



جامعة الملك عبد الله
للعلوم والتقنية
King Abdullah University of
Science and Technology

Daryl Grenz and Thibaut Lery

CRIS2016
St. Andrews

A CRIS in the Desert

The Implementation of Pure at KAUST

DESTINATION



Pure Implementation Timeline

(KAUST created in 2009)

2014

Tool study

Contract
signature

Project start-up

Jan

Feb

March

April

May

June

July

Aug

Sept

Oct

Nov

Dec

2015

HR, finance, Org. Data
Integration

Publication & Repository
Integration

Students & Grants Integration

Jan

Feb

March

April

May

June

July

Aug

Sept

Oct

Nov

Dec

2016

ORCID, Scopus &
Scival Integration

Research Portal

Go in Production

Go Live

Jan

Feb

March

April

May

June

July

Aug

Sept

Oct

Nov

Dec

KAUST in a nutshell



900+
Students



142
Faculty



424
Post Docs



234
Research scientists

6,000+
Publications

320
Invention
Disclosures



7000
Community
members



2231
Workforce



1432
School children

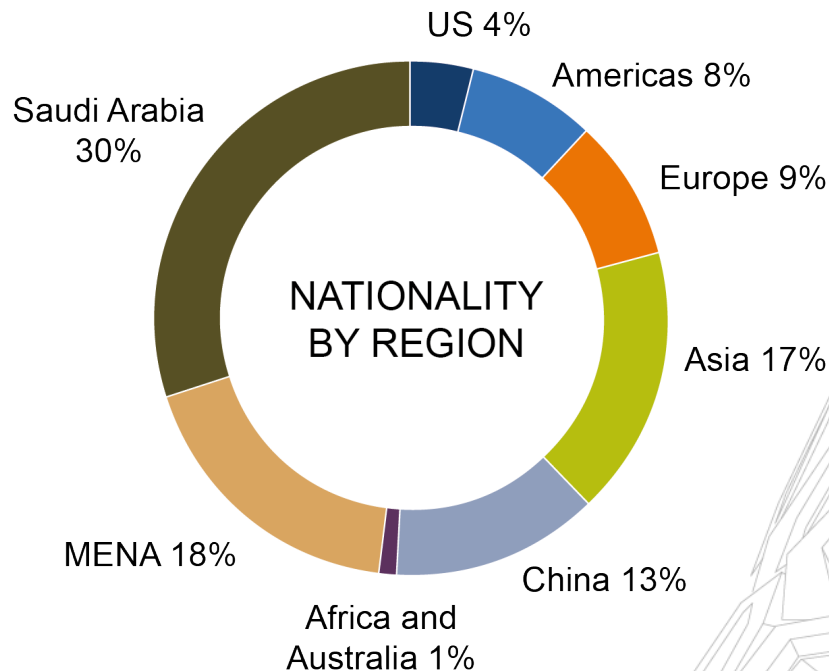
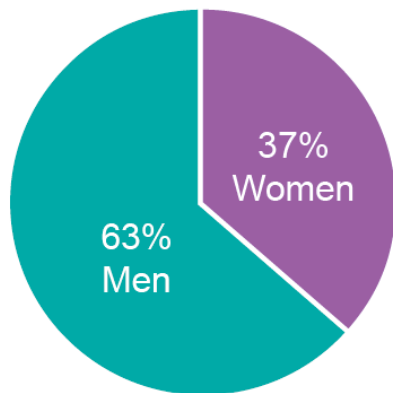
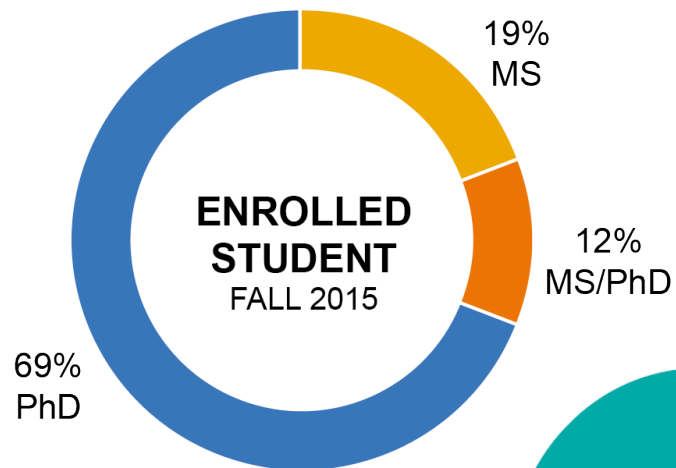


104
Nationalities

219
Patent
Applications

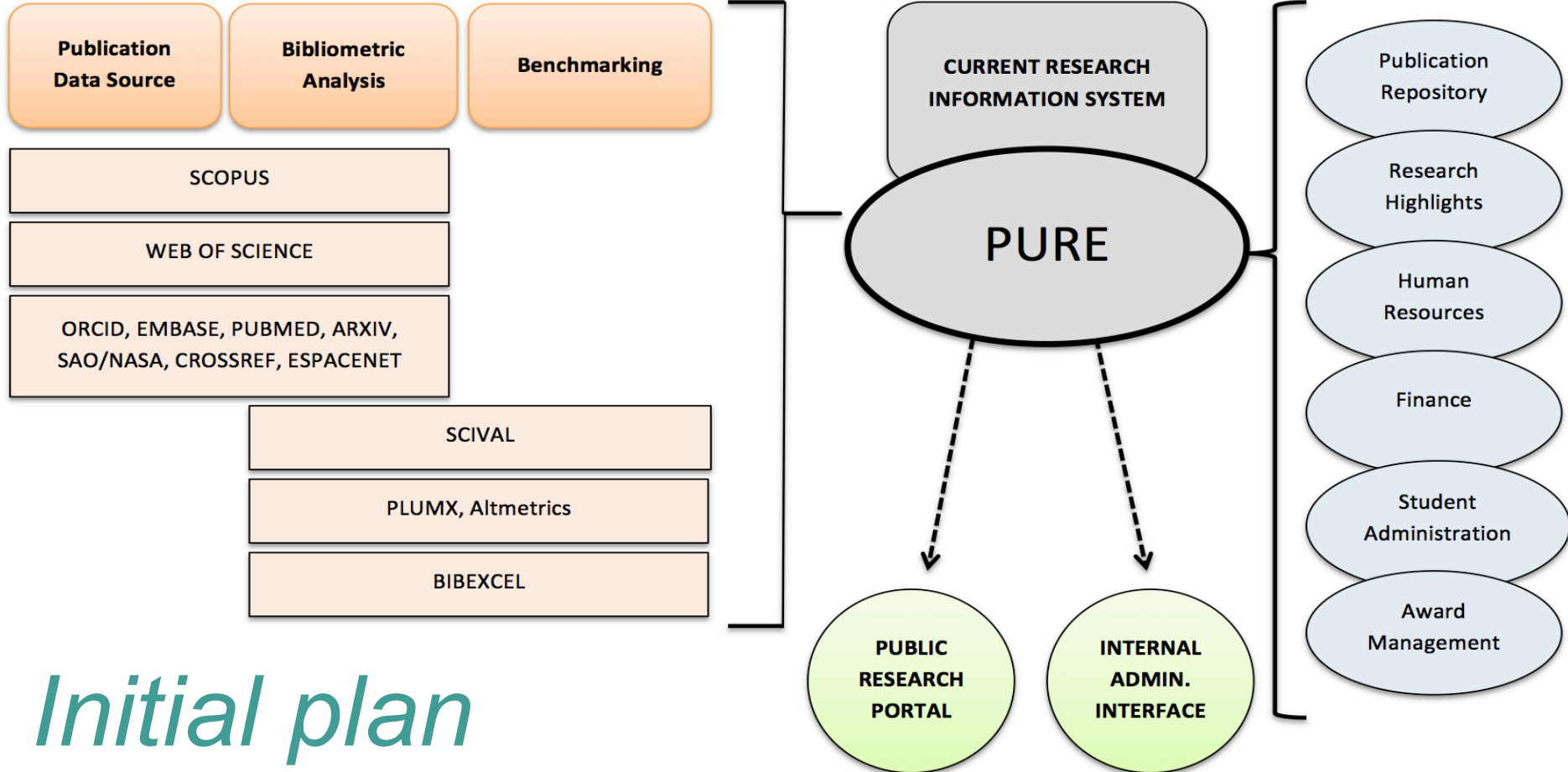
1.95
FKAUST FWCI

Our Students

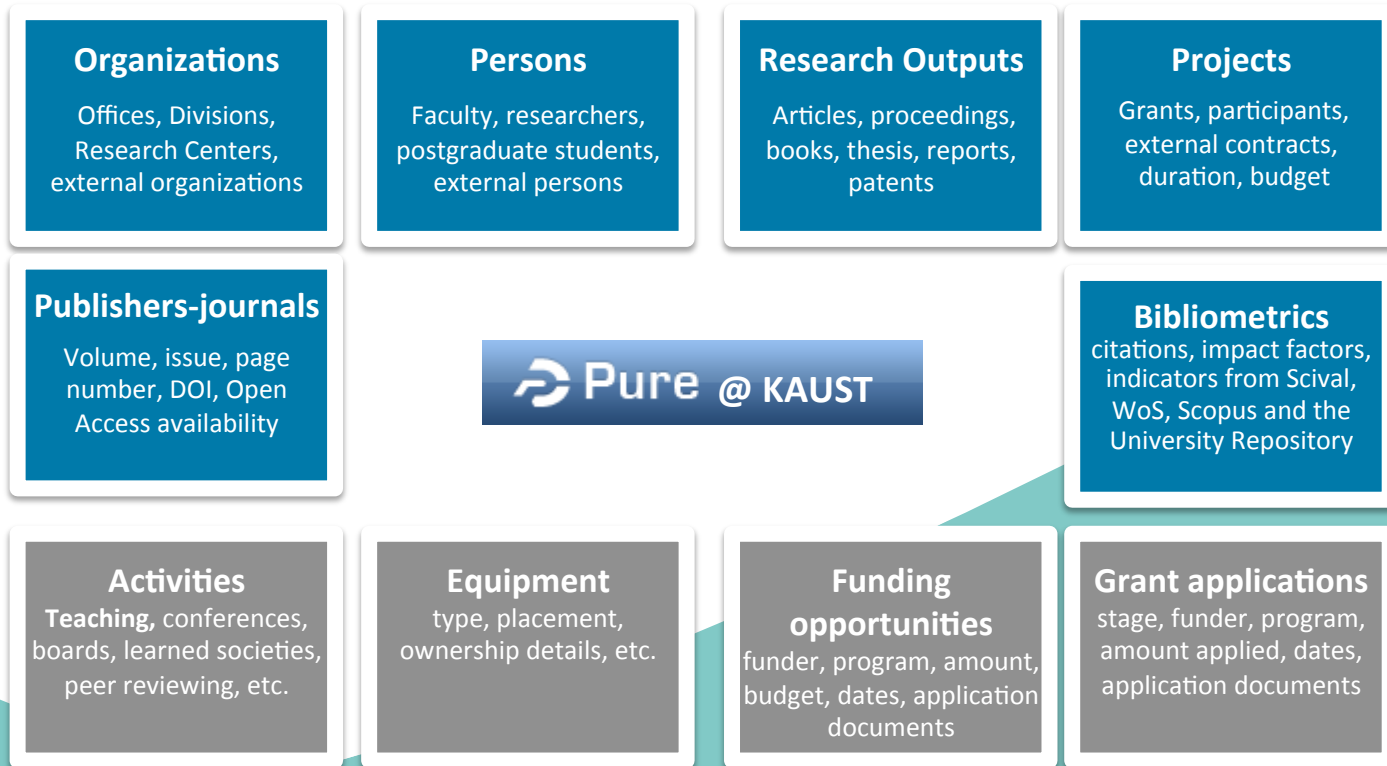


EXTERNAL SYSTEMS

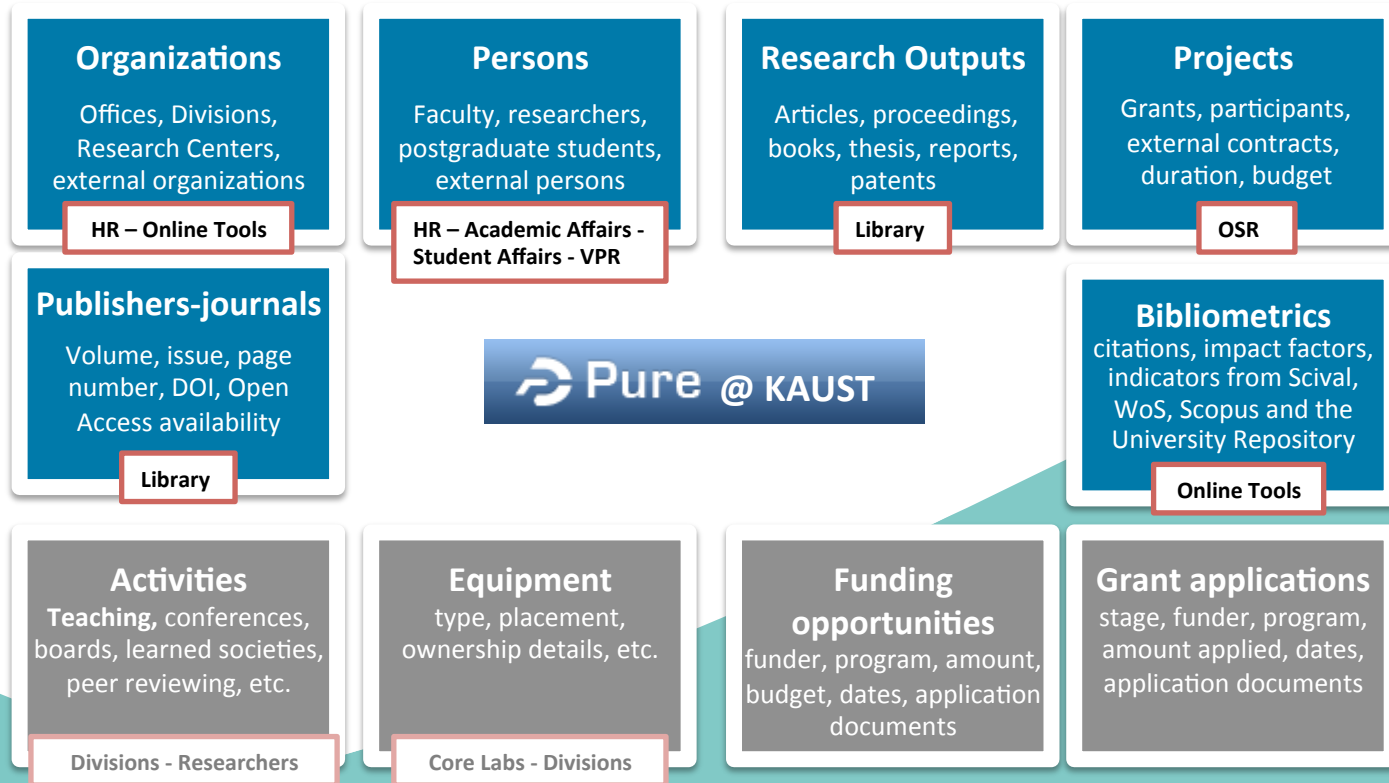
INTERNAL SYSTEMS



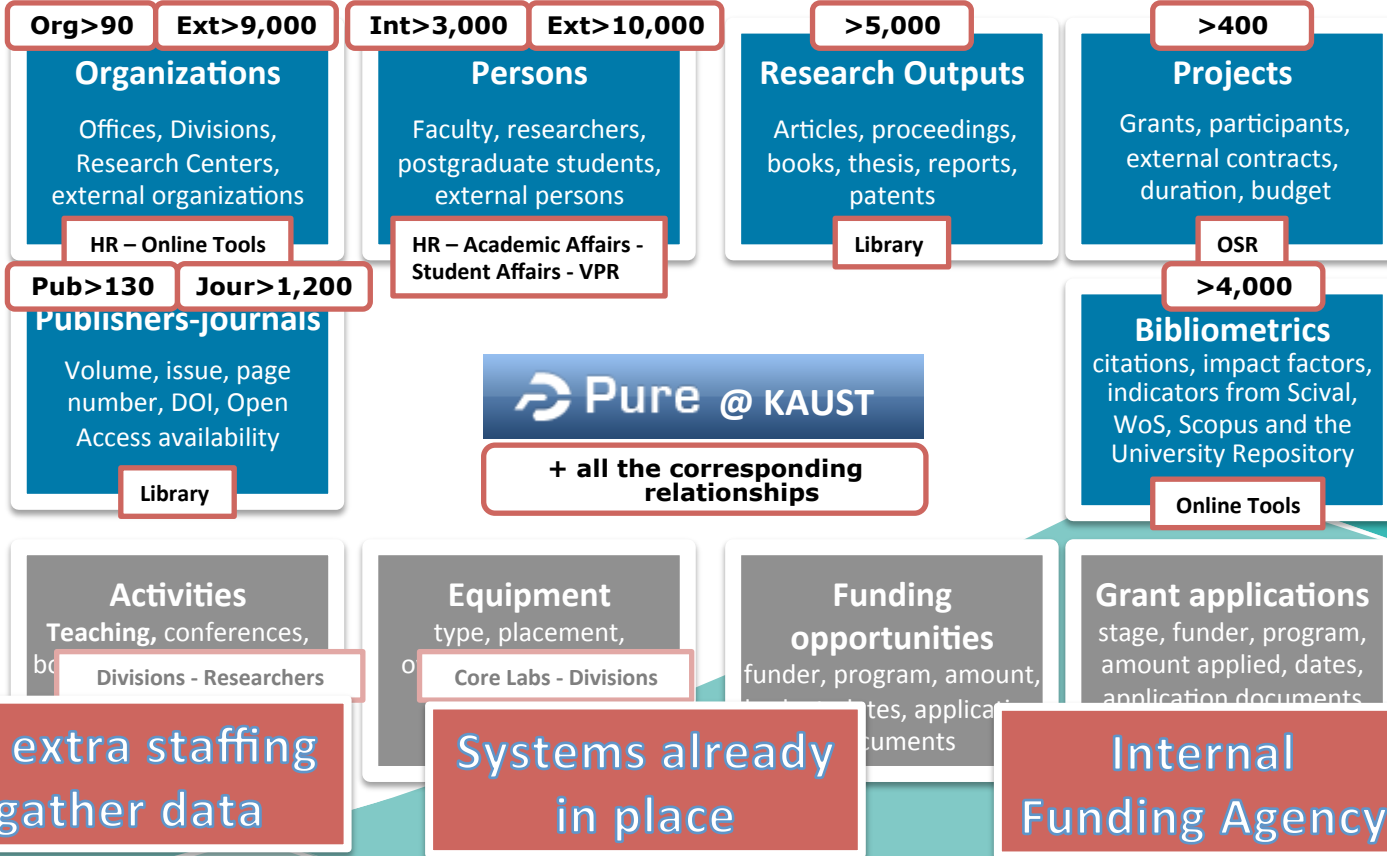
PURE data in a nutshell



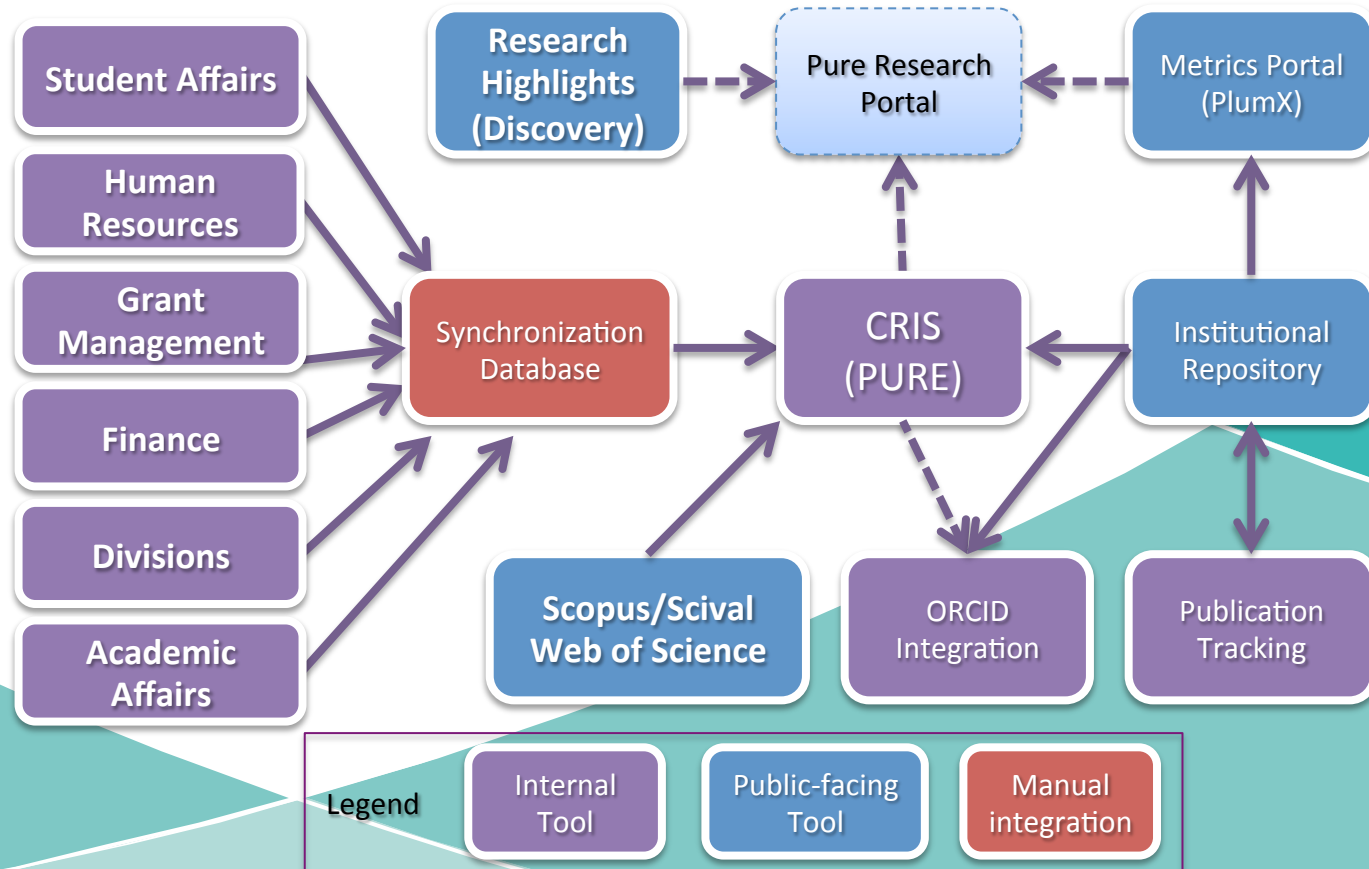
PURE data in a nutshell



PURE data in a nutshell



Current arrangement



Search entire portal

Search portal... **SEARCH**

Keyword

Select keyword

Organizational unit

Add organizational unit...

Latest publications

Most cited

Visualizing band offsets and edge states in
bilayer-monolayer transition metal
dichalcogenides lateral heterojunction
Research output: Contribution to journal ›
Article

Food supply confers calcifiers resistance to
ocean acidification
Research output: Contribution to journal ›
Article

Semi-automated quantification of living cells
with internalized nanostructures
Research output: Contribution to journal ›
Article

The trade-off between heat tolerance and
metabolic cost drives the bimodal life strategy
at the air-water interface
Research output: Contribution to journal ›
Article

Electronic phase transitions under hydrostatic
pressure in LaMnO₃ (111) bilayers sandwiched
between LaAlO₃
Research output: Contribution to journal ›
Article

[View all publications >](#)

Research Highlights

KAUST Discovery highlights the most exciting research taking place at the different research centers in KAUST. The research highlights are informative articles that cover breakthrough research and are accessible to the wider science community and a general audience interested in science. With regular weekly updates, this is the place to keep up with the best research happening at KAUST.

May 1, 2016



Graphene powers up water purification

Self-cleaning graphene-coated membranes remove water pollutants while harvesting energy from microbial decomposition.



A clearer view of rainfall patterns

Improved random modeling allows scientists to generate realistic patterns of high-frequency rainfall.



Sneaky losses solved for resistive memory

A data readout scheme achieves an unprecedented reduction in power consumption for a promising high-performance resistive memory architecture.

[ARCHIVE](#)

PLUM

Artifact Summary

Article: 8455
Conference Paper: 1566
Thesis / Dissertation: 551
Book Chapter: 266
Review: 192
Patent: 127
Presentation: 77
Letter: 32
Report: 24
Poster: 10
Book: 9
Video: 6
Other: 3
Other: 2
Abstract: 2

Recent Artifacts

- Instantly decodable network coding for real-time device-to-device communications
- Linear precoding based on polynomial expansion: reducing complexity in massive MIMO
- A multi-agent conversational system with heterogeneous data sources access
- Effect of microbial community structure on organic removal and biofouling in membrane adsorption bioreactor used in seawater pretreatment
- Selection of suitable fertilizer draw solute for a novel fertilizer-drawn forward osmosis-anaerobic membrane bioreactor hybrid system.

[see details](#)

Researcher at KAUST

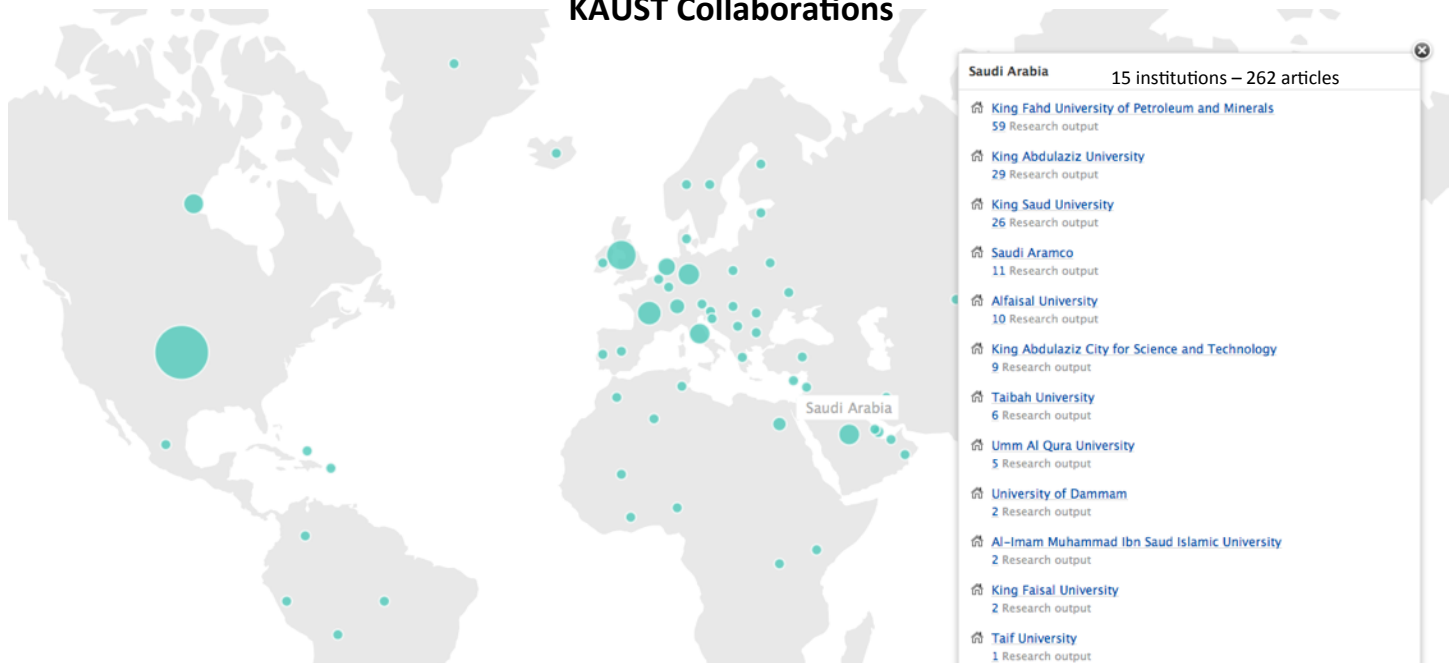


Michael L. Berumen

Associate Professor, Marine Science
Biological and Environmental Science and Engineering
Center membership: Red Sea Research Center
m.berumen@kaust.edu.sa

Internal dashboard

KAUST Collaborations



Institution	Co-authored publications	Co-authors outside KAUST	Co-authors at KAUST	Citations	Views	Citations per Publication	Field-Weighted Citation Impact
King Fahd University of Petroleum and Minerals	110	100	75	418	5454	3.8	1.38
King Abdulaziz University	44	52	66	449	4177	10.2	2.24
King Saud University	33	33	20	182	1700	5.5	1.44
King Abdulaziz City for Science and Technology	22	11	32	105	1265	4.8	0.56
Saudi Aramco	16	20	27	18	1420	1.1	0.59
Alfaisal University	14	4	5	78	1459	5.6	1.16
Taibah University	7	15	11	45	509	6.4	2.01
Umm Al Qura University	6	8	12	16	428	2.7	0.66
Princess Nourah bint Abdulrahman University	4	1	5	8	64	2	1.2
Al-Imam Muhammad Ibn Saud Islamic University	2	2	1	49	120	24.5	3.58
King Khalid University	2	2	4	1	223	0.5	0.08
University of Dammam	2	3	3	0	102	0	0
King Faisal University	1	1	1	3	26	3	2.62
Taif University	1	1	1	3	94	3	0.72
Qassim University	1	1	1	0	10	0	0

Examples of reports

KAUST Division Projects Analysis

A report made in Pure. Prepared by: (changeme@atira.dk), 3/05/16 15:31

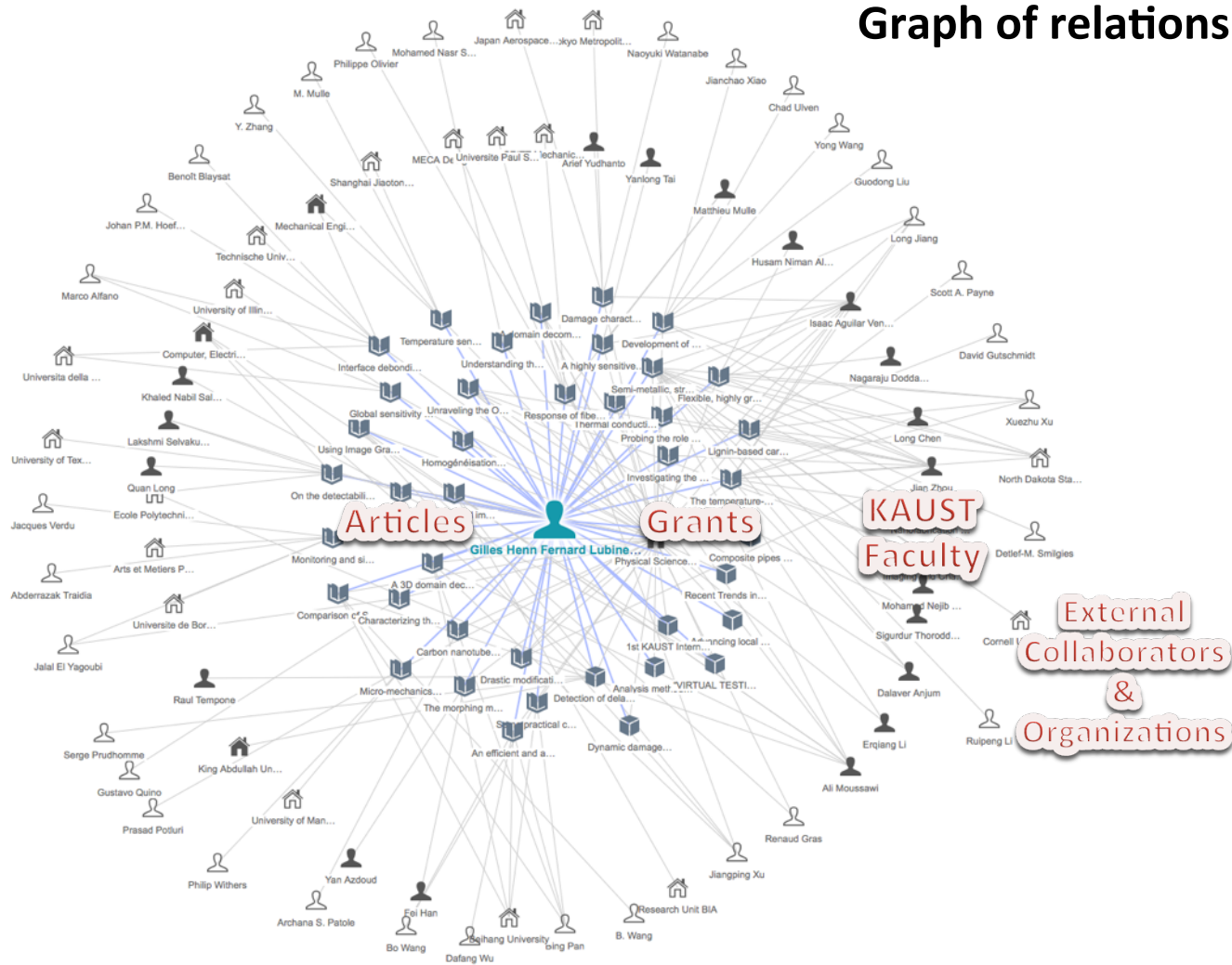
Organizational unit

	Number of projects		Analysis of external Participants		Analysis of internal Participants		Count		Sum of citations per year (SciVal)		Average FWCI (SciVal)	
1	Physical Science and Engineering	219	58	74	2598	34350	2.29					
2	Biological and Environmental Science and Engineering	90	38	54	1322	20805	2.24					
3	Computer, Electrical and Mathematical Science and Engineering	88	31	59	1340	9201	1.70					
Total		397	127	187	5260	64356	6.23					
Avg		132.33	42.3	62.3	1,753.33	21,452.00	2.08					

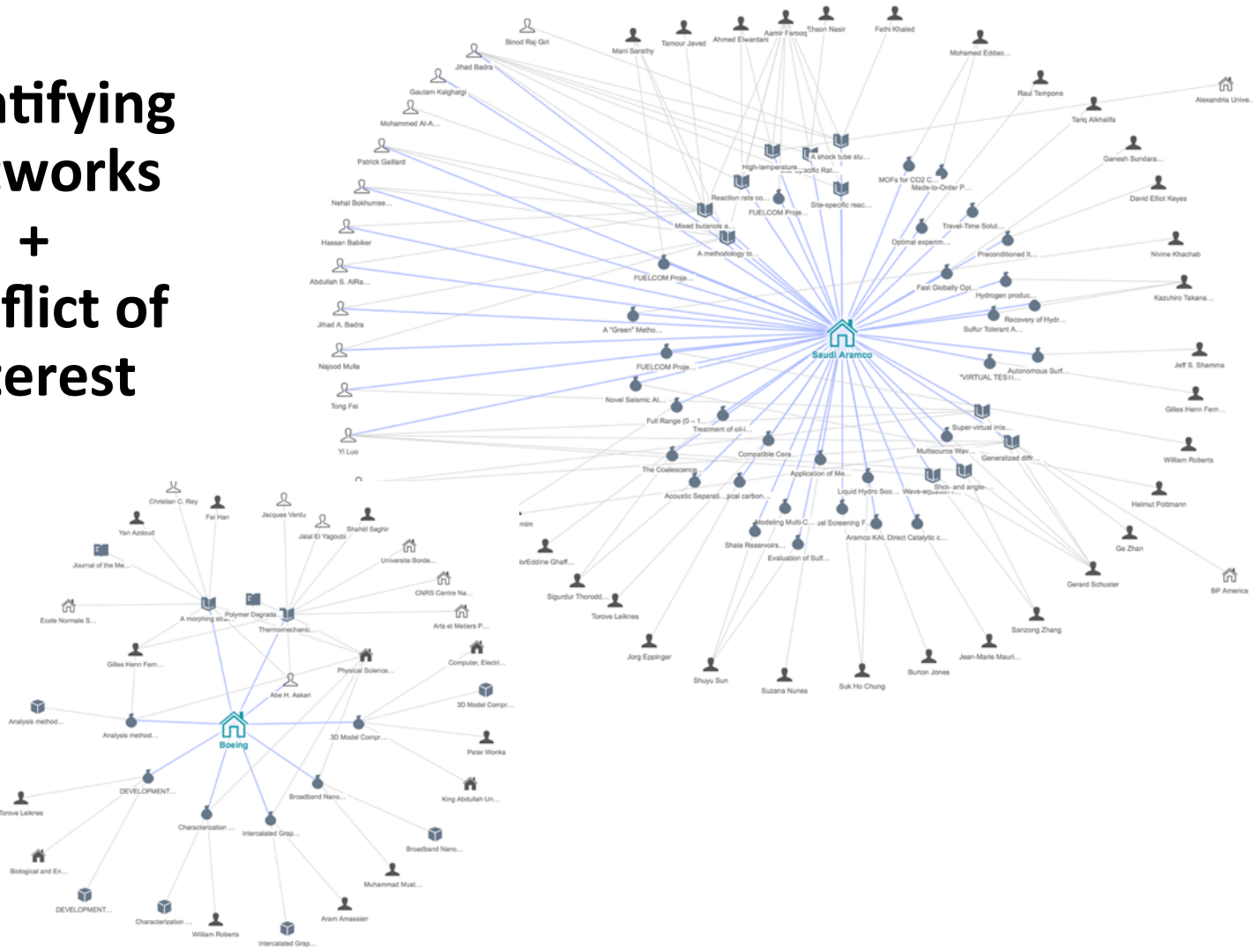
Matrix of collaborations															
	Physical Science and Engineering	Imperial College London	KAUST Catalysis Center	National University of Singapore	Istituto Italiano di Tecnologia	Water Desalination and Reuse Center	Universita degli studi Magna Graecia di Catanzaro	Delft University of Technology	Red Sea Research Center	Woods Hole Oceanographic Institution	Universita di Salerno	Biological and Environmental Science and Engineering	James Cook University	Computer, Electrical and Mathematical Science and Engineering	Texas A and M University
Physical Science and Engineering		69		37	52		50	7			25		23		32
Imperial College London	69											5			
KAUST Catalysis Center				58							45		37		
National University of Singapore	37		58			50						42			6
Istituto Italiano di Tecnologia	52											36			
Water Desalination and Reuse Center				50				49							
Universita degli studi Magna Graecia di Catanzaro	50											26			
Delft University of Technology	7					49						27			
Red Sea Research Center										48				37	
Woods Hole Oceanographic Institution									48			7			
Universita di Salerno	25		45									14			
Biological and Environmental Science and Engineering			5	42	36		26	27		7	14			11	
Universitat de Girona	23		37												
James Cook University									37			11			
Computer, Electrical and Mathematical Science and Engineering															35
Stanford University															
Texas A and M University															28
Wetsus															
Stanford University															9
Purdue University															9
University of Texas at Austin															10
University of California															9
Universite Lumiere - Lyon 2															
Nanyang Technological University	27		9			9						13			
Institute of Materials Research and Engineering	19		26									9			
Universitat Augsburg	25														
University of Tokyo	16		25									9			

Reports can be exported to doc, xls, pdf, html

Graph of relations



Identifying Networks + Conflict of interest



Ideal model



= Data sources in customized formats



= Data integration and validation



= Data storage in CERIF format



= Optimal and flexible system using standard metadata

Global environment

- Identification systems
 - For organizations, funding, facilities
 - Open and widely implemented
- Interchange standards
 - CERIF APIs – global adoption?
 - Support by systems vendors for modularity

Institutional challenges

- Access to information + standardization
- Big Brother is watching you (for researchers)
- Difficulty to adapt Pure to local needs
- Adapted to EU-US context
- Affiliation problems
- New indicators

One can grow a CRIS in the desert!

Thank You!

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كاوست
KAUST

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