



2012-2018 Report by Carol LaFayette, Director



Banner for the first ever IAC-curated STEAM pavilion at the largest engineering conference in the U.S. - The USA Science & Engineering Festival, 2014. The IAC was invited by the National Endowment for the Arts and conference organizers.

Vision and Mission

The Institute for Applied Creativity is a forum for collaboration among domains and disciplines intent on creating a radiant future. We champion combinations of experimental, rational, intuitive, and analytical methods to realize tangible accomplishments. The inherent creativity of individuals, the deep knowledge within disciplinary practice and research, and the rapid pace of transformation in society collectively contribute to an institute that exercises iterative, regenerative, and nimble practices. As an aggregator of 21st Century knowledge and expertise, a matchmaker crossing academic, community and business boundaries, and a catalyst for realizing transformative ideas, our research, education and outreach initiatives focus on the process of creation, a keystone of innovation. Today's societal challenges are of such a magnitude of complexity that multiple areas of expertise are needed to design effective solutions.

This statement was co-authored in 2012 by over 20 faculty members and thought leaders on campus and in the community.

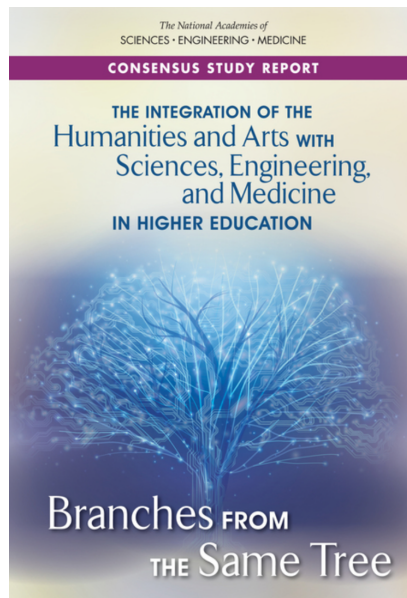
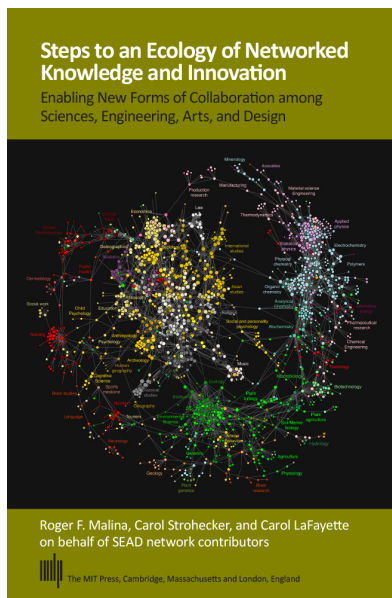
The IAC contributes strongly to the virtual aspect of built environments in the College of Architecture. Through collaboration we seek to catalyze 21st century approaches to learning, research, practice, demonstration, inclusion, and outreach. As a designated institute, we pursue opportunities to partner across other entities on campus and beyond.

Allied with the Department of Visualization, the IAC seeks to engage visual, analytical and intuitive strategies of the mind. The IAC focuses on articulating future directions in education, research, and creative work by promoting the Department of Visualization as a unique, and as one of the first programs in the country to demonstrate the potential for productive collaboration across sciences, engineering, arts, and design.

The IAC serves university goals of excellence, integrity, leadership, loyalty, respect, and selfless service. In particular, we have devoted IAC initiatives to transformational learning and scholarship; strengthening graduate programs; enhancing the undergraduate experience; delivering local to global outreach; and meeting our commitment to the people of Texas. Faculty and researchers in the sciences and in engineering have actively sought us out for collaboration and partnerships.

IAC impacts on research and creative activities

The Network for Sciences, Engineering, Arts and Design (SEAD) is in its eighth year as an international organization supporting SEAD intersections in learning, research, and creative work. SEAD formation was supported by the National Endowment for the Arts and the National Science Foundation, demonstrating acknowledgement that bridging the arts and sciences is in the national interest. [Website](#)



Left: SEAD network report sponsored by the NSF, 2015; right: National Academies report, 2018

From 2016-2018, a committee comprised of SEAD members and others joined the Board on Higher Education and Workforce at the National Academy of Sciences, Engineering, and Medicine (NASEM) to create a formal study on integration of the arts and humanities with Science, Technology, Engineering, Math, and Medicine (STEMM) in higher education. The report offers recommendations to better support transdisciplinary learning and research. The

Department of Visualization curriculum was included in a compendium of example programs. Rather than increasing specialization of disciplines, the report found that integration of them is something employers and higher education institutions agree is important for the United States in the 21st century. [Website](#) (For educational compendium, see tab on “Resources.”)

The IAC was included in the first National Academies Keck Futures Initiative (NAKFI) to invite artists to join engineers and scientists to tackle grand challenges and collaborate on solutions. NAKFI also provides seed funding to support risky, experimental projects. [Website](#)

As a result of IAC advocacy, guidelines for National Endowment for the Arts “Creativity Connects” funding were changed to include centers and institutes in higher education that engage intersections of the arts and sciences. This demonstrates support on the federal level for the potential of collaborative engagement at research universities. [Website](#)

IAC Fellow Jose Quintana has created SEAD Gallery and SEAD Academy in downtown Bryan, now in its fifth year of programming for the arts and sciences. SEAD Gallery and SEAD Academy are tangible examples of innovation, vibrant cultural development, and diverse, SEAD powered learning. [Website](#)

Limited seating. Free tickets: creativity.tamu.edu. Co-hosted by Institute for Applied Creativity, Department of Visualization, Physics and Astronomy, The Mitchell Institute for Fundamental Physics and Astronomy



Strandbeest evolution: a new form of life
Lecture by Theo Jansen, Wednesday Nov. 18, 5pm, Physics and Astronomy Hawking Auditorium

Theo Jansen, Dutch kinetic artist and physicist, visited Texas A&M in 2015. Co-sponsored by IAC, the Department of Visualization, the College of Architecture, the Department of Physics and Astronomy, and the Mitchell Institute for Fundamental Physics and Astronomy.

The IAC demonstrates the power of art + science collaboration to the campus community through showcasing the work of international artists that, for example, engage agricultural

reclamation of brown fields in Chicago; make use of physics to build kinetic, wind driven sculptures; and employ bacteria for bio-art installations enhanced with computational visualizations. Partnerships have been formed across physics and astronomy and the health sciences, demonstrating awareness of the importance of such work.

Promoting diversity and inclusion

Activities promoting diversity and inclusion involve outreach, education, and project development engaging under-represented community members and students.



Left: Fred Bacon, middle: Emily Connelly, right: Sam Addington, Citizen Storytellers, Liberty, Texas. Co-sponsored by Texas Target Communities.

Citizen Storytellers: The IAC initiated a partnership with Texas Target Communities (TTC) to create a “Citizen Storytellers” initiative, in which Visualization undergraduates tutored Liberty, Texas youth on digital networking and visual art. The youths created a community blog responding to the TTC service learning initiative. At the close of the program, Storytellers visited Texas A&M with their families and were encouraged to apply. [Website](#)



“Sculptures in Augmented Reality,” a summer workshop co-hosted by the IAC and SEAD Academy, Bryan

SEAD Academy, Bryan: The IAC has hosted Visualization graduate students who create curriculum and lead summer classes in digital creation for community youth in Bryan. [Website](#)

reGEN, San Antonio: The IAC co-founded reGEN, a partnership with Land Heritage Institute, San Antonio, Texas A&M San Antonio, and AgriLife researchers at Texas A&M College Station. The IAC is building community dialog with researchers and landowners to regenerate the landscape, water, flora, and fauna on this 1200 acre preserve in San Antonio. Research, art, design, and visitor engagement are thus blended. [Website](#)

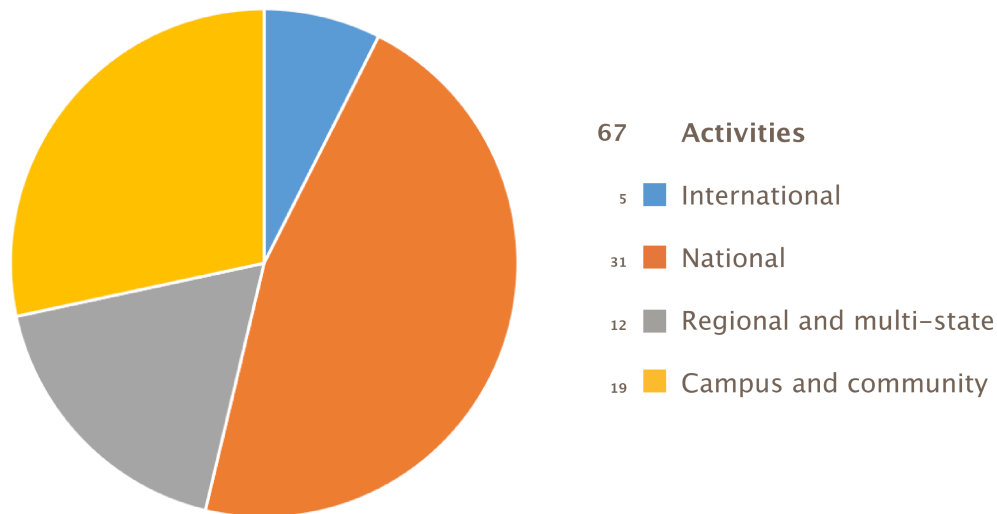


Pecha Kucha Bryan nights invite citizens and academics to mingle and share ideas on creativity

Pecha Kucha Bryan: Pecha Kucha Night Bryan is a quarterly, casual forum intended to spark collaboration between civic and academic community members. Sponsored by Klein Dytham Architecture, Tokyo, the event shares visual presentations on creativity by researchers, students, citizens, and businesses, providing a global audience. PK nights are held in over 1000 cities worldwide. Many Bryan presentations have been included in the global, mobile app as well as on the global PK site. To date, PK Bryan has hosted 71 speakers from campus, Bryan, and College Station. [Website](#)

Please see Appendix A for a listing of funded and unfunded projects.

Scope of Activities



International (5): Since 2012, the IAC has leveraged NSF sponsored SEAD network dialog to increase awareness of the need for greater support of transdisciplinary engagement across disciplines and domains. International activities include a crowdsourced e-book authored by over 200 individuals from 24 countries describing what is needed (and by which entity) to better catalyze 21st century learning, research and creative work, and cultural and economic development. The IAC has also demonstrated what SEAD engagement looks and feels like, and its potentials, through hosting international artists whose work and learning intersect the sciences and engineering.

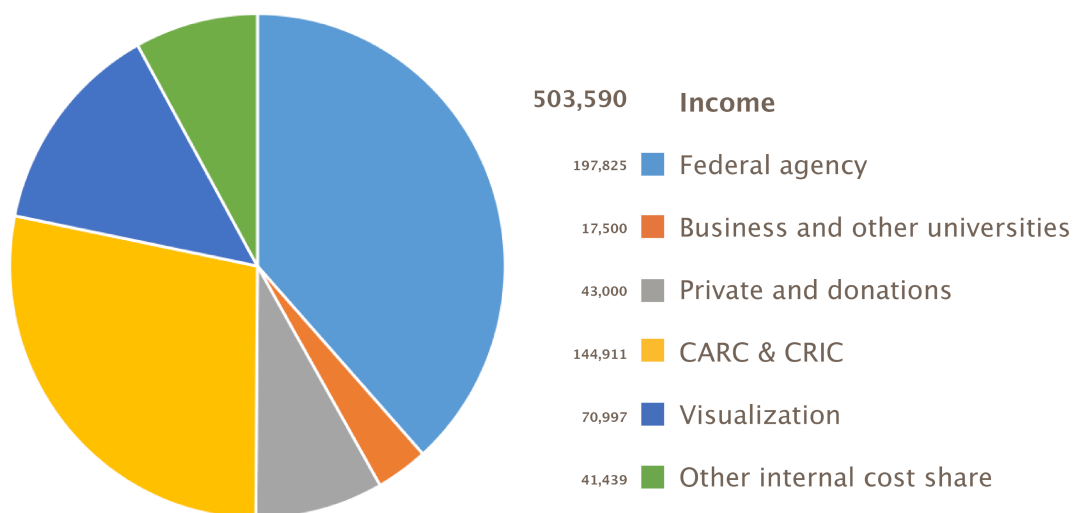
National (31): Since 2012, The IAC has participated in 23 conferences, demonstrations, and convenings, all dedicated to aspects of transdisciplinary engagement. Conference organizers include the National Science Foundation, the National Endowment for the Arts, Santa Fe Institute, Grantmakers in the Arts, the USA Science & Engineering Festival, and the National Academies of Sciences, Engineering, and Medicine. Faculty in Visualization have directly benefitted from IAC participation in this growing dialog, for example, by appointment to advisory boards in the National Academies, funding awards, and greater visibility nationally for the hybrid art+science culture that the Department of Visualization represents. From 2016 to 2018, SEAD contributed to a formal study by the Board of Workforce, National Academies of Science, Engineering, and Medicine. The study concluded that employers and universities strongly agree on the need for integration of the arts and humanities with STEM fields, if the United States is to maintain excellency and economic superiority in future.

Regional and multi-state (12): The IAC has actively partnered with higher education institutions, private foundations, STEM organizations, and other groups to build regional and statewide dialog around transdisciplinary engagement. Activities have included think tanks on K-12 learning with Texas university researchers; workshops for large, NSF-funded networks at other A&M campuses, and building a consortium of transdisciplinary centers and institutes in Texas.

Campus and community (19): The IAC builds dialog with community members devoted to entrepreneurship across the arts and sciences that has resulted in greater local vibrancy and quality of life. Fellow Jose Quintana has partnered with the IAC on a number of funding proposals, and is a regular partner in the quarterly IAC Pecha Kucha event sponsored by Klein Dytham Architecture, Tokyo. On campus, the IAC has collaborated with faculty and researchers from BioEngineering, Neuroscience, Biology, Veterinary Medicine, Health Sciences, Engineering, and other fields, generating new forms of student research and creative work. Research papers, projects, demonstrations, and workshops have resulted in greater awareness on campus for the productivity of transdisciplinary engagement. SEAD Gallery and SEAD Academy in downtown Bryan, are both in the fifth year of programming. The IAC has supported exhibits and classes, and has contributed to events in which artists and researchers join the community in various activities.

Resources received

Because the IAC mission crosses domains and disciplines, we aspire to attract blended funding from federal agencies, businesses, private foundations and individuals, as well as to achieve greater impacts through cost sharing. The IAC often operates as a conduit and coordinator for initiatives and projects. By design we do not warehouse technology or labs. Instead, we include the cost of equipment and software in project funding. This allows us to be nimble and able to navigate rapid changes in technology. It also maintains a focus on building a network of networks — the real infrastructure for collaboration.



Amounts below do not include funding awarded to individual faculty or research groups. It does include staff time and summer salary. Awards for travel and conferences initiated by third parties is rounded.

Federal agencies (\$197,825): A 2011 NSF award from CISE IIS led to the formation of SEAD network and summer salary for the Director. Other federal funding includes support to attend a week-long NSF Engineering think tank, and funding from the National Endowment for the Arts for SEAD network related activities, as well as an invitation to lead a SEAD discussion at the annual gathering for national private foundations, Grantmakers in the Arts, in 2013.

Business and other universities (\$17,500): In 2015 the IAC was awarded an academic research grant from Microsoft for projects developed for the HoloLens. Due to community building around SEAD intersections, the IAC has been invited and hosted for presentations at 23 different conferences related to transdisciplinary engagement. Some conferences were supported by private businesses and foundations and others were led by U.S. higher education institutions.

Private support (\$43,000): In 2015, IAC Director Carol LaFayette was awarded the first Harold L. Adams '61 Interdisciplinary Professorship in Visualization. Also in 2015, the Keck Foundation at the National Academy of Sciences funded a digital project created by IAC fellows and students. In 2013-2014, the IAC was invited to co-lead a cross-disciplinary, environmental competition for youth hosted by From the Bowseat Foundation. In 2012, Stephanie Sale funded a project to create an exhibit in the Memorial Student Center celebrating 50 years of OPAS. Pecha Kucha Bryan night consistently draws private donations from attendees.

College of Architecture, CARC Research and Interdisciplinary Council (\$144,911): The IAC receives \$5130. annually for operations, and half salary for staff person Jennifer Robertson, at 20 hours/week. CRIC awarded 1 month summer pay for the Director in 2015, and 2 weeks in summer 2016 for a total of \$13,455. The College has also shared costs for a number of special initiatives and events showcasing IAC fellows and visiting teams.

Department of Visualization (\$70,997.): The IAC has partnered with Visualization on a number of projects related to field building, outreach, and learning and education. Since 2012, Visualization awarded course releases for the Director in 6 out of 14 fall and spring semesters. Visualization characterizes a course release for the Director as 25% of a faculty member's monthly salary. The total reported support for the Director for course releases total of \$63,496.

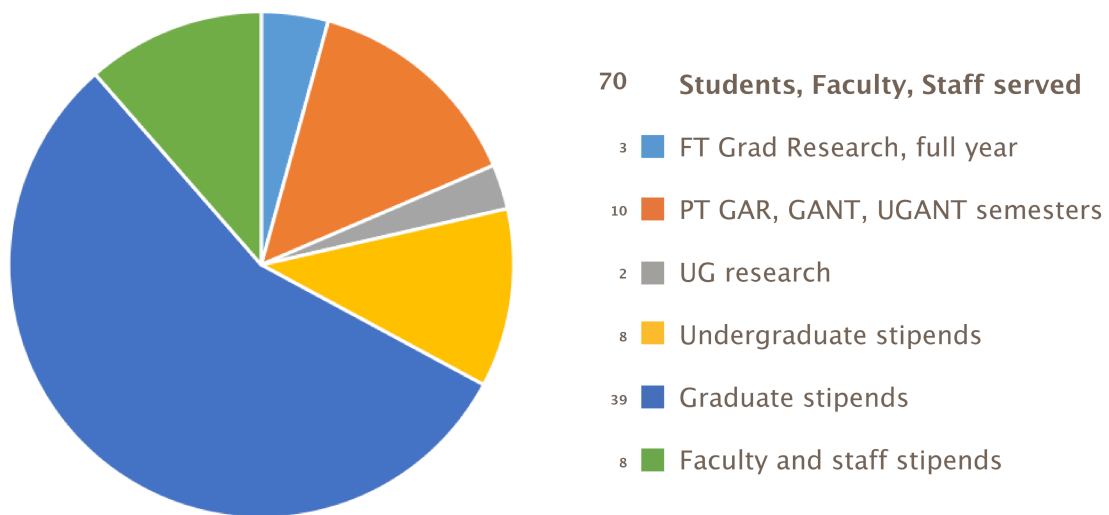
Other internal cost sharing (\$41,439.): The IAC has collaborated with other internal entities on events, projects, and research. These include Center for Housing and Urban Development (CHUD); RCN CE3SAR network led by Dr. Luis Cifuentes, Texas A&M Corpus Christi, and Dr. Jorge Vanegas, College Station College of Architecture; Texas Sea Grant; The International Ocean Discovery Program; Texas A&M Dean of Faculties; Office of the Provost; College of

Health Sciences; the Departments of Physics and Astronomy; BioEngineering; and Biochemistry and Biophysics.

Please see Appendix A for detail on resources.

Student, faculty and staff support

The IAC strives to elevate SEAD intersections within education and scholarly work. We have involved many students and faculty in commissioned projects, undergraduate research, graduate employment, and assistanceships. We remunerate and/or award course credit for all those actively collaborating in projects and activities.



The IAC has engaged a total of 70 students, faculty, and staff in research, assistanceships, and other activities.

- 3 Graduate Research assistants, full time, full year
- 10 GAR, GANT or UGANT students, part time, full semester
- 2 Undergraduate research students
- 8 Undergraduate stipends (freelance, part time, and travel)
- 39 Graduate stipends (freelance, part time, and travel)
- 8 Faculty or staff stipends (project lead, commission, travel)

The above includes positioning two Master of Fine Arts in Visualization students as Research Fellows for one semester each on innovative collaborations with faculty in the Departments of Bioengineering and Biochemistry and Biophysics.

Publications

Students served in bold

2018

Roger Malina, Carol Strohecker, Robert Thill, Nicola Triscott, Robert Root-Bernstein, Carol LaFayette, and Alex Garcia Topete, "Gallery of Illuminating and Inspirational Integrative Practices in Higher Education," in *The Integration of the Humanities and Arts with Sciences, Engineering, and Medicine in Higher Education: Branches from the Same Tree*, David Skorton and Ashley Bear, Editors; Committee on Integrating Higher Education in the Arts, Humanities, Sciences, Engineering, and Medicine; Board on Higher Education and Workforce; Policy and Global Affairs; National Academies of Sciences, Engineering, and Medicine, (Washington, DC: National Academies Press, 2018), ISBN 978-0-309-47061-2 | DOI 10.17226/24988. [Website](#)

2017

Joseph Simpson, Carol LaFayette, and Penelope Boyer, "Art and Technology Respond to Climate Change: Regenerative Urban Development and Eco-Techno-Aesthetics," *Regenerative Development: Urbanization, Climate Change & the Common Good*, Beth Schaefer Caniglia, Beatrice Frank, John Knott, Ken Sagendorf & Eugene Wilkerson (eds.), Routledge Press (in progress).

William Klemm, Will Tallent, and Carol LaFayette, "Managing Creativity with a Principle-driven Battery of Creativity Tools," *Creativity and Innovation Management Journal* (in progress).

Undergraduate research sponsored: **Will Tallent and Michael Saenz, VIST**

2016

Carol LaFayette, **André Thomas, Fermi Perumal, and Schaefer Mitchell**, *Art, Design and Science, Engineering and Medicine Frontier Collaborations: Ideation, Translation, Realization: Seed Idea Group Summaries*. (Washington DC: National Academies Press, 2015). ISBN 978-0-309-44347-0 | DOI 10.17226/23528. [Website](#)

2015

Roger Malina, Carol Strohecker, and Carol LaFayette, eds., *Steps to an Ecology of Networked Knowledge and Innovation: Enabling New Forms of Collaboration among Sciences, Engineering, Arts, and Design*, (Cambridge: MIT Press, 2015). E-ISBN: 978-0-262-75863-5. ISAST. Creative Commons Attribution-NonCommercial 4.0 International license (CC BY-NC 4.0), 2 year full time **GAR: Rodrigo Guinski**. [Website](#)

2013

Carol LaFayette, Thanassis Rikakis, Donna Cox, Gunalan Nadarajan, Carol Strohecker, Pamela Jennings, Noah Wardrip-Fruin, Roger Malina, Sheldon Brown, and Alicia Gibb, "SEAD: Network for Sciences, Engineering, Arts and Design," *Leonardo Journal*, 2013, 46(2), 194-198.

Carol LaFayette, Thanassis Rikakis, Donna Cox, Gunalan Nadarajan, Carol Strohecker, Pamela Jennings, Noah Wardrip-Fruin, Roger Malina, Sheldon Brown, and Alicia Gibb, "Network for Sciences, Engineering, Arts and Design." *Proc. ACM SIGGRAPH 2012*, Article no. 79. [Website](#)

2012

Carol LaFayette, Thanassis Rikakis, Donna Cox, Gunalan Nadarajan, Carol Strohecker, Pamela Jennings, Noah Wardrip-Fruin, Roger Malina, Sheldon Brown, and Alicia Gibb, "SEAD: Network for Sciences, Engineering, Arts and Design." *Leonardo Online*, July 5, 2012.

Presentations, lectures, workshops, projects

2018

Sebastian Kawar and Kendall Tiller MFAV; Assistant Professor Felice House, Visualization, "Live Mural" competition at South by Southwest, Austin (SXSW). IAC partner with the Texas A&M Division of Marketing.

2016

Roger Malina, Carol Strohecker, Robert Thill, and Carol LaFayette, "5 Year Update: SEAD working group meeting," National Academy of Sciences, Washington DC, February. Included federal agencies, academics, and businesses. [PDF](#)

Carol Strohecker, Roger Malina, Robert Thill, and Carol LaFayette, "Cultivating an Ecology of Networked Knowledge and Innovation through Collaborations among the Sciences, Engineering, Arts, and Design," College Art Association Annual Conference, Washington, D.C., peer reviewed.



How do we get people collaborating who have never met each other? Motion visualization of a person dancing to a story with a mobile phone, and calling the next person to continue the story. The app was created to introduce people to each other before the NAKFI conference began, with all stories and motions collected on a touch table at

the event. The motion image was printed on the participant's hangtag for the conference. Programmer: Fermi Perumal, MSV; artist: Schaefer Mitchell, MSV.

2015

Carol LaFayette, **André Thomas, Fermi Perumal, and Schaefer Mitchell**, "Art and Science, Engineering, and Medicine Frontier Collaborations: Ideation, Translation & Realization," 13th Annual National Academies Keck Futures Initiative (NAKFI) conference, National Academies, Irvine, peer reviewed. **Included custom touch screen and mobile application sponsored by Keck Futures Initiative, developed by our team.**

Carol LaFayette, "Integrating Education in the Arts and Humanities with Education in Science, Engineering, Technology, and Medicine," Hosted by the Board on Higher Education and Workforce of the National Academies of Sciences, Engineering, and Medicine, Washington, DC, invited.

Joan Quintana, Jose Quintana, and Carol LaFayette, "Texas Humanities, Arts, Technology, and Sciences (TXHATS) workshop," Co-hosted and co-sponsored regional convening of transdisciplinary practitioners. AdventGX LLC., Bryan, Texas. **Included a digital art exhibition by 10 Visualization students.**

Carol LaFayette, "Exploring a Peer Review Platform for Collaborative Scholarship, invitational workshop." Association for the Arts in Research Universities (a2ru), Carnegie Mellon University, invited.

Carol LaFayette, "Steps to an Ecology of Networked Knowledge and Innovation," Creativity in the Arts and Sciences (CASE), University of Florida, invited. Invited full presentation. **Included jurying an exhibition by UF student team collaborators across art and medicine.**

2014

Carol LaFayette, "STEAM: Bringing Art, Design, and Visualization into STEM," Science and Math Teacher Imperative, Association of Public and Land Grant Universities, Milwaukee, invited.

Carol LaFayette, "Engineering Phase I Ideas Labs on Undergraduate STEM Education," National Science Foundation, Alexandria, Virginia, peer reviewed. Week long think tank and team building for competitive proposals, peer reviewed.

Carol LaFayette, "Steps to an Ecology of Networked Knowledge and Innovation: Enabling new forms of collaboration among sciences, engineering, arts, and design." STEAMConnect Conference 2014, Qualcomm, San Diego, invited.



Yomi Adenuga, MSV, demonstrates a virtual way to learn how an electrical switch is wired. Designed by Stephen Aldriedge and Dr. Hwaryoung Seo, Visualization. "STEAM Pavilion," USA Science & Engineering Festival, 2014.

Carol LaFayette, Curator, with Hwaryoung Seo, Visualization faculty, and graduate students Janelle Arita, Catherine Hervey, Antoinette Bumatay, Stephen Aldriedge, and graduate assistant Yomi Adenuga, "STEAM Pavilion," USA Science & Engineering Festival, Washington D.C. Invited by the NEA and USASEF. External curated groups included GadgITeration, New York, and Oceans Awareness STEAM competition for high school students, audience of 350,000, Washington, D.C., invited by the National Endowment for the Arts. Graduate assistant Yomi Adenuga; project support and travel for all A&M participants.

Miranda, C., Davis, J., Evans, K., Malina, R., Marrin, D., Tejerina, B., Ox, J., Lowenberg, R., Solar, M., Tatar, D., "Fostering Trans-disciplinarity among the Social and Natural Sciences, Engineering, Arts and Design." XVIII ISA World Congress of Sociology, Yokohama, Japan, peer reviewed. SEAD sponsored presentation of papers.

Carol LaFayette, "Leonardo Art and Science Evening Rendezvous," Umlauf Art Center, Austin, invited.

2013

Carol LaFayette and 12 SEAD network members, “Networking Sciences, Engineering, Arts and Design to Confront the Hard Problems of our Time,” co-sponsored by the National Science Foundation, The Smithsonian Institution and The National Endowment for the Arts. Speakers included the Director of the NSF, Chairwoman of the NEA, Under Secretary for History, Art, and Culture at the Smithsonian, and the Director of NASA JPL. Other speakers represented the Department of Education, National Endowment for the Humanities, Department of Energy, U.S. Patent and Trademark Office, and the U.S. Office of Science and Technology Policy. Washington, DC. [Website](#)

Tiffany Sanchez, MFAV, “Oceans Awareness Challenge: Plastics Pollution,” Texas Art Educators Association, Dallas, co-sponsored by the IAC and From the Bowseat Foundation.

Dr. Jorge Vanegas and Carol LaFayette, “Understanding the Corpus Christi Educational Ecosystem: Promoting a Culture of STEM + Arts and Design,” Research Coordination Network for Climate, Energy, Environment, and Engagement in Semiarid Regions (RCN CE3SAR), Corpus Christi, TX, invited.

Carol LaFayette, “Challenges, Opportunities, and Impacts at the Intersection of Art and Science: The New Creative Economy,” NEA session, Grantmakers in the Arts annual conference, Philadelphia, invited by the National Endowment for the Arts.

Carol LaFayette and Dr. Carol Strohecker, “SEAD Network,” SIGGRAPH 2013, Los Angeles, Birds of a Feather, peer reviewed.

2012

Carol LaFayette and Roger Malina, “SEAD Network.” Scientists/Artists Research Collaborations (SARC), Santa Fe Institute, New Mexico, featured event, Inter Society for the Electronic Arts (ISEA) Festival, Los Alamos, NM, invited.

Rodrigo Guinski, MSV, “SEAD network.” SIGGRAPH 2012, Poster and abstract, Los Angeles, peer reviewed.

Impact on teaching activities in the College and University

Educational

2018

“Recent Work,” Visiting UK artists Anna Dumitriu and Alex May. One week exhibition in Wright Gallery, two workshops, three lectures for the campus. Cohosted by Academy for the Visual and Performing Arts, Wright Gallery committee, College of Architecture, Department of Visualization, Institute for Applied Creativity, and the College of Health Sciences. **Students supported to assist: Courtney Brake and Abby Malkey, MFAV.**

Harold Adams Interdisciplinary Competition for Undergraduates (ICU). A three day design charrette for undergraduates from each department in the College of Architecture along with university studies students. **Student support: Lydia Pifer, Architecture.**

2015

“Strandbeest Evolution: A New Form of Life,” Visiting artist Theo Jansen, Holland. Cohosted by CARC, Physics, Mitchell Institute, and Harold L. Adams Professorship in Visualization. Two-day visit, three lectures for the entire campus, several student meetings and a dinner for the cosponsors.

2012

Visiting artist Frances Whitehead, Art Institute of Chicago. Co hosted with Dr. Shannon Van Zandt, CHUD. One day lecture for the entire campus.

Students, faculty, and other partners engaged in research and creative work, community service, academic, and/or professional activities

2018

Courtney Brake, MFAV, internship with Dr. Paul Straight, Biochemistry and Biophysics, 10-week summer semester

Lydia Pifer, Museum studies minor, Arch GANT, to assist Harold Adams Interdisciplinary Charrette for Undergraduates.

2017

Abby Malkey and Courtney Brake, MFAV, and 2 Architecture GANTS, to assist exhibition installation and workshops, for UK visiting artists Anna Dumitriu and Alex May.

“reGEN” and “eMERGE,” presentation and digital art exhibition in a barn at Land Heritage Institute, San Antonio. With Joseph Simpson, Department of Sociology, Texas A&M San Antonio, and 10 graduate students. Funded exhibition, 2-day lodging and travel for all students and graduate assistant.

Cosponsor, Deanna Ooley and Kate Colin, exhibition by faculty engaging art and science from UNT. SEAD Gallery, Bryan.

2014-2016

Texas Humanities, Art, Technology, and Sciences (TXHATS). Formation of regional collaborative of colleges and universities in Texas: UNT, UTD, TX Tech, Texas A&M, with regional artists and scientists. Three regional conferences from 2014-2016.

2016

Mikayel Karabegov, MFAV, research fellow with Dr. Balakrishna Haridas, Bioengineering, with a group designing innovations to improve emergency room operations in Bryan College Station.

Sponsor, "Citizen Storytellers," Liberty County and Texas A&M, in collaboration with Texas Target Communities. Two high school age youths build a virtual community of peers reflecting on TTC service learning projects in their community in Liberty County, learning digital creative skills. Part time UGANT: Will Tallent, Taylor Mullins, Visualization

2015

Will Tallent, Taylor Mullins, VIST, undergraduate assistants for Texas Target Communities. Mentored Liberty Citizen Storytellers on blog creation and digital tools.

"Leadership Education through Entrepreneurship and Creativity," SEC-U, Atlanta: Adam Rothstein, MFAV, installed his work demonstrating national collaboration on a digital film.

Keck Futures Conference, National Academies, Irvine: Co-lead with André Thomas, Visualization; Schaefer Mitchell, MSV; Fermi Perumal, MSV. Project developed programming and design interface for mobile device game and touchscreen exhibited at the conference.

Cosponsor, John Firth, Ocean Discovery Program at Texas A&M, and at SEAD Gallery, Bryan, exhibition of microfossils and community artists' creations reacting to them.

2012-2014

Rodrigo Guinski - 2 full years Graduate Research Assistant, NSF sponsored SEAD network activities.

2014

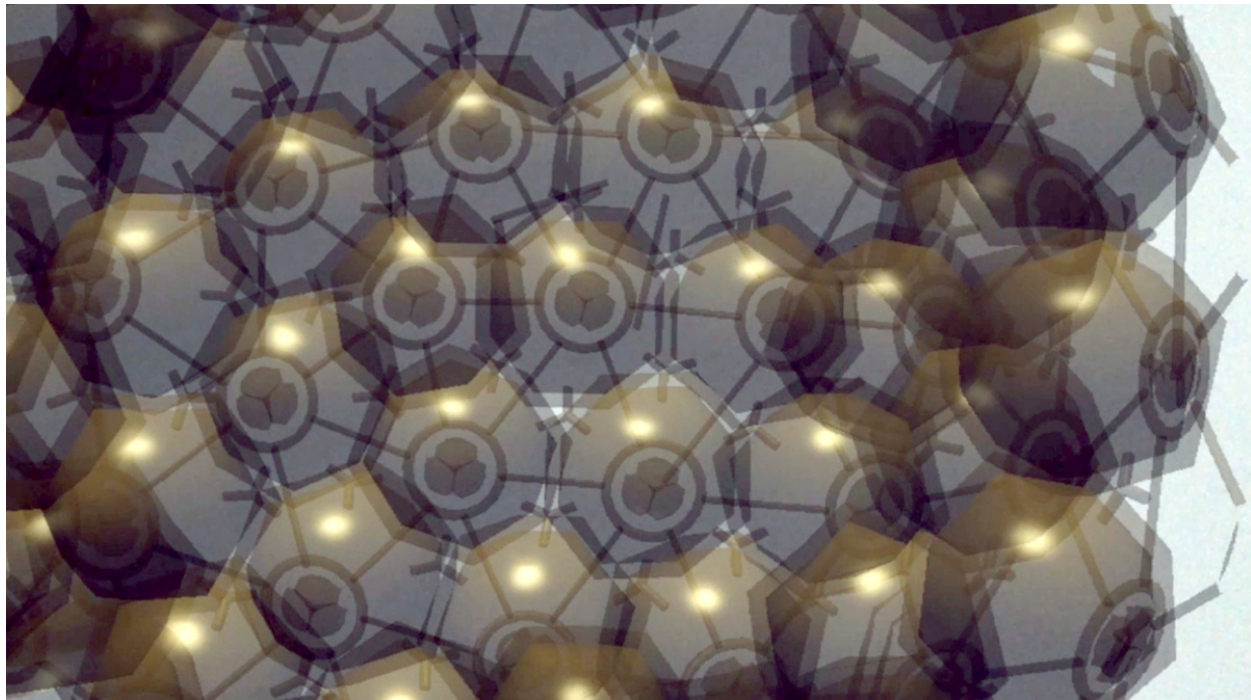
Will Tallent, Michael Saenz, VIST, research on creativity with William Klemm, Neuroscience. Paper submitted for publication.

USA Science & Engineering Festival - 6 students + Yomi Adenuga, MSV, GANT. 3-day exhibition and demonstration of projects by Dr. Hwaryoung Seo's research group, for the largest science & engineering festival in the U.S. Invited by National Endowment for the Arts to create the first STEAM Pavilion.

2013-2014

From the Bowseat Foundation: Tiffany Sanchez, MSV, GANT to support a high school contest nationwide about plastics pollution in the oceans. Travel to external conferences, online assistance and coordination.

CARC community building/centers - Cassandra Hanks, video production for promotional pitch to attract funding for a Bryan “community building building,” to house centers and institutes in downtown Bryan.



A 3D model designed by Will Tallent, undergraduate in Visualization, for Dr. John Firth, International Ocean Discovery Program. The model investigates how a micro-organism is formed in groupings of interconnected “soccer balls” — this can give engineers new ideas for structural strength at a different scale.

2012

OPAS: Stephanie Sale funded an exhibition for the 50-year anniversary. 5 undergraduate VIST students and one graduate VIZA student assisted Russell Reid to design and install.

“STEAM” innovation workshop. K12 educators and researchers, Rice University and Texas Christian University

Impact from service and outreach

2012 and 2018:

NSF AISL proposal reviews by the Director keeps the IAC in dialog with a federal program that funds transdisciplinary research on learning.

2017 - present

Participation in annual Center and Institute Directors’ Council for Outreach and Education, Chair Timothy Scott, Ph.D., helps the IAC network with other centers and institutes.

2016

Participation in university initiative “Breaking the Barriers to Multidisciplinary Teaching and Scholarship,” Office of the Provost, contributes to structural change in curriculum to better support transdisciplinary learning and scholarship.

Accolades

“Thanks my friend - yes, please feel free to mention/include SEAD Gallery and SEAD Academy, and if needed, also the impact that SEAD (in the arts) has had within the context of our incubator (Innovation Underground) as it has helped us to create great connections in Europe and in South America. It is also worth noting that thanks to such initiatives we have been able to raise private funds for our heritage preservation projects such as the Ice House and the Stafford.” — Jose Quintana, AdventGX LLC, Bryan. See also this [podcast](#) interview with Mr. Quintana explaining how SEAD dialog can contribute to cultural and economic development.

“I am writing to ask if you would consider being honored in Philadelphia by agreeing to receive an Honorary degree from Moore College of Art at our Commencement on May 15, 2016. The Honorary Degree Selection committee comprised of faculty, students and the Academic Dean nominated you as their top candidate because of your approach to combining art and science and the way in which your work expands the boundaries of both in this ever increasing interdisciplinary world. Your work and reputation make you a role model for the students and worthy of this recognition.” — President Cecilia Fitzgibbon, Moore College of Art and Design (the oldest college for women in art and design in the U.S.)

“Kudos to Carol LaFayette, associate professor of visualization and head of our Institute for Applied Creativity, for bringing together the expertise of both artists and scientists in solving problems. The full story is at <http://tx.ag/kdzuor>.” — President Michael K. Young

Please see Appendix B for public relations materials.

Constituencies served

Transdisciplinary centers and institutions in higher education, through SEAD network:

The AlloSphere Research Facility, California NanoSystems Institute, UC Santa Barbara
Bug Labs, New York

Art and Technology, University of Texas, Dallas.

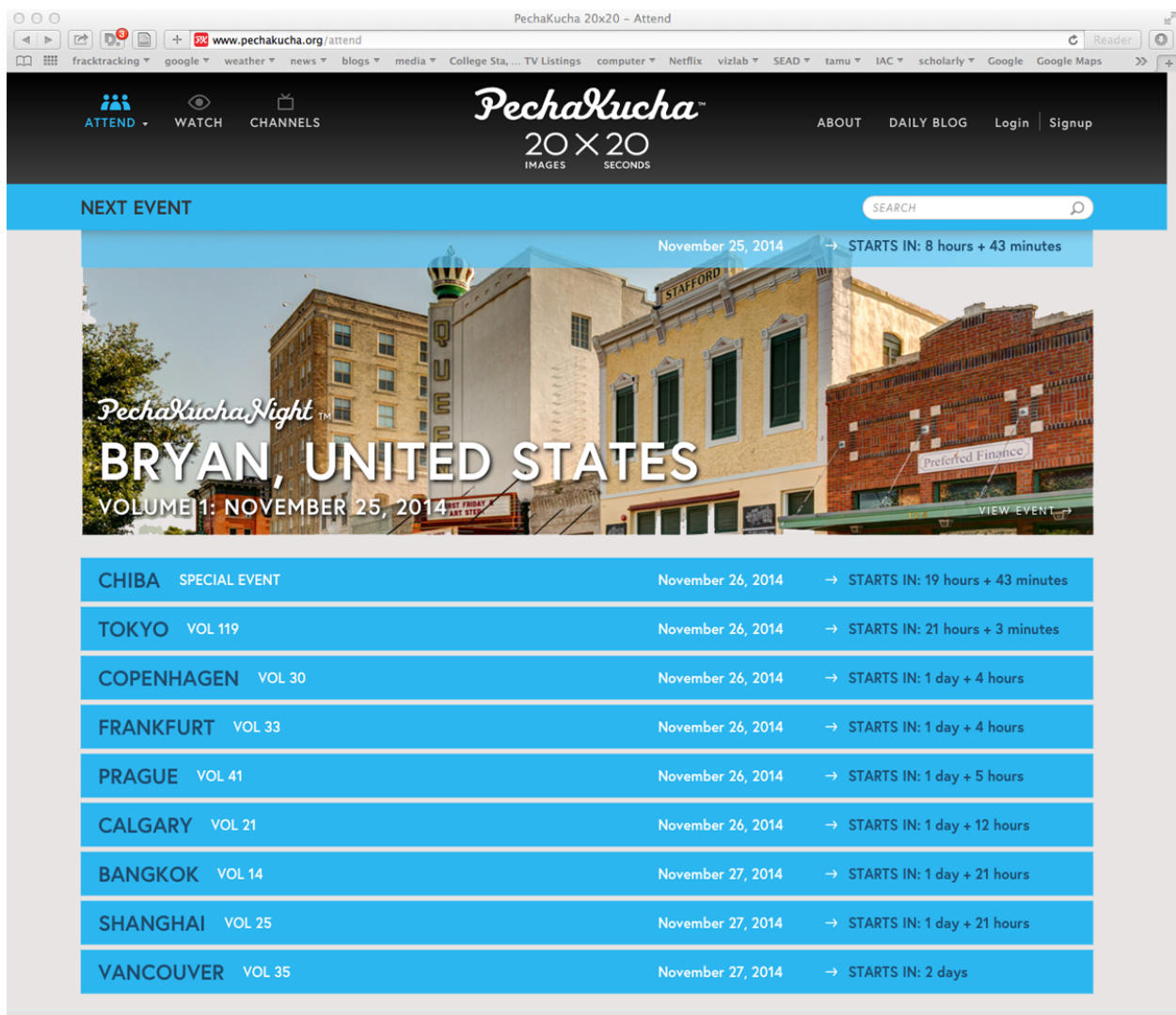
Center for Design Innovation, University of North Carolina

Center for Research in Computing and the Arts at UC San Diego

Center for Research in Electronic Art Technology (CREATE) , UC Santa Barbara

Cultural Research in Technology Group at Indiana University

Duke Institute for Brain Science, at Duke University



Inaugural Pecha Kucha event in Bryan featured on the global website.

- FX Palo Alto Laboratory, Inc. (FXPAL)
- Games and Playable Media, UC Santa Cruz
- Herberger Institute for Design and the Arts, Arizona State University
- High-Low Tech, a research group at the MIT Media Lab
- Illinois eDREAM Institute (Emerging Digital Research and Education in Arts Media Institute)
- Institute where Creativity Empowers Education Success (ICEE), Texas
- Leonardo/The International Society for the Arts, Sciences and Technology
- Maryland Institute College of Art
- The National Center for Supercomputing Applications (NCSA), U. Illinois Urbana-Champaign
- Parsons New School For Design
- Rensselaer Polytechnic Institute
- Rhode Island School of Design
- The School of the Art Institute of Chicago
- School of Arts, Media and Engineering, at Arizona State University

SEAD network

International network for Sciences, Engineering, Arts, and Design

TXHATS

Texas consortium of centers and institutes for Humanities, Arts, Technology, and Sciences

Fellows and affiliates

Dr. Hwaryoung Seo, Visualization: assistance with TOP grant (awarded to Seo), NSF full proposal and Honda Corporation (not awarded); partnering on several demonstrations and events as described above; visioning for the IAC

André Thomas, LiveLab: Invitation to collaborate on Keck Futures initiative with subsequent seed grant awarded to Thomas and team; assistance with game jams; assistance with full proposal to NSF (not awarded); visioning for the IAC

Dr. Mardelle Shepley, Professor, Architecture, Cornell University: Guest lectures to classes on subjects related to art and science; visioning for the IAC

Dr. Francis Quek: Partial assistance with NSF proposal (awarded to Dr. Quek)

Jose Quintana: Assistance with SEAD initiatives in downtown Bryan; partnering on quarterly Pecha Kucha Bryan nights with Pecha Kucha international; visioning for the IAC

Dr. Rodney Hill, Architecture: IAC Senior Advisor; partnering on Harold Adams Interdisciplinary Competition; networking, consultation, and referrals; visioning for the IAC

Dr. Zofia Rybkowski, Associate Professor Construction Science: partnering on Harold Adams Interdisciplinary Competition; visioning for the IAC

Dr. Ergun Akleman, Professor, Visualization: Partnering on rubric to assess faculty for promotion and tenure in cross-disciplinary programs.

Dr. Geoffrey Booth, Associate Professor, Landscape Architecture and Urban Planning: Participation in Leadership Initiative for the college led by Architecture alumni; visioning for the IAC

Dr. Stephen Caffey, Architecture: Partnering on proposal for “community building building” in downtown Bryan; visioning for the IAC.

Dr. Cecilia Giusti, Landscape Architecture and Urban Planning: Partnering on diversity initiatives; visioning for the IAC

Dr. Kirk Hamilton, Professor, Architecture: Visioning for the IAC

Dr. Frederic Parke, Professor, Visualization: Collaboration on MicroSoft HoloLens project proposal and development; visioning for the IAC

William Jenks, Assistant Department Head, Visualization: Visioning for the IAC; partnering on proposal for “community building building” in downtown Bryan; visioning for the IAC

Howard Eilers, Visualization: Visioning for the IAC

Cassidy Barton, AdventGX, Bryan: Visioning for the IAC

IAC mission for the next 5 years

We aspire to build a new layer of networked knowledge and learning on our campus and provide a model for other universities, to shape the future of transformative, 21st Century knowledge and creativity.

Recent dialog about transdisciplinary engagement has catalyzed a national movement and has generated strong interest across academic, government, business, and civic stakeholders. About ten years ago, the MacArthur Foundation helped to create the field of Digital Humanities with multi-year, multimillion dollar funding. In the past three years, the Mellon Foundation has awarded over \$4 million to catalyze intersections of the arts with research in higher education. The Keck Foundation awarded \$1 million in seed funding for projects with SEAD intersections. This demonstrates that the integration of the arts with STEM fields is of growing national importance. The IAC serves as an aggregator and amplifier for a shift in learning and scholarship already taking place and impacting learning and education; community and cultural growth; and research and creative work. This shift toward multi-, trans-, and cross-disciplinary engagement is fueled by industry, by the economy, and by rapid changes in our technology and tools.

The integration of arts and humanities with STEM will likely take a different form from that of the field of Digital Humanities. The IAC aims to be proactive in the process as this moves forward, to contribute to positive change based on the foundational exemplar of hybridity the Department of Visualization represents.

Goals and objectives

Goal 1: Transformational discovery and innovation

Improve systems of support for research and creative work that engage the arts and design with other disciplines.

Objective 1: For people and products to achieve innovative impact, support systems need to be optimized. We will build processes and networks that nurture the work of artists and designers actively collaborating with other disciplines. There is a growing need for development of new models and measures to assess innovations arising from SEAD learning and research.

Value to Texas A&M

Potential partners include private foundations, landowners of Texas; state policy makers; state and local businesses; agencies; and other stakeholders supporting aspects of each initiative. We can deliver project development and increased collaboration among centers and departments in Architecture, among other colleges and research units at Texas A&M, and at other institutions in Texas and beyond.

Indicators of success:

- Movement toward action and change in educational structures and policies that support intersections of the arts and design with other fields on campus
- Increased quality of and capacity for blended federal agency, private, and business support
- Development and peer acceptance of new research measures related to innovation

Goal 2: Transformational learning and education

Assist a diverse population of students to invent their own futures.

Today's jobs aren't the jobs our students train for: they will disappear. A focus on the future will instill the creativity necessary for students to invent careers. The IAC can assist students in learning how to learn through the lifetime. Team science has shown that diverse teams are more innovative and productive. Diversity is a component of decision making in hiring, partnering, and collaborating.

Objective 2: Create a learning network for Hispanic students in border regions of Texas to partner with our former students in industry (such as Disney, DreamWorks, and Electronic Arts).

Value to Texas A&M

Multidisciplinary visual and interactive computing possibilities created by fields such as Visualization are rapidly expanding in the medical, engineering, and entertainment industries, generating new jobs that demand richer perspectives from people of all backgrounds for creative success. At the same time, there is a growing need and opportunity for those largely underrepresented in tech, notably Hispanics, to make their mark in these fields. In partnership with industry leaders from companies such as Electronic Arts and Walt Disney Animation, Texas A&M University's Department of Visualization and Institute for Applied Creativity will create a pathway from middle school to the STEM degree and potential careers through 1) middle school curriculum involving teacher professional development; 2) in-school visits and youth tech summer camps; 3) a personal and virtual support network; and 4) dissemination of the

model to professional societies and other communities. By focusing these efforts on some of the poorest regions of the U.S. along the Texas-Mexico border, we aim to increase accessibility to opportunities in higher education and tech careers, with the expectation of disseminating an articulated model for other communities to adopt.

Indicators of success:

- Increased participation by border communities, industry, and former students (new voices, less likely participants engaged)
- Local economic improvement over time
- Growth in articulations with K12, high schools, businesses, and Texas A&M (curricula and certifications)
- Uptake by other institutions and groups over time

Goal 3: Transformational impact

Build public awareness of the need for SEAD through demonstration, outreach, and dissemination.

The IAC will leverage the NASEM report and showcase exemplar work to expand public awareness of the potential for productive SEAD intersections.

Objective 3: Generate public forums, exhibitions, and other events that focus on aspects of collaboration, innovation, and imagination.

Value to Texas A&M

Through disseminating the work of collaborators across disciplines, we make tangible the innovative potential of integrated thinking, learning, and making. Through this, we catalyze and spark creative, new approaches to complex challenges.

“Over the past few decades a growing tension between the broad and integrated education commonly referred to as liberal education and the increasing specialization in higher education as individual disciplines and administrative structures drive a fragmentation of curricula. This tension between broad, integrated education and specialized, disciplinary studies has heightened during periods of economic challenge, particularly since the Great Recession that began in 2008. Ironically, as this movement toward narrower, disciplinary education has progressed inexorably, many employers—even, and, in fact, especially in “high tech” areas—have emphasized that learning outcomes associated with integrated education, such as critical thinking, communication, teamwork, and abilities for lifelong learning, are more, not less, desirable. Integration outcomes reported include increased critical thinking abilities, higher-order thinking and deeper learning, content mastery, problem solving, teamwork and communication skills, improved visuospatial reasoning, and general engagement and enjoyment of learning.”

— David Skorton and Ashley Baer, eds., *The Integration of the Humanities and Arts with Sciences, Engineering, and Medicine in Higher Education: Branches from the Same Tree* (Washington DC: National Academies Press, 2018)

Indicators of success:

- Change in public and campus awareness and understanding of the need for SEAD intersections
- Shifts in thinking and attitudes about multidisciplinary engagement
- Increased media coverage and representation of dialog

Challenges to future success

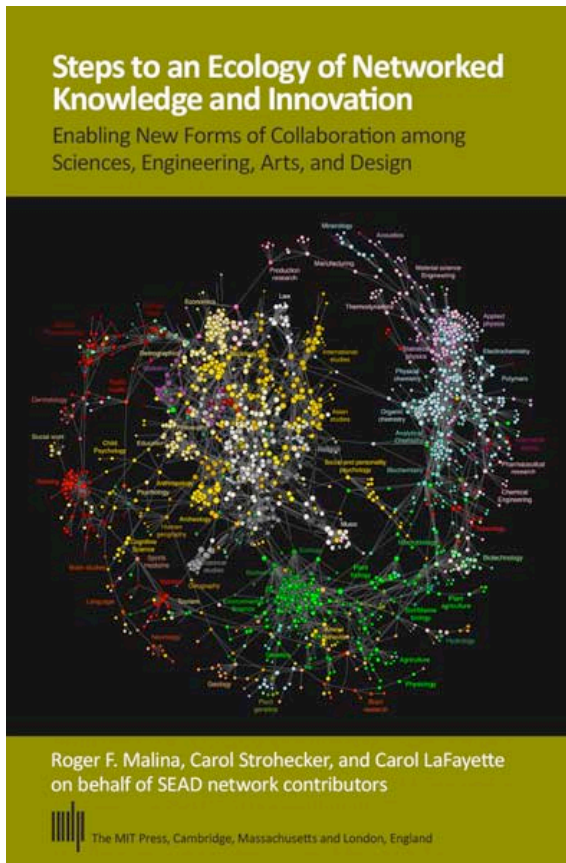
The most pressing challenge the IAC faces is that of the time needed to not only invent but also to develop robust engagement across various stakeholders, while building capacity and disseminating the results. Much of our work in the past five years has resulted in national and local impacts and dialog; future work must be devoted to developing cross-sector support on the Texas A&M Campus. Like other centers and institutes in the college, the IAC would greatly benefit from tangible incentives for faculty participation as Fellows or collaborators.

IAC 2012-2018 Report, Appendix A: Resources								
2012 - 2013								
Resource	Partners	Amount	Federal	Bus & other U's	Private	CARC / CRIC	VIZ	Cost share Internal
NSF IIS, CISE: SEAD network. \$190,000 of \$280,000 collaborative award.	National network for Sciences, Engineering, Arts, and Design (about 350 persons internationally)	175,243	175,243					
OPAS anniversary exhibition	Stephanie Sale	3,000			3,000			
RCN CE3SAR project Corpus Christi A&M	Dean Vanegas	5000						5000
CRIC		10,260				10,260		
Viz course releases		9,314					9,314	
Staff salary		24,011				24,011		
Summer pay for Director			14,757					
NSF indirect			6,325					
Not funded								
A&M Capital campaign "Community building building"	IAC faculty, CHUD, \$50,0000	400						400
ArtPlace America NEA	AdventGX, \$400,000.							
STEAM proposal	Dean Vanegas and angel investor, \$148,100							
2012 - 2013 Subtotal		227,228						
2014-2015								
Resource	Partners							
From the Bowseat Foundation	Linda Cabot	6,000			6,000			
USA Science & Engineering Festival, Washington DC	Hwaryoung Seo, IAC, CARC, Visualization	12,000				3,000	3,000	
Texas Sea Grant partnership	CARC; Texas Sea Grant Mona Behl; Visualization, CARC	4,000				1,000	500	2,500
SEC-U Symposium, Atlanta GA	Office of the Provost	3,000						3,000
Pecha Kucha Bryan (since 2012)	Klein Dytham Architecture, Tokyo; AdventGX	2,300			2,300			
Creativity in the Arts and Sciences, juror and presenter (invited)	L. Lavelli, Dean of Arts and Sciences, with McKnight Brain Institute, University of Florida	2,000		2,000				
NSF ENG IUSE Ideas Lab. Ideas Lab - Undergraduate STEM Education. Alexandria, Virginia.	NSF Engineering	1,500	1,500					
STEAM Connect, Qualcomm Inc., San Diego	STEAMConnect organization; Qualcomm	1,000		1,000				
Science and Technology Math Teachers Imperative conference, Milwaukee	American Association of Land Grant Institutions	1,000		1,000				
Community Building Video for Capital Campaign	Van Zandt, Caffey, Jenks, Booth	400						400

Conference on Art and Science, Engineering, and Medicine Frontier Collaborations: Ideation, Translation & Realization	Keck Futures Conference, National Academies, Irvine, CA.	3000			3000			
a2ru workshop, Carnegie Mellon	L. Baefsky a2ru.org	1500		1500				
Theo Jansen, international artist/scientist, full day visit, 2 lectures, student meetings	CARC; Physics; Harold Adams	12000				4000	4000	1000
National Academies of Science, National Keck Futures Initiative	Keck Foundation; A. Thomas	15,700			15,700			
A&M TOP Grant "Creative Anatomy Collective"	Hwaryoung Seo, \$200,000							
CRIC		10,260				10,260		
Viz course releases		31,024					31,024	
Staff salary		24,009				24,009		
Summer pay for Director		9,560				9,560		
Proposals not funded	Partners							
A&M Research Development Fund: 4D Hub	23 faculty researchers from 10 different colleges across campus, \$1,263,040							
ArtPlace America 2nd proposal	AdventGX, \$400,000							
A&M Capital Campaign proposal: Research Community Incubator	S. Caffey, S. Van Zandt, W. Jenks, C. Giusti, \$84,7000							
NEH: "Women Transforming Art and Science"	SEAD network and Moore College of Art and Design, Philadelphia, Roy Wilbur and faculty, \$9,186							
VentureWell: "Community Innovation Ecosystem"	AdventGX, \$50,000							
NSF - IUSE: Full proposal as a result of NSF Ideas Lab on Undergraduate STEM Education: "Improving Undergraduate STEM Education: Building Community Into Engineering Education"	J. Stroebel, Engineering; . Cooper TTC, \$1,225,000							
NEH: "Steps to an Ecology of Networked Knowledge and Innovation: Enabling new Forms of Collaboration Among Sciences, Engineering, Arts, and Design"	C. Strohecker RISD; R. Malina UTD, \$98,425							
NSF: "Affordable, Mobile, Service Platform for Remote Feral Hog Surveillance and Citizen Driven Mapping"	J. Quintana/AdventGX, \$656,672							
DARPA / NEA (invited): Creativity engine methodology	W. Klemm, Neuroscience, \$52,4308							
Honda Corporation: Intergenerational STEM Education + Creativity	H. Seo, Visualization, \$5,4892							
DOD-Navy-Office of Naval Research: Educating High School Students on Naval Technology Capabilities	A. Thomas, Visualization, \$400,000.							
NSF: Center for the Research on Learning Games	A. Thomas, Visualization, \$2,0501,866							
2014-2016 Subtotal		140,253						

2016-2018								
Resource	Partners							
Harold L. Adams Professorship	Harold L. Adams	13,000			13,000			
Bioinnovation Fellow, with BioEngineering	B. Haridas, BioEngineering (invited)	10,000						10,000
MicroSoft HoloLens Academic Research	LaFayette/Parke; Microsoft	12,000		12,000				
Partner STEAM project with Texas Target Communities: "Citizen Storytellers"	J. Masterson, J. Cooper, C. LaFayette	7,139						7,139
Visiting artists Anna Dumitriu and Alex May	AVPA	12,000						12,000
CRIC		10,260				10,260		
Staff salary		44,656				44,656		
Viz course releases		23,159						23,159
Summer pay for Director		3,895				3,895		
Proposals not funded								
National Academies Keck Futures Seed Grants: "InterSEAD: Hybrid summer program to support development of early-career professionals"	LaFayette/C. Strohecker, R. Malina, \$100,000							
NEA Creativity Connects: "InterSEAD: Hybrid summer program to support development of early-career professionals"	LaFayette/C. Strohecker, R. Malina \$100,000							
NSF STEM-C Computing Partnerships: "Developing Interactive Arts Integrated Investigation for Elementary Life Sciences Education"	H. Seo, \$1,082,711							
Carnegie Foundation	LaFayette, McLaughlin, \$200,000.							
2016-2018 Subtotal		136,109						
Total 2012-2018		503,590	197,825	17,500	43,000	144,911	70,997	41,439
			Federal	Bus & other U's	Private	CARC / CRIC	VIZ	Cost share Internal

2012-2018 Report, Appendix B: Public Relations and mentions



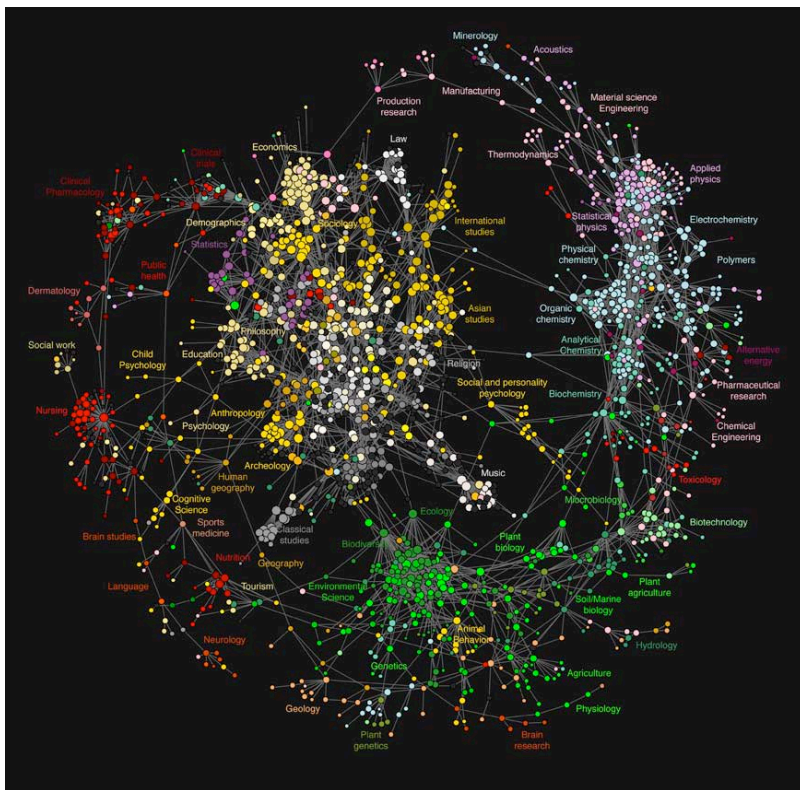
SEAD report published by MIT Press

Steps to an Ecology of Networked Knowledge and Innovation: Enabling New Forms of Collaboration among Sciences, Engineering, Arts, and Design

Roger F. Malina, Carol Strohecker, and Carol LaFayette, on behalf of SEAD network contributors

The Network for Sciences, Engineering, Arts, and Design ([SEAD](#)) has published a creative commons e-book to build community awareness of perceived challenges and opportunities for transdisciplinary collaboration across the breadth of science, engineering, art, design and the humanities. The study takes note of the growing international interest and development of initiatives in universities, corporations and civil society. This synthesis report offers a set of "action clusters" common to texts from the international response by SEAD members. The SEAD White Papers initiative was chaired by Roger Malina and co-chaired by Carol Strohecker, with the assistance of an international Steering Group and coordination by Carol LaFayette and Amy Lone, Managing Editor. The report contains images from SEAD collaborators and links to all White Papers contributions.

Funded under the US National Science Foundation (NSF) Grant No. 1142510. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.



SEAD network

The Network for Sciences, Engineering, Arts and Design ([SEAD](#)), an NSF supported organization, includes professionals and students in the physical, life, and social sciences; mathematics, engineering, and technology; the creative arts in all their forms; designers of all kinds; and researchers across the humanities. SEAD network is united by a vision of the importance and value of research and creative work spanning and joining the arts and sciences. The overarching theme becomes collaboration, as transdisciplinary interests and practices continue to grow and as public discourse increasingly acknowledges the complexity of today's global issues and the need for multiple kinds of expertise in addressing them.

Supported by the National Science Foundation under Grant No.1142510. Above image: Maps of science resulting from large-scale clickstream data provide a detailed, contemporary view of scientific activity and correct the underrepresentation of the social sciences and humanities that is commonly found in citation data. © Johan Bollen. Used with permission. Originally published in Bollen J, Van de Sompel H, Hagberg A, Bettencourt L, Chute R, et al. (2009) Clickstream Data Yields High-Resolution Maps of Science. PLoS ONE 4(3):e4803. doi:10.1371/journal.pone.0004803

BRAZOS VALLEY

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Join PechaKucha Bryan for an Evening of Presentations on Healing



♥ 7

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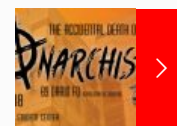
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On March 6 at 7pm, PechaKucha Bryan presents their 14th event, this time featuring a healing theme at the Grand Stafford Theater. **PechaKucha Bryan** is the local chapter of **PechaKucha**, an international organization with more than 1,000 cities worldwide.

PechaKucha Bryan will host speakers Shari Heftel, Lisette Templin, Tristane Nelson, Robin Roberts, and Lou Blinn as they share ways they have experienced successful healing from either physical or emotional trauma in their lives.

Presentations will be delivered using the PechaKucha 20x20 format. PechaKucha 20x20 is a simple presentation format where you show 20 images, each for 20 seconds. The images advance automatically as the speaker talks.





Texas HATS

Texas has become a hub for attracting cross-disciplinary leaders. The IAC and SEAD network are co-coordinating Texas HATS (Humanities, Arts, Technology, and Sciences), a new network, with several institutions including UT Dallas, University of North Texas, and UT Austin. Other organizations and groups, including entrepreneurs, artists, scientists, and business leaders are represented in this growing network. To view results from the latest gathering in Austin, click [here](#). To join Texas HATS, click [here](#).



CAROL LAFAYETTE, JOAN QUINTANA, ZACH THOMAS, CAITLIN GAMBRELL & SETH SHAFER

Big Issues in Art + Science

On Mar. 30, 2016 the **TxHATS** (Humanities, Art, Technology, Science) network gathered in Denton, Tx to initiate conversations across disciplines and exchange new ideas. After a series of presentations of North Texas art + science projects, TxHATS members coalesced around free-forming discussion groups to whiteboard ideas and put solutions on the table.

The TxHATS working groups produced key insights into the art-science community and allowed them to tackle big questions. The discussion begins with the basics – a look at differences in the working practices of scientists and artists – and lands at the heart of issues many communities face today. [Read more](#)



Opening Reception for Spontaneous Symmetry & Sacred Scents Sponsored by the SEAD Gallery and the Institute for Applied Creativity

March 16, 2017

SEAD Gallery, 216 W 26th St, Bryan, Texas 77803

Deanna Ooley and Kate Colin are both lecturers in the College of Visual Arts and Design at the University of North Texas. Ooley's exhibit, "Sacred Scents", is based on science and color theory. The aromatic shrines will be based on plant imagery with some general and Texas plants as the themes. Kate Colin's "Spontaneous Symmetry" is a group of paintings that suggest a twisted theory of everything. She combines the format of world maps and hyperbolic geometry to achieve complexity. This energetic work seeks the unification of structure and nature. [Read more](#)



REGEN: Art & Science Addressing Climate Change

January 5, 2017

In November 2016, the [Land Heritage Institute](#) (LHI) hosted the first reGEN: Art & Science Addressing Climate Change event. reGEN is focused on gathering a diverse group from the region for ongoing collaborations to address regenerative practices. reGEN was envisioned as an annual collaborative event between Texas A&M University-College Station, Texas A&M University-San Antonio, and the Land Heritage Institute. reGEN brings together the public, students, science practitioners, and artists to engage in a productive dialogue about how science, technology, and art can be brought together to address climate change. The intent of reGEN is to move beyond the traditional framework of sustainability and present a platform for regenerative practices, "to turn fallow lands green." The principles outlined in the [Regenerative Development Manifesto](#) inform what the reGEN collaborative seeks to achieve for San Antonio and South Texas. [Read more](#)

eMERGE

a show by ten mfa candidates exploring the relationship between art and technology



Visiting artist
Lynn Palewicz
lynnpalewicz.com

November 5, 2016
12-5 pm
Artists Talks at 3 pm

The Land Heritage Institute
1349 Neal Rd.
San Antonio, TX 78264
210-846-9403

ATM VISUALIZATION TEXAS A&M UNIVERSITY
land heritage institute



art + science addressing climate change
reGEN & eMERGE @ LHI

Ten MFA students from Texas A&M-College Station's Department of Visualization--the very folks who get nabbed by the likes of Pixar and Disney upon graduation--mounted a pop-up exhibition exploring the relationship between art and technology called eMERGE in the big barn at Land Heritage Institute on Saturday, November 5. There were also artist talks and presentations about

Visualization profs NSF-funded STEM-to-STEAM effort prompts Academies to green-light study

04/12/2016

The green-lighting of a National Academies of Sciences, Engineering, and Medicine study investigating the value of integrating arts and humanities into science and technology education is a milestone in the global transdisciplinary education movement, said Carol LaFayette, a visualization professor at Texas A&M University and founder of an advocacy network on the vanguard of the movement.

With initial support from the National Science Foundation, LaFayette created the [Network for Sciences Engineering, Arts & Design](#) (SEAD Network) to advocate for [STEM to STEAM](#) — namely, adding art and design components, the "A," to science, technology, engineering and mathematics (STEM) teaching and learning. [Read more](#)

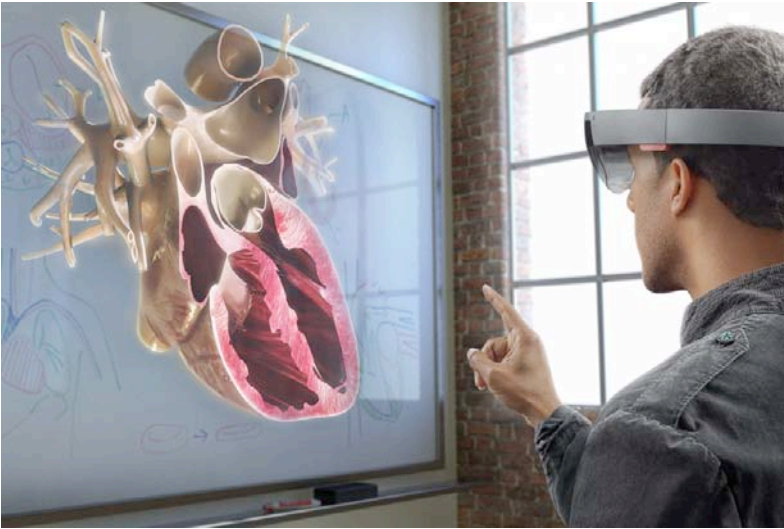


MOORE CONGRATULATES THE CLASS OF 2016!

05/17/2016

Moore's 167th Commencement was held on Sunday, May 15, 2016 under a large tent in Aviator Park, across from the College.

This year, 100 undergraduates received Bachelor's degrees in Animation & Game Arts, Art Education, Art History, Curatorial Studies, Fashion Design, Fine Arts, Graphic Design, Illustration, Interior Design and Photography & Digital Arts during the ceremony. [Read more](#)



Visualization faculty awarded Microsoft HoloLens research grant

Professors Carol LaFayette and Frederic Parke are among 10 academic research teams awarded support for [HoloLens development](#) by Microsoft. They will explore how the Microsoft HoloLens might be augmented to extend human perception into the near ultraviolet light spectrum and into the ultrasound sonic spectrum.

[Read more](#)



Viz profs' visor software could enhance human sight, hearing

12/08/2015

The ability to see and hear beyond the spectrum of human sensitivity could be granted to those who don a Microsoft visor equipped with new software created by Carol LaFayette and Frederick Parke, [visualization](#) faculty members at Texas A&M University.

LaFayette and Parke are using a \$100,000 grant from Microsoft to develop software for the company's new [HoloLens](#), a wireless visor equipped with a computer that renders high-definition holograms and stereo audio. [Read more](#)



IAC Partners with Texas Target Communities to Engage Youth in Initiatives

Two teenage residents of Liberty County, Texas are posting ideas about improving their home county in a multimedia blog, "[Trinity Time Hop](#)," one of a set of ongoing [Texas Target Communities](#) initiatives aimed at helping residents of the rural area northeast of Houston shape their futures. [Read more](#)

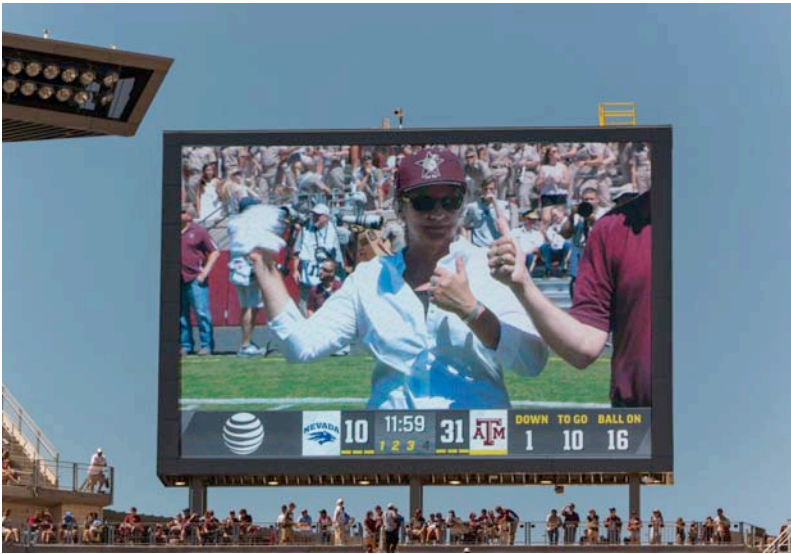


Viz profs joined peers seeking solutions at art-science nexus

09/29/2015

A national event focused on the nexus of art and science attracted influential leaders from both worlds, including Carol LaFayette, a professor of visualization at Texas A&M University, and head of the National Science Foundation's [Network for Sciences, Engineering, Arts and Design](#).

The Conference on Art and Science, Engineering, and Medicine Frontier Collaborations: Ideation, Translation & Realization took place Nov. 11-15, 2015 in Irvine, Calif., at the [National Academies of Sciences, Engineering, and Medicine](#). [Read more](#)



Viz professor Carol LaFayette was recognized at the game for her leadership in Texas A&M's Institute for Applied Creativity.

[09/21/2015](#)



Beach walking-figures' creator to lecture at Texas A&M on Nov. 18

[08/31/2015](#)

Dutch artist Theo Jansen, creator of [Strandbeests](#), gigantic skeletal wind-powered walking mechanical animal sculptures fashioned from PVC pipe and cloth sails, will deliver two lectures Wednesday, Nov. 18 on the Texas A&M College Station campus. [Read more](#)



Real, virtual sculptures created in summer camp co-sponsored by IAC

08/24/2015

Miniature monsters inhabited real and virtual worlds after their creation by high school-age students in a 2015 summer camp co-sponsored by Texas A&M's [Institute for Applied Creativity](#). In the camp, called Sculptures in Augmented Reality, students created clay models from their drawings of monsters, photographed the models from numerous angles, then used software to create a virtual monster from the photos that could be viewed in 3-D on a mobile phone using [Google Cardboard](#), a virtual reality viewer. [Read more](#)



IAC to join SECU event on creativity and innovation

The IAC has been invited to organize an exhibition related to applied creativity for the third-annual [Southeastern Conference \(SEC\) Symposium](#), to be held September 20-22 at the Hyatt Regency Atlanta. This year's event is entitled Creativity, Innovation & Entrepreneurship: Driving a 21st Century Economy. Led by the University of Florida, the 2015 SEC Symposium will focus on the role universities play in preparing students to be entrepreneurial, innovative and creative thinkers and will explore the ways universities impact the economy.



College faculty, staffers reveal creative pursuits at IAC event

03/27/2015

Faculty and staff from the Texas A&M College of Architecture discussed their creative pursuits March 10, 2015 in a unique presentation format at a downtown Bryan event co-sponsored by the [Institute for Applied Creativity](#). [Read more](#)



03/05/2015

When amateur photographer Glen Vigus takes the stage at the Grand Stafford Theater on Tuesday, he'll have exactly six minutes and 40 seconds to drive home his point. Vigus, a professor at Texas A&M University and a photographer with 32 years of experience, will offer a presentation on the history of photography and his experiences in the profession, though he hopes his audience will walk away with conviction on the title "amateur." [Read more](#)



CASE Kickoff Event Featuring David Epstein and Carol LaFayette

The ninth annual Creativity in the Arts and Sciences Event (CASE) will take place at the University of Florida in Gainesville, Florida, on Saturday, Jan. 31, 2015 from 9:30 a.m. until 5 p.m. Presented by the UF Howard Hughes Medical Institute (HHMI) Science for Life Program and UF College of the Arts, CASE features science research posters, 2-D/3-D art exhibits, film, and dance/music/theatre performances. [Read more](#)

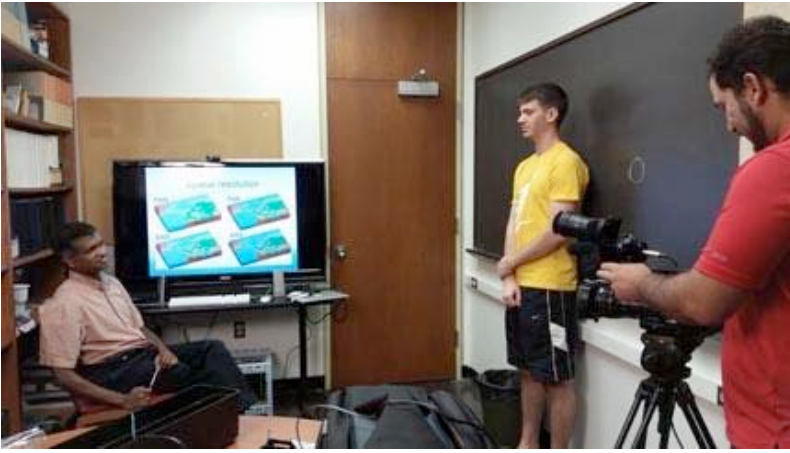


Texas A&M program merges art and science to address climate issues

10/27/2014

Two Texas A&M University programs have partnered to help explain climate change issues facing the state.

The Sea Grant Program at Texas A&M has teamed up with the university's Institute for Applied Creativity to create a semester-long internship position that will use videos to address topics surrounding weather, water and climate change. [Read more](#)



Texas Sea Grant partners with Institute for Applied Creativity to launch visualization internship on climate change

10/17/14

COLLEGE STATION, Texas — The Texas Sea Grant College Program at Texas A&M University (TAMU) has partnered with the university's Institute for Applied Creativity to launch a new internship designed to use visualization to communicate weather, water and climate issues in Texas. [Read more](#)



Downtown Bryan earns cultural badge with help of IAC fellows

10/9/2014

Downtown Bryan's recent designation as a [Texas Cultural District](#) was achieved with the help of community fellows from the [Institute of Applied Creativity](#) at the Texas A&M College of Architecture.

The designation, which is granted by the [Texas Commission on the Arts](#) to urban zones harnessing cultural resources to help generate businesses, attract tourists and foster civic pride, will help the city market and promote downtown events and aid in increasing the area's property values, said Sandy Farris, executive director of the Downtown Bryan Association. [Read more](#)



Visualization students' exhibits promote art, science symbiosis

04/30/2014

Interactive exhibits merging art and science created by Texas A&M visualization students encouraged kids to explore nature, physics, color theory and more at a booth sponsored by the [Institute for Applied Creativity](#) at the April 26-27 [USA Science and Engineering Festival](#) in Washington, DC. [Read more](#)



Creativity institute co-sponsoring ocean pollution exhibit contest

01/28/2014

An all expense-paid trip to the [USA Science & Engineering Festival](#) in Washington D.C., April 25-26, 2014, awaits the winner of a [contest](#), co-sponsored by the [Institute for Applied Creativity](#), to create a festival exhibit informing kids about plastic pollution in the world's oceans.

A rapidly growing mass of trash already twice the size of Texas, weighing 3.5 million tons and consisting mostly of plastic, is floating in the Pacific Ocean; giant trash heaps like it can now be found in all the world's oceans. Sea animals, mistaking the plastic for prey, starve to death because their stomachs become filled with undigestible plastic. [Read more](#)

Movement to integrate science, art education gathering STEAM

09/18/2013

A remarkably diverse coalition including national science, arts and education groups assembled by Carol LaFayette, associate professor of visualization at Texas A&M, is advocating for the inclusion of the arts in science and technical education, an idea gaining traction among educators across the United States.

“Artists approach problem solving differently than scientists do,” said LaFayette, who heads the [Network for Sciences, Engineering, Arts and Design](#) on behalf of the National Science Foundation. [Read more](#)

Teacher workshop eyed melding arts with math, science curricula

02/01/2013

Texas educators in grades K-12 gathered to develop curricula incorporating the arts and creative thinking into science, technology engineering and math (STEM) classes during a March 9-10 workshop hosted by Texas A&M’s [Institute for Applied Creativity](#).

The workshop, which took place in the Langford Architecture Center on the Texas A&M campus, was part of a nationwide, National Science Foundation-funded [effort](#) headed by Carol Lafayette, associate professor of visualization, to advance the STEM to STEAM movement — the inclusion of art and creative thinking in curricula of STEM disciplines. [Read more](#)

Lafayette, collaborators shaping creativity institute at Texas A&M

10/12/2012

An institute promoting the study and application of creativity and innovative thinking across colleges and disciplines at Texas A&M and throughout a network of academic, corporate, community, and nonprofit partners is under development at the College of Architecture.

“The [Institute of Applied Creativity](#) is interested in developing context-specific methodologies of creativity, meaning it's not ‘one size fits all,’ by establishing communication and collaboration opportunities between groups traditionally operating in separate arenas,” said institute director Carol LaFayette. [Read more](#)