PediaTrac measure to become a standard for monitoring development and early detection in the primary clinical care setting. Core domains of early development assessed with PediaTrac include feeding/eating, sleep, sensorimotor, social-communication/cognition, and attachment. Information also is obtained about demographic, medical, and environmental factors. We will establish trajectories of typical/atypical development across critical domains of functioning for infants/toddlers. We expect that PediaTrac will be an easy to use, yet powerful measure and method that could substantially improve the public health of infants and toddlers by refining our understanding of aggregate and individualized risks and subsequently inform early intervention.

Allen Kurta, Biology

Consumers Energy Corporation (\$10,000)

Habitat for the Endangered Indiana Bat along Pipeline 2800, from Genesee Township to Grand Blanc, Michigan (A15-0005-011): Dr. Kurta will evaluate the habitat for threatened/endangered bats along a 15-mile-long segment of Pipeline 2800, between Genesee Township and the city of Grand Blanc, in Genesee County, Michigan, and provide a written report.

Maurice Henderson, College of Technology, Dean's Office
Michigan Department of Education (\$60,000)

MDE-BPA 2018-2018 (A16-0012-004): Renewal for continuing support for Business Professionals of America (BPA) - Michigan Association. The purpose of the project is to sustain and advance Business Professionals of America as a vital component of the Business Services and Technology curriculum and to fulfill the mission of the Career and Technical Education and Leadership organizations in Michigan.

Iktimal Hamed, College of Technology Academic Advising Center

Caroline Sanders, EMU Engage

PNC Foundation (\$8,000)

Girls in Engineering Academy (A19-0003-001): Girls in Engineering camp is a four-week summer camp where middle school girls stay on the campus of EMU from Sunday to Thursday. The girls are provided with hands-on project based STEM activities, life skills development, mentoring, pre-college experiences, and engineering career exploration. This camp is offered to pre-selected girls already participating in a year-long program through the Engineering Society of Detroit. The purpose of GEA is to improve academic achievement and increase interest in Engineering topics and careers among girls; and decrease the gender gap that negatively impacts these girls' successful matriculation through the sciences, technology, engineering and math educational pipeline and into STE careers.

Charles Graham, School of Social Work

Washtenaw County Juvenile Drug Court (\$27,861)

Adolescent Diversion Program 2019 (A18-0014-002): The Adolescent Diversion Program (ADP) field unit is a cooperative effort between Eastern Michigan University (EMU) School of Social Work and Washtenaw County Juvenile Court. ADP seeks to provide court referred adolescent participants with a program of mentoring and advocacy services tailored to address their unique needs and to help them avoid further involvement with the juvenile justice system. Trained and supervised social work undergraduate and graduate student interns will meet and work with each assigned youth 6-8 hours weekly for 15 weeks, providing constructive interaction and feedback through various vocational, academic, clinical and recreational activities.

Wayne Doyle, Institute for the Study of Children, Families and Communities

US Department of Education (\$161,395)

EMU SSS Veterans, Year 4 (A16-0011-007): The EMU program promotes academic success among student veterans and serves a minimum of 80 students. The program provides dedicated academic and personal support, tailored to address the unique needs of veterans who are in pursuit of a bachelor's degree from EMU. Expected outcomes are good academic standing, increased retention and degree completion and optimal use of available financial aid. The program partners with: EMU Veterans Resource Center, McNair Scholars Program, EMU Student Support Services, Financial Aid, Transfer Admissions, Upward Bound, University Advising and Career Development, the Veterans Community Action Team for Region 9, and the Consortium of Michigan Veterans Educators.

Stephanie Casey, Mathematics

National Science Foundation (\$32,718)

Enhancing Statistics Teacher Education with E-Modules, Subaward from North Carolina State University, Year 3 (A17-0011-003): For this project, we aim to push the discipline of mathematics teacher education and the field of statistics education forward into utilizing free online resources (and/or entire modules) within traditional settings in university teacher preparation programs. Thus, our goals and corresponding actions are: 1. Create online resources for infusing secondary mathematics teacher preparation programs with content focused on teaching, 2. Design modules and approaches to be used within teacher preparation, 3. Implement resources and modules in undergraduate courses and investigate students' learning and faculty implementation.

Elise Buggs Sturdivant, Academic Partnerships

Michigan Department of Health and Human Services, Year 1 partial funding (\$66,843)

Michigan Department of Health and Human Services, Year 2 funding (\$133,738)

MAGIC Independent Skills for Living (A13-0002-005, 006): The program provides independent living services to eligible youth. The services are coordinated with other relevant federal and state programs and include assistance with housing, employment, education, budgeting/financial management, identifying/maintaining appropriate relationships, career planning, parenting, medical/dental health, and finding community resources.

Danny Bonenberger, Geography and Geology

US National Park Service (\$19,680)

Early Dwellings of North Wheeling Intensive Survey, Phase II (A18-0008-002): North Wheeling, West Virginia has long been renowned for the beauty of its late Victorian architecture, however recent field research led by Dan Bonenberger has identified a remarkable concentration of vernacular dwellings dating to the first half of the 19th century. These houses link the city with the most important themes, eras, and events in its history: its settlement, the arrival of the National Road (with its terminus at 7th and Main), industrialization, immigration, the statehood movement, and the Civil War. Last year over 100 of the earliest dwellings in the neighborhood were identified and twenty-four were researched and described in detail using West Virginia Historic Property Inventory Forms (WVHPIFs), following state and federal best-practices. A survey report evaluated the significance of these buildings in the context of local, regional and national developments and made recommendations detailing future recording, designation, and management options. This project will continue this work using a similar methodology to identify additional early dwellings north of 3rd Street, and complete research and WVHPIF documentation on over thirty early dwellings that stand beyond the current historic district boundaries. In addition, the team proposes to research and write the history of sixteen of the earliest and most significant dwellings, compose detailed descriptions of their physical form, style, and architectural details (including sketch floor plans and interior elements where accessible), and evaluate them in the context of Wheeling's history and in relationship to the antebellum housing types common in the Upper Ohio Valley and the Mid-Atlantic region.

Jack Bidlack, EP Professional Program Training

State of Michigan (\$20,000)

Protecting Construction Workers from Silica (A19-0012-001): Eastern Michigan University's Center for Organizational Risk Reduction's (EMU CORR) training program will (1) enhance

MIOASHA's mission to help assure the safety and health of Michigan workers, (2) assist MIOASHA to implement its 2014-2018 Strategic Plan for Construction Health Hazards, and (3) assist Michigan employers in complying with new silica standards and protecting Michigan workers by providing effective, practical training and compliance advice. EMU CORR will provide an eight-hour comprehensive training program in workshop format to enable employers to recognize silica exposure hazards, understand legal obligations to protect workers from silica exposure, and select and implement appropriate exposure control measures for various construction situations and conditions. EMU CORR will hold eight seminars in multiple locations around the state. The target audience is employers engaged in (1) the construction of buildings, (2) heavy and civil engineering construction, (3) demolition, (4) residential construction, and (5) building material, garden equipment and supplies.

Cassandra Barragan, School of Social Work

Katherine A. Kendall Institute for International Social Work Education (\$5,695)

Get to know my world: Jamaican and US experiences through Photovoice (A19-0002-001): The objective of this project is to give a voice to people in the US and Jamaica impacted by mental health issues, substance abuse, and human trafficking through use of Photovoice. Using the theme "Get to know my world" people in both the US and Jamaica will have a chance for a meaningful exchange even if they can't directly visit. Through this project, participants will be able to share their stories indirectly with people impacted by similar issues, social workers, students, and the general population in the US. The expected outcome of this project is for Jamaica trip alumni students and faculty to complete a Photovoice project to facilitate the sharing of stories between the US and Jamaica in local and national settings. This project is a cutting-edge and innovative way to bring awareness to these very important issues in both countries.

Jessica Alexander, EMU Engage

Ann Arbor Area Community Foundation (\$20,000)

Vital Seniors Capacity Support (A19-0004-001): Aging in Place with Grace will cultivate and train residents in Ypsilanti's affordable housing communities to be community health workers (CHW) tasked with supporting senior residents' ability to age in place. Aging in Place with Grace will bridge two social and economic gaps: accessible employment and training opportunities for affordable housing residents; and health navigation and community health for seniors living in the same communities. The proposed project is to create a cohort of ten CHWs who reside in the Ypsilanti Housing Commission (YHC) communities, and will serve aging residents in such communities by helping to navigate to supports and services outside the actual residential community.

Jessica Alexander, EMU Engage

Marquan Jackson, Institute for the Study of Children, Families, and Communities

University of Michigan (\$207,322)

Supportive Housing, Family Empowerment Program (A19-0013-001): Resources will allow the Family Empowerment Program (FEP) at The Ypsilanti Housing Commission to expand and continue its resident support services program. This funding will grow the program at Hamilton Crossing (70 families), implement the program for a new population at Parkridge Homes (86 families), and take advantage of a unique opportunity to support the Strong Families Fund initiative as it continues to build infrastructure and capacity at Sauk Trail Point (112 families) in

Ypsilanti, Michigan. These three initiatives will transform the economic and community life of the city, offering an unprecedented opportunity to reshape the city's neediest neighborhood, cultivate employment and educational resources available to adults in this community, and positively influence their children. The FEP will aim to improve employment, education, health, mental health, and safety outcomes for the neighborhood (specifically Parents/Older Adults and Children) while reducing participant reliance on government aid and lower utilization of public resources (police, hospital emergency rooms).

Ypsilanti Community Schools (\$20,173)

College Coaching Core 2018-2019, Ypsilanti (A19-0017-001):

Lincoln Consolidated Schools (\$13,449)

College Coaching Core 2018-2019, Lincoln (A19-0017-002):

Milan Area School District (\$13,449)

College Coaching Core 2018-2019, Milan (A19-0017-003):

The College Coaching Corps seeks to help Michigan students located in communities with low socio-economic status and low adult educational attainment rates pursue postsecondary educational opportunities. Working alongside school professionals and under the supervision of school counselors or principals, Eastern Michigan University College Coaching Corps Graduate Assistants support students as they make the transition from high school to postsecondary education. College Coaching Corps GA's provide students and their families with relevant information regarding the benefits of a postsecondary education, preparing for college attendance, and the admission and financial aid processes.