

# **Education Committee Directory**2017

**Research Centers and Programs** 

## **Table of Contents**

Australia: Perth	<u>3</u> - <u>4</u>
Canada:  Halifax, St. John's	<u>5</u> - <u>8</u>
China:	<u>9</u> - <u>11</u>
Denmark: Esbjerg	
Norway:  Stavanger	<u>13</u> - <u>14</u>
South Africa: Cape Town	<u>15</u> - <u>16</u>
United Kingdom:	<u>16</u> - <u>17</u>
United States: Houston	<u>17</u> -21

#### **Australia**

#### **Perth**

#### Australian Resources Research Centre (ARRC)

Email: reception-arrc@csiro.au

Website: <a href="http://www.arrc.net.au/">http://www.arrc.net.au/</a>

Description: ARRC is situated less than 6km from the Perth central business district, in the heart of Western Australia's premier research and development showcase, Technology Park. ARRC is a leading research facility for the minerals and energy industries. ARRC is a hub where scientists can interact, exchange information and explore new ideas in partnership with industry, universities, government and the community to ensure the ongoing sustainability of our resources industries, our environment and our way of life.

#### **Cisco Innovation Central**

**Contact:** Tom Goerke - Director

Email: tgoerke@cisco.com

Website: <a href="https://research.curtin.edu.au/projects-expertise/institutes-centres/">https://research.curtin.edu.au/projects-expertise/institutes-centres/</a>

innovation-central-perth/

Description: Innovation Central is about bringing together small-to-medium enterprises, corporates, researchers and government to combat business challenges with innovative tech solutions for multiple industries including; agriculture, astronomy, resources and smart technology. This Cisco-led collaboration works with partners all over Australia such as, Curtin University, Woodside, CSIRO Data61, New South Wales Farmers, NSW Department of Industries and the University of New South Wales to provide access to technological expertise, development equipment, investment funds, joint marketing and rapid prototyping. The Centre also offers a dedicated space where customers, open communities, researchers and tech enthusiasts are invited to work and brainstorm on new ideas and technologies.

Page 3

#### Harry Perkins Institute of Medical Research

Contact: Emma Stone - Development & Strategic Projects Manager

Website: <a href="https://www.perkins.org.au/">https://www.perkins.org.au/</a>

**Description:** Since 1998, the Perkins has grown to become one of the nation's leading adult medical research centres, where a close-knit team of more than 250 work together to defeat the major diseases that impact our community.

With two new state-of-the-art research facilities, co-located with the major teaching hospitals, the Perkins is creating a culture of innovation and collaboration to deliver better patient outcomes faster.

Through our clinical trials facility, Linear Clinical Research Ltd, we work with medical innovators from around the world to test and optimise pioneering treatments and drugs – innovations with the potential to change and save lives.

We believe that when you put world class scientists, doctors and researchers together in modern facilities, purpose built to encourage collaboration, amazing things happen.

While we conduct research into a range of diseases we focus on:

- Cardiovascular disease
- Cancer and
- Diabetes

#### **MRIWA**

Contact: Mark Woffenden - CEO

Email: mark.woffenden@mriwa.wa.gov.au

Website: <a href="http://www.mriwa.wa.gov.au/">http://www.mriwa.wa.gov.au/</a>

**Description:** The Minerals Research Institute of Western Australia (MRIWA) is a statutory body established by the Western Australian Government under the Minerals Research Institute of Western Australia Act 2013 to stimulate minerals research to support investment in, and operation of, a globally competitive minerals industry in Western Australia.

MRIWA's primary function is to provide and administer funding grants to carry out minerals research. The Institute is able to collaborate with local, Australian and worldwide research and scientific institutions and is also able to undertake and procure minerals research itself.

As well as directly supporting minerals research projects, MRIWA funds are available for projects, programs and events that promote public awareness of, and interest in, minerals research, and to support related academic activities.

MRIWA has a scholarships program for PhD candidates and for final year students' Honours projects, where the field of study is relevant to the MRIWA objectives as detailed in its Research Priority Plan.

The expertise of MRIWA is available to the State Minister and the WA Government to foster and promote minerals research for the benefit of the Western Australia.

#### National Energy Resources Australia (NERA)

Contact: Miranda Taylor - Chief Executive Officer

Email: miranda.taylor@nera.org.au

Website: <a href="http://www.nera.org.au/">http://www.nera.org.au/</a>

**Description:** NERA is an Industry Growth Centre established under the Australian Government's Innovation and Competitiveness Agenda with a focus on the energy resources sector. NERA supports sector-wide transformational change and the development of a smart, high value, digital and export-focussed supply chain. NERA helps achieve this by directing research to industry needs, identifying future work skills and transition pathways and promoting regulation that supports innovation and growth while giving the community confidence that industry is accountable for high standards.

#### Perron Institute for Neurological and Translational Science

Contact: Steve Arnott - Chief Executive Officer

Email: info@perron.uwa.edu.au

Website: <a href="https://perroninstitute.org/">https://perroninstitute.org/</a>

**Description:** The Perron Institute for Neurological and Translational Science (formerly the Western Australian Neuroscience Research Institute – WANRI) is Western Australia's longest established medical research institute. One of our special strengths is the depth of links between the institute's laboratory research and its 15 specialist clinics. We undertake cutting edge research on a broad spectrum of conditions including stroke, Parkinson's, muscular dystrophy and multiple sclerosis. This multidisciplinary approach enables us to translate research outcomes into treatments aimed at providing a better quality of life for millions of people around the world who suffer with devastating neurological conditions.

#### Western Australia Energy Research Alliance (WA:ERA)

Contact: Inna Donaldson

Email: inna.donaldson@waera.com.au

Website: <a href="http://www.waera.com.au/">http://www.waera.com.au/</a>

**Description:** The Western Australian Energy Research Alliance (WA:ERA) delivers direct access to a critical mass of leading researchers actively addressing industry research challenges with world-class resources. WA:ERA research focus includes innovative research on LNG, Carbon Capture & Storage, Hydrocarbon Exploration and Production technologies.

#### Canada

#### **Halifax**

#### **Bedford Institute**

Contact: Alain Vézina - Regional Director, Science

Email: webmasterBIO-IOB@dfo-mpo.gc.ca

Website: <a href="http://www.bio.gc.ca/index-en.php">http://www.bio.gc.ca/index-en.php</a>

Description: BIO is a modern oceanographic research facility, established in 1962 by the Federal Government of Canada and is located on the shores of the Bedford Basin in Halifax, Nova Scotia. Over the last 50 years it has grown to become Canada's largest center for ocean research. The Institute performs targeted research, mandated by the Canadian government, to provide 'peer' reviewed advice and support to government decision making on a broad range of ocean issues, including sovereignty, safety and security, environmental protection, the health of the oceans, safe and accessible waterways, the sustainable use of natural resources (fisheries, minerals, oil & gas) and the integrated management large ocean management areas.

## Fundy Ocean Research Centre for Energy (FORCE) Labs

Contact: Lindsay Bennett - Operations Manager

Email: <a href="mailto:lindsay.bennett@fundyforce.ca">lindsay.bennett@fundyforce.ca</a>

Website: <a href="http://fundyforce.ca/">http://fundyforce.ca/</a>

**Description:** FORCE is Canada's leading test center for in-stream tidal energy technology. FORCE works with developers, regulators, and researchers to study the potential for tidal turbines to operate within the Bay of Fundy environment. FORCE provides a shared observation facility, submarine cables, grid connection, and environmental monitoring at its pre-approved test site. FORCE receives funding support from the Government of Canada, the Province of Nova Scotia, Encana Corporation, and participating developers.

## Halifax (continued)

### Geological Survey of Canada (Atlantic)

**Contact:** Stephen Locke - Director

Email: webmasterBIO-IOB@dfo-mpo.gc.ca

Website: <a href="http://www.nrcan.gc.ca/earth-sciences">http://www.nrcan.gc.ca/earth-sciences</a>

Description: As Canada's foremost geomatics and geoscience organization, NRCan provides public geoscientific and geospatial expertise, knowledge and technology to support environmental, social and economic objectives of the federal government. This knowledge is used to strengthen Canada's understanding, stewardship and sovereignty of its landmass and natural resources and helps to build a competitive advantage for its related economic sectors. Not only does it rely on its in-depth science and technology expertise, Earth Sciences programs and services in NRCan also leverage federal / provincial / territorial and academic partnerships to effectively support its mandate and legislated responsibilities.

#### St. John's

#### College of the North Atlantic - Office of Applied Research

Contact: Mohammad Iqbal - Chair of Applied Research

Email: ar@cna.nl.ca

Website: <a href="http://www.cna.nl.ca/Research-And-Innovation/">http://www.cna.nl.ca/Research-And-Innovation/</a>

**Description:** Office serves as one of the college's main points of contact for industry, government, and community groups interested in research collaborations and outreach activities. Offers a research environment that is both intimate and expansive, one in which faculty are engaged in innovative ideas that, in some cases, are locally focused, while others have global reach and many are interdisciplinary in nature.

## St. John's (continued)

#### **Memorial University of Newfoundland**

Contact: Dr. Ray Gosine - Vice-President (Research) Pro Tempore

Email: vp.research@mun.ca

Website: <a href="http://www.mun.ca/research/">http://www.mun.ca/research/</a>

**Description:** Memorial University has a vibrant culture of creativity and innovation that is reflected in the research activities of our scholars and researchers. Memorial is recognized for its rich record of engagement with community partners and research collaborators, in Newfoundland and Labrador and around the world.

## National Research Council - Ocean, Coastal and River Engineering (NRC/OCRE)

**Contact:** Terry Lindstrom - General Manager

Email: Terry.Lindstrom@nrc-cnrc.gc.ca

Website: <a href="http://www.nrc-cnrc.gc.ca/eng/rd/ocre">http://www.nrc-cnrc.gc.ca/eng/rd/ocre</a>

**Description:** NRC Ocean, Coastal and River Engineering (NRC OCRE) supports a broad cross section of industry sectors by developing creative and practical solutions to engineering challenges in rivers, lakes and marine environments. NRC OCRE offers specialized consulting and applied research services in ocean engineering, coastal engineering, solutions for water resources management, marine safety standards and technologies, as well as marine renewable energy assessments and technology.

## St. John's (continued)

#### Petroleum Research Newfoundland and Labrador

Contact: David Finn - COO

Email: dave.finn@petroleumresearch.ca

Website: <a href="http://www.pr-ac.ca/">http://www.pr-ac.ca/</a>

Description: Research facilitation and management for Newfoundland and Labrador's offshore industry. Petroleum Research is a federally-incorporated, not-for-profit organization that facilitates and funds research and development on behalf of Newfoundland and Labrador's offshore oil and gas industry. Petroleum Research is a member-based organization that identifies research and technology development opportunities that deliver value to its oil and gas industry participants.

## Research & Development Corporation of Newfoundland and Labrador

Contact: Mark Ploughman - Acting Chief Executive Officer

Email: info@rdc.org

Website: <a href="http://www.rdc.org/">http://www.rdc.org/</a>

**Description:** RDC is a provincial Crown Corporation established to strengthen the focus, quantity, quality, and relevance of R&D for the long-term economic benefit of Newfoundland and Labrador. RDC invests in projects that support highly-qualified people, world-class infrastructure and cutting-edge research. RDC delivers applied R&D services needed by businesses, to help them solve their technical challenges right here in Newfoundland and Labrador. To maximize the economic impact of investments, RDC targets the priority sectors of energy, mining/minerals and ocean technology given the province's competitive advantages in those sectors, while also investing in projects in other sectors that will deliver a positive economic impact.

## China

## **Dongying**

## Drilling Technology Institute of Shengli Oilfield Administration Bureau

Contact: Xunlian Zhang - Chief

Email: zjy@sldrilling.com

Website: <a href="http://zjysldrilling.xiaomi001.com/">http://zjysldrilling.xiaomi001.com/</a>

**Description:** It is a multidisciplinary and cross-field institute of petroleum engineering covering comprehensive research, technological service and Pilot Scale Production. It provides research and application service of new procedure, new technology and new equipment for land and offshore petroleum exploration and development of Shengli Oilfield and Sinopec Group. The institute consists of 12 research institutions including drilling technology study institution and drilling engineering design institution, etc.

## Petroleum Engineering Technology Research Institute of Shengli Oilfield Branch Office

Contact: Zhanli Tang - Chief

Email: dywqb\_8331265@126.com

Description: Petroleum Engineering Technology Research Institute of Shengli Oilfield Branch Office (hereafter referred to as the Institute) is mainly responsible for developing new technologies, integrating and applying leading technologies, hammering out major capacity construction plans and reviewing designing plans about drilling, logging and surface injection, thus an important technology headquarter of Shengli Oilfield exploration, a key research institute of the Group, the sub-center of Shengli Oilfield postdoctoral research center and joint graduates training base of China University of Petroleum (Huadong). The Institute has 7 departments, 3 unites under direct administration of the Institute, 24 section-level units and 6 fourth-class-level units.

## **Dongying (continued)**

## Sinopec Group Shengli Oilfield Exploration and Development Research Institute

Contact: Panfeng Chen - Deputy Director

Email: dywqb\_8331265@126.com

Description: Sinopec Group Shengli Oilfield Exploration and Development Research Institutes mainly responsible for major projects and new technology breakthrough of Sinopec Group Shengli Oilfield, compiling plans related with oil and gas field exploration and new and old capacity construction and testing and analyzing oil, water, gas and the rock of the oilfield. The Institute is a key research institute of the Group combing exploration and exploitation. The institute has established the National Energy Shale Oil Research Center, Sinopec Group Recovery Efficiency Center, China Petroleum and Geology Data Center, Shandong Recovery Efficiency Research Center, Shandong Taishan Program, two key labs of improving oil recovery and exploring shale oil and other six key labs of sedimentation simulation and reservoir evaluation, hydrocarbon accumulation and geo-science, chemical flooding, gas flooding, percolation mechanism of oil and gas reservoir and oil and gas layer protection.

#### Karamay

#### Division of State Key Laboratory of Heavy Oil Processing

Contact: Xudong Sun - Vice Principal

Email: sxudong@cup.edu.cn

Website: www.heavyoil.cn

Description: Established in 1995, CUPB's State Key Laboratory of Heavy Oil Processing is presently China's only key lab on the state level that mainly does researches on heavy oil. In the past two decades, its researches have been focusing on the following three directions: heavy oil chemistry, heavy oil conversion by catalyst, heavy oil conversion by technology and engineering. In recent five years, the Lab has been granted 4 National Progress Awards in Science and Technology, issued over 300 invention patents, published 12 professional books, and over 1,800 papers.

## Division of State Key Laboratory of Petroleum Resources and Prospecting

**Contact:** Xudong Sun - Vice Principal

Email: sxudong@cup.edu.cn

Website: <a href="http://www.cup.edu.cn/prplab/">http://www.cup.edu.cn/prplab/</a>

**Description:** Established in 2007, CUPB's State Key Laboratory of Petroleum Resources and Prospecting mainly focuses its researches on 5 directions: basin evolution and the distribution of oil-gas resources, the principle of reservoir forming, oil-gas geophysics, the theory and technology of oil-gas drilling, the theories and methods of well logging. In recent years, the Laboratory has been granted 11 National Progress Awards in Science and Technology, including first and second prizes, 13 first prizes for progress in Science and Technology on the provincial and ministerial level, etc. Occupying an area of over 4,000 square meters, the Lab is featured with its 80 million CNY apparatus and facilities, including the self-developed large-scale simulation systems and introduced large-scale precise instruments.

#### Denmark

## **Esbjerg**

## Aalborg University, Department of Energy Technology, Oil & Gas, OES program including DHRTC projects

Contact: Jens Bo Holm-Nielsen - Section Head

Zhen Yu Yang - Program Manager

Email: jhn@et.aau.dk

Yang@et.aau.dk

Website: www.et.aau.dk

**Description:** Department of Energy have more than 25 years of experience. The working fields are mainly into Renewable Energy Systems and Energy efficiency and savings. Power Electronics is one of the leading competences. Oil and Gas R&D is a new subject area to do advanced studies in optimization, control and communication of all data at exixting oil fields. We are open for project cooperation with partners from WECP areas! collaboration with the industry corporates who assist with branch knowledge and mentoring throughout the program period. Companies has to apply to participate and will go through a process of lean canvas and selection board before the 10 most potential business are selected for the program. Program period is 1. February to 1. July.

## Norway

#### Stavanger

Corec

Contact: Ying Guo

Email: corec@iris.no

Website: <a href="http://www.corec.no/home">http://www.corec.no/home</a>

**Description:** COREC, Center of Oil Recovery, was initiated by ConocoPhillips, IRIS and the University of Stavanger in 2003. The overall goal was to increase the oil recovery and the national improved oil recovery competence through extensive research, competence building and education of new students. COREC contributes in building Norway's fifth University, the University of Stavanger.

#### IRIS/ University of Stavanger, Drillwell

Contact: Sigmund Stokka - Manager

Email: sigmund.stokka@iris.no

Website: <a href="http://drillwell.no/home">http://drillwell.no/home</a>

**Description:** DrillWell (The Drilling and Well Centre for Improved Recovery) was established in 2010 and received status as a Centre for Research Based Innovation (SFI) from the Research Council of Norway in 2011. DrillWell's objective is to improve drilling and well technology, providing improved safety for people and the environment, and value creation through better resource development, improved operational efficiency and reduced costs.

## Stavanger (continued)

## University of Stavanger, National center for increased oil recovery

Contact: Merete Vadla Madland - Director

Email: merete.v.madland@uis.no

**Website:** <a href="http://www.uis.no/fakulteter-institutter-sentre-og-museum/det-teknisk-naturvitenskapelige-fakultet/det-nasjonale-ior-senteret/">http://www.uis.no/fakulteter-institutter-sentre-og-museum/det-teknisk-naturvitenskapelige-fakultet/det-nasjonale-ior-senteret/</a>

**Description:** The National IOR Centre of Norway provides solutions for improved oil recovery on the Norwegian continental shelf through academic

excellence and close cooperation with the industry.

## University of Stavanger, Research Network for Sustainable Energy at UiS and IRIS

Contact: Siri M. Kalvig - Director

Email: siri.m.kalvig@uis.no

**Website:** <a href="http://www.uis.no/research-and-phd-studies/research-areas/oil-gas-and-sustainable-energy/research-network-in-sustainable-energy/">http://www.uis.no/research-and-phd-studies/research-areas/oil-gas-and-sustainable-energy/research-network-in-sustainable-energy/</a>

**Description:** Together with the IRIS research institute, the University of Stavanger (UiS) has a number of strong academic communities linked to the field of sustainable energy. Our areas of expertise include offshore wind power, energy efficiency, geothermal heating, sustainable aquaculture, carbon capture and energy informatics.

#### South Africa

## **Cape Town**

#### **Square Kilometer Array**

Website: <a href="https://www.ska.ac.za/">https://www.ska.ac.za/</a>

**Description:** The SKA project is an international effort to build the world's largest radio telescope, with a square kilometer (one million square meters) of collecting area. The scale of the SKA represents a huge leap forward in both engineering and development. The SKA telescope will be co-located in Africa and in Australia.

## South African Renewable Energy Technology Centre (SARETEC)

Contact: Wikus van Niekerk - Director

Email: wikus@sun.ac.za

Website: <a href="http://www.saretec.org.za">http://www.saretec.org.za</a>

**Description:** The Centre for Renewable and Sustainable Energy Studies (CRSES) acts as a central point of entry into Stellenbosch University for the general field of renewable energy. Some contract research projects are completed within CRSES while others end up in the other academic departments or research entities of the University.

## **Cape Town (continued)**

#### South African Marine Research and Exploration Forum (SAMREF)

Contact: Nicole du Plessis - Project Officer

Email: samref@saeon.ac.za

Website: <a href="http://samref.dirisa.org/">http://samref.dirisa.org/</a>

**Description:** SAMREF aims to identify and take advantage of opportunities provided by oil and gas exploration activities and platforms, to gather important marine ecosystem data, and to facilitate new collaborative offshore studies.

## **United Kingdom**

#### **Aberdeen**

## Oil and Gas Innovation Centre (OGIC)

Contact: Ian Phillips - Chief Executive

Email: ian.phillips@ogic.co.uk

Website: www.ogic.co.uk

**Description:** Innovative project led degree program will equip graduates with the expertise required to develop innovative solutions to challenges faced in the oil and gas sector. Co-ordinated by the University of Aberdeen, this MSc will provide graduates with the aptitude to generate and commercialize innovation whilst further advancing their technical knowledge.

## Aberdeen (continued)

#### Oil and Gas Technology Centre (OGTC)

Contact: Colette Cohen - Chief Executive

**Description:** One of the top three centers globally for innovation and technology development in subsea production, mature basin asset management, maximizing economic recovery, and ensuring decommissioning excellence.

#### **United States**

#### **Houston**

## Center for Energy and Environmental Research in the Human Sciences (CENHS)

Contact: Dominic Boyer, PH.D. - Founding Director

Email: Dcb2@rice.edu

Website: <a href="http://culturesofenergy.com/">http://culturesofenergy.com/</a>

Description: The Center for Energy and Environmental Research in the Human Sciences (CENHS) is the only research center in the world specifically designed to foster and incubate research on the energy/environment nexus across the arts, humanities and social sciences. Founded in 2013, we are part of Rice University's landmark Energy and Environment Initiative (EEI), an effort to involve all the intellectual resources of a research university in addressing today's most pressing energy and environmental challenges.

## **Houston (continued)**

#### **Energy Point Research**

Contact: Doug Sheridan - Managing Director

Email: info@energypointresearch.com

Website: <a href="http://www.energypointresearch.com/about.html">http://www.energypointresearch.com/about.html</a>

**Description:** Our mission is to provide customer satisfaction intelligence that impacts success. Since 2003, we've delivered independent and insightful research regarding many of the industry's leading suppliers. Through proven evaluation processes, we gather, analyze and publish our closely watched ratings in areas important to the industry and its stakeholders.

#### **Houston Advanced Research Center**

Contact: Lisa Gonzalez - President

Email: <a href="mailto:lgonzalez@HARCresearch.org">lgonzalez@HARCresearch.org</a>

Website: <a href="http://harcresearch.org">http://harcresearch.org</a>

**Description:** HARC's mission is to conduct research on sustainable development. Their expertise is focused on the science and engineering needed to understand and address issues related to air quality, clean energy, and water quality and supply.

#### **Laboratory for Nanophotonics**

Contact: Surbhi Lal - LANP Executive Director Office

Email: slal@rice.edu

Website: <a href="http://lanp.blogs.rice.edu/">http://lanp.blogs.rice.edu/</a>

**Description:** LANP works on breakthroughs and advances in the broad, multidisciplinary field of Nanophotonics, spanning the physical, chemical, biological and information sciences, of near and long-term societal benefit. This includes research on nanoparticles for solar energy harvesting.

## **Houston (continued)**

#### **Ocean Energy Safety Institute**

Contact: Dr. M. Sam Mannan, PE, CSP - Director

Email: mannan@tamu.edu

Website: <a href="http://oesi.tamu.edu/">http://oesi.tamu.edu/</a>

**Description:** The institute works to improve the safety of the offshore oil and gas industry. Works with the cooperation of several Universities including the University of Houston.

#### Rice Energy and Environment Initiative

Contact: Charles McConnell - Executive Director

Email: eei@rice.edu

Website: <a href="http://eei.rice.edu/about/">http://eei.rice.edu/about/</a>

**Description:** The power of the Energy and Environment Initiative stems from engaging the market strategically and globally. At Rice, that demands setting the bar with a series of grand challenges and pursuing those challenges with transformative solutions from the basic sciences, engineering, public policy, the social sciences and the humanities. To meet these challenges, the Energy and Environment Initiative is engages expertise from multiple research disciplines, along with industry leaders and government agencies, NGOs and the public to develop safer, more affordable and environmentally sustainable carbon-based fuels.

## **Houston (continued)**

#### Rice University Shell Center for Sustainability

Contact: Dr. John B. Anderson - Academic Director

Email: johna@rice.edu

Website: <a href="http://shellcenter.rice.edu/">http://shellcenter.rice.edu/</a>

**Description:** The center was created in 2002 by Rice University and Shell Oil Company to research sustainable development in Houston and throughout

the Gulf region.

## University of Houston Energy Research Park

Contact: Michael Knight - Group Manager

Email: michael.knight@transwestern.com

Website: <a href="http://www.uh.edu/af/universityservices/erp/">http://www.uh.edu/af/universityservices/erp/</a>

**Description:** The UH Energy initiative takes an integrated, interdisciplinary, translational approach to combine many research areas, ranging from the exploration of new sources (previously inextricable oil and fossil fuels), testing and enhanced production processes of discovered sources (fossil fuels and biofuels), efficient storage and packaging of known sources (wind and solar), and cost-efficient transportation and delivery of acquired sources (electric power), with the ultimate goal of meeting the energy needs of tomorrow. Our leadership will come through engaging researchers from multiple disciplines in exciting, cutting-edge research synergy.