Centre for Health Informatics (CHI)

2000 - 2015
About the Centre for Health Informatics (CHI)

WE DRIVE CHANGE IN HEALTHCARE AND BIOMEDICINE BY MAKING CONTRIBUTIONS TO:

SCIENCE
Break-through discoveries in information, communication, cognitive and organisational science needed to support health service innovation and biomedical researchers.

POLICY
Providing expert input and leadership into government, shaping e-health policy priorities and goals.

INNOVATION
Invention of novel information technologies and methods that can transfer into industry and health services.

EDUCATION
Training future researchers through postgraduate research degrees, and educating clinicians, technologists and policy makers through postgraduate programs.

KEY TECHNOLOGIES DEVELOPED
Healthy.me
Quick Clinical
TechWatch

WHO WE ARE
Founded in 1999, the Centre for Health Informatics (CHI) is Australia’s largest and longest running academic research group in this discipline with over fifteen years in this field. CHI is one of three centres within the Australian Institute of Health Innovation (AIHI), Faculty of Medicine and Health Sciences at Macquarie University. CHI is also the lead agency of the NHMRC Centre of Research Excellence in e-health (CRE).

OUR RESEARCH
The Centre for Health Informatics work is internationally recognised for its ground breaking contributions in data analytics, consumer informatics, IT safety, intelligent systems for evidence-based healthcare, social network analyses, and in understanding how communication shapes the safety and quality of health care delivery.

OUR EXPERIENCE
With a team of 31 staff with extensive national and international experience, this team has a strong track record of innovative health informatics research and its translation into policy and practice. Our award-winning team is multi-disciplinary and multi-national with backgrounds in health informatics, e-health, medicine, computer science, engineering, physics and pharmacy and ably supported by dedicated professional staff.

OUR COLLABORATORS
We are linked with most major academic researchers or groups in health informatics and e-health in Australia, mediated via shared grants and publications. Our international partners include leading research groups at Harvard and Stanford Universities. We have collaborative relationships with organisations of relevance to the national e-health agenda in government, industry, and health service organisations. Our industry partnerships have resulted in two spinoff companies and we actively work with industry to deliver innovative and targeted solutions based on research evidence. Our students have gone on to have promising careers as researchers, practitioners and entrepreneurs.

OUR FUNDING
We are funded by Macquarie University and government and industry grants.

JOIN OUR TEAM OR PARTNER WITH US
We welcome research scientists with a background as clinicians, computer scientists, doctors, engineers and students to join our team. We invite industry to partner with us to create business opportunities through research and innovation.

Professor Enrico Coiera
Founding Director
NHMRC Centre of Research Excellence in e-health (CRE)

WHO WE ARE
The NHMRC Centre of Research Excellence commenced in 2012 and is now in its fourth year of a five year $2.5m funded program. Lead by investigators from the Centre for Health Informatics, it brings together for the first time a leading group of academic e-health research organisations in Australia. This team has over a decade of experience in system design, evaluation and translation and with an international reputation for our work. Our people include e-health and health informatics researchers, doctors, computer scientists, engineers and professional staff.

OUR RESEARCH
Our research targets major evidence gaps in the safety and quality of clinical and consumer e-health systems. We contribute to national and international e-health policy and are building national capacity in e-health research to meet current and emerging national health priorities.

OUR EXPERIENCE
The Centre has investigators from Macquarie University, University of NSW, Bond University, Sydney University and the University of South Australia. The investigator team has extensive national and international experience and a strong track record of translation into policy and practice. We’ve won national and international awards for our work.

OUR FUNDING
We are funded by the National Health and Medical Research Council (NHMRC) which is Australia’s peak body for supporting health and medical research; for developing health advice for the Australian community, health professionals and governments; and for providing advice on ethical behaviour in health care and in the conduct of health and medical research.

More information about the Centre for Research Excellence can be found at www.ehealth.edu.au
NHMRC GRANT
$2.5MILLION
OVER 5 YEARS

RESEARCH STREAMS
CONSUMER E-HEALTH
DECISION SUPPORT
E-HEALTH SAFETY

COLLABORATION
COLLABORATIVE RESEARCH
WITH FIVE UNIVERSITIES,
GOVERNMENT AND INDUSTRY

PUBLICATIONS
35 PUBLICATIONS
Centre for Health Informatics staff

November 2015
CHI at a glance 2000 - 2015

646 PUBLICATIONS
31 STAFF (DEC 2015)
82 GRANTS $37.6M GRANTS AND FUNDING
8 GRADUATES
34 COLLABORATORS AND 27 FUNDERS
7 BOOKS
2 INDUSTRY SPINOFFS
57 INDUSTRY AND GOVERNMENT CONSULTANCIES
14 MAJOR AWARDS
CHI highlights 2000 – 2015

2000
CENTRE FOR HEALTH INFORMATICS COMMENCES
Developed as a collaborative venture of the UNSW Faculty of Medicine and Faculty of Engineering in association with the Graduate School of Biomedical Engineering.

2002
AUSTRALIAN COLLEGE OF HEALTH INFORMATICS (ACHI) FOUNDED
Foundation Fellow and President – Enrico Coiera. ACHI is Australasia’s Health Informatics Professional Body. It represents Regional Clinical and Non-Clinical health thought leaders and experts.

2007
AHIC APPOINTMENT – ENRICO COIERA
Enrico Coiera joins the Executive Committee of the Australian Health Information Council (AHIC).

2009
CENTRE JOINS AUSTRALIAN INSTITUTE OF HEALTH INNOVATION
The Centre for Health Informatics joined with the Centre for Clinical Governance Research at UNSW and the Simpson Centre at Liverpool Hospital to found the Australian Institute of Health Innovation (AIHI) – the largest collection of dedicated health researchers in Australasia.

2010
CENTRE 10 YEAR ANNIVERSARY
To celebrate this major landmark, the Centre held a one-day symposium attended by 170 participants.
Significant grants
NHMRC PROGRAM GRANT
Patient Safety: enabling and supporting change for a safer and more effective health system
$8,400,000

NSW HEALTH CAPACITY BUILDING GRANT
$1,750,000

NHMRC CENTRE OF RESEARCH EXCELLENCE IN E-HEALTH
$2,499,870

NHMRC PROGRAM GRANT
Creating safe, effective systems of care: the translational challenge
$10,855,710

ARC SPIRIT INDUSTRY GRANT
Intelligent search integration engine and content parser for a web content management and retrieval environment.
$1,250,474 (ARC $390,474 and Merck, Sharp & Dohme $860,000)

ARC LINKAGE GRANT
Evaluating the impact of information and communication technologies on organisational processes and outcomes: a multi-disciplinary, multi-method approach
$1,004,000

NSW HEALTH CAPACITY BUILDING INFRASTRUCTURE GRANT
$1,267,795

HCF MEDICAL RESEARCH FOUNDATION GRANT
An independent national clinical evidence service to create a 'Facebook for healthcare'
$988,855

NHMRC PROJECT GRANT
The impact of electronic medication administration records (e-MAR) on medication administration safety and nurses' work
$678,475

NHMRC PROGRAM GRANT
2001
2003
2006
2007
2008
2009
2010
2012
2014
2005

IBM FACULTY AWARD
IBM Research Laboratories
Enrico Coiera

INTEL DON WALKER AWARD FOR QUALITY
Health Informatics Society of Australia
Enrico Coiera for Quick Clinical

UNSW GOLDSTAR AWARD
Johanna Westbrook

2006

WINNER OF IFMBE YOUNG INVESTIGATOR
COMPETITION, MEDICON
PhD student Sata Busayarat

2007

NEW INVENTORS PEOPLE’S CHOICE AWARD
For commercialisation of our team handover support system by iClinix

BEST PAPER AWARD
American Medical Informatics Association Summit on Translational Bioinformatics

2008

UNSW GOLDSTAR AWARD
Farah Magrabi

2009

UNSW GOLDSTAR AWARD
Mei Sing Ong

2010

UNSW GOLDSTAR AWARD
Guy Tsafnat

2011

UNSW GOLDSTAR AWARD
Enrico Coiera

BEST STUDENT PAPER, AMERICAN MEDICAL INFORMATICS ANNUAL SYMPOSIUM
Mei Sing Ong

DEAN’S RISING STAR, UNSW
Mei Sing Ong

UNSW INVENTOR OF THE YEAR (INFORMATION AND COMMUNICATION TECHNOLOGY)
Stephen Anthony, Vitali Sintchenko and Enrico Coiera

SIMULATION ACHIEVEMENT AWARD, SIMULATION AUSTRALIA
Geoff McDonnell
Awards

2013

**BEST AUSTRALIAN HEALTH SERVICES RESEARCH PAPER, AUSHSI**
MJA CareTrack paper

2014

**UNSW GOLDSTAR AWARD**
Farah Magrabi and Guy Tsafnat

2015

**IMIA FRANÇOIS GRÉMY AWARD OF EXCELLENCE**
Enrico Coiera

**SAX INSTITUTE RESEARCH ACTION AWARD**
Farah Magrabi

**IMIA WORKING GROUP OF THE YEAR AWARD**
Farah Magrabi and Andrew Georgiou
HOSTED A ONE-DAY THINK TANK ON THE FUTURE OF E-HEALTH AND THE INTERNET
In partnership with the Smart Internet CRC, Sydney.

2004

CLINICAL DECISION MAKING
Sydney

2007

THIRD INTERNATIONAL CONFERENCE ON INFORMATION TECHNOLOGY IN HEALTH CARE (ITHC)
Hosted by the Centre, Sydney.

2007

CHI WINTER WORKSHOP: NEXT-GENERATION TECHNOLOGIES FOR DECISION MAKING IN THE HEALTH AND BIOSCIENCES
Sydney

2008

HEALTH SYSTEM SIMULATION: SYSTEMS THINKING AND MODELLING FOR HEALTH – SIMPLE MODELS FOR COMPLEX SYSTEM DYNAMICS
Sydney

2008

DYNAMIC MODELLING: WHAT, WHY & HOW?
Sydney

2013

MANAGING E-HEALTH SAFETY
Held in conjunction with HIC 2013, Adelaide

2013

DYNAMIC MODELLING: WHAT, WHY AND HOW?
Melbourne

2014

DATA ANALYTICS FOR EVIDENCE-BASED HEALTHCARE
Held in conjunction with the 19th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), Vietnam

2015
Events and courses
Books we’ve written


3. Sintchenko V. *Decision by design: Decision support for antibiotic prescribing in critical care*. Saarbrucken: VDM-Verlag Dr Müller; 2009


5. Lau, A. *The impact of cognitive biases on information searching and decision making*, UNSW, 2006


Highly cited papers


2. Coiera E. When conversation is better than computation. Journal of the American Medical Informatics Association 2000;7(3):277-86 (> 400 citations)


Technology commercialisation

The Centre for Health Informatics has an enviable track record of working with national and international organisations from industry, government and not-for-profits to help them translate research into practical solutions for health system problems and patient care. We bring unique perspectives, technologies, domain expertise and scientific rigour and have extensive networks within the healthcare systems in Australia and overseas. Here are two examples of our successful collaborations with industry.

**THE “BITCOIN FOR HEALTHCARE”**

Healthbanc is a US-based start-up company created to commercialise our consumer e-health technologies (known as Healthy.me). Healthbanc was founded by entrepreneur and pharmacist, Ken Lee in 2015.

Healthbanc is a rewards program and booking app that helps patients save money on healthcare expenses, save time making appointments and creates a healthcare professionals network.

Healthbanc aims to become the distribution hub for new medical technologies, delivered at lower cost by creating a unique virtual Healthcare currency, a “Bitcoin for Healthcare” (Healthbanc points). Patients accumulate Healthbanc points which they can then redeem for certain free activities, to reduce their healthcare costs.

**REVOLUTIONARY DNA ANALYSIS SOFTWARE**

Spokade is a company founded in 2013 by Dr Guy Tsafnat to commercialise sophisticated DNA analysis software developed at the Centre for Health Informatics in collaboration with Western Sydney Local Health District with $3,000,000 in government research funding.

The World Health Organisation has declared antibiotic resistance as the world's top health priority as every year over 15 million people die from previously treatable bacterial infections, including new “superbug” strains.

Jointly, the Centre for Health Informatics and Spokade technologies provide clinicians critical information on antibiotic resistance at the point of care. Spokade is currently conducting pre-clinical trials of its technology.
Our graduates
WHERE ARE THEY NOW?

PROFESSOR VITALI SINTCHENKO

Professor Sintchenko completed his PhD in Medical Informatics in 2005 and is now an informatician who conducts research on biosurveillance of communicable diseases. As the Director of the Centre for Infectious Diseases and Microbiology - Public Health, a translational research hub funded by NSW Health, he leads a public health and diagnostic microbiology team working toward improving laboratory and epidemiological investigations of communicable diseases. He is the Chair of the Commonwealth Public Health Laboratory Network and he is a Fellow of the Royal College of Pathologists of Australasia and the Australian College of Health Informatics. He is widely recognised and has published over 150 full-length peer-reviewed papers, 5 book chapters and 2 books with 700 citations. His paper in Nature Microbiology Reviews laid the foundation for pathogen profiling utilising phenotype-based methods with genomics, proteomics, and sequence-based typing. Professor Sintchenko's other qualifications include an MBBS and he is also a FRCPA and FACHI.

DR MEI SING ONG

Dr Mei-Sing Ong completed her PhD in Medicine in 2011, and is now a Postdoctoral Research Fellow at Harvard, as well as a NHMRC Early Career Fellowship recipient. In addition to patient safety informatics, which was the focus of her PhD, Dr Ong’s research interests include applying advanced informatics methodology to large clinical datasets to better understand chronic diseases and their varying manifestations and treatment efficacy. Dr Ong’s work has attracted over 470 citations, including a recent high-impact study on the economic and human costs of breast cancer screening. Dr Ong’s PhD work was awarded the prestigious best student paper award at the 2011 American Medical Informatics Association’s Annual Symposium, beating students from universities such as Stanford, Harvard and Vanderbilt – the first Australian to ever achieve this distinguished honour. Dr Ong’s other qualifications are a Bachelor of Computer Engineering (BE) and a Master of Biomedical Engineering (ME).

DR ROSEMARIE SADSAD

Dr Rosemarie Sadsad completed her PhD in Medicine in 2012 and is now a Hospital Scientist/Postdoctoral Research Fellow at the Centre for Infectious Disease and Microbiology. Her research interests are in translational pathogen genomics and informatics. She has worked on the automated synthesis and reporting of “big health data”, technology for secure, remote sharing of medical images, and a clinical decision support system for the treatment of behavioural and psychological symptoms of Dementia. Her PhD developed a policy evaluation tool to simulate infection control policies for reducing hospital acquired infections. This tool informed infection control policies for a Sydney hospital and is now used as a staff and student education tool. She is a member of the Marie Bashir Institute for Infectious Diseases and Biosecurity Pathogen Genomics team and the National Public Health Laboratory Network Expert Advisory Group on Whole Genome Sequencing. She is currently developing an automated genomics surveillance system for drug-resistant, healthcare associated infections. Dr Sadsad’s other qualifications are a Bachelor of Computer Engineering (BE) and a Master of Biomedical Engineering (ME).
Key performance indicators

ANNUAL INCOME 2000-2015

PUBLICATION OUTPUT AND HEADCOUNT 2000 - 2015
Our funders and collaborators

**OUR FUNDERS**

We are grateful to our partners and funders for their ongoing support of our research programs. CHI’s research has been supported by the following organisations and we are also grateful for ongoing support and funding from Macquarie University and previously from the University of NSW where we first began.

- Australian Commission on Safety and Quality in Healthcare (ACSQHC)
- Australian National Data Service (ANDS)
- Australian Research Council (ARC)
- Cancer Australia
- Cerebral Palsy Institute
- Department of Health and Ageing
- Gold Coast Hospital and Health Services
- HCF Health and Medical Research Foundation
- International Business Machines Corp (IBM)
- Macquarie University
- MSD Australia
- National Breast Cancer Centre (NBCC)
- National e-Health Transit Authority (NeHTA)
- National Health and Medical Research Council (NHMRC)
- National Health Call Centre Network (NHCCN)
- National Institute of Clinical Studies (NICs)
- National Prescribing Services (NPS)
- Novo Nordisk
- NSW Health
- Ramaciotti Foundation
- Sax Institute
- Smart Internet Technology CRC
- South Eastern Sydney Area Health Service (SESIAHs)
- St Vincent’s Clinic Foundation
- Unisearch Expert Services UNSW
- University of NSW
- University of South Australia

**OUR COLLABORATORS**

We collaborate widely with national and international agencies, state and commonwealth health agencies, hospitals, universities, other research institutes and industry. Here’s a snapshot of our collaborators over the last 15 years.

**NATIONAL**

- Austin Hospital, Melbourne
- Australian Commission on Safety and Quality in Healthcare
- Australian Patient Safety Foundation
- Blackdog Institute
- Bond University
- Macquarie University Hospital
- NSW Clinical Excellence Commission
- Prince of Wales Hospital
- Royal Hospital for Women
- Sax Institute
- Spokade Pty Ltd
- St Vincent’s Hospital
- Sydney University
- The George Institute
- The Kirby Institute
- Therapeutic Guidelines Australia
- University of Adelaide
- University of Melbourne
- University of NSW
- University of Technology
- Westmead Hospital

**INTERNATIONAL**

- Boston Children’s Hospital, USA
- Danish Centre for Health Informatics, Aalborg University, Denmark
- Harvard Medical School, USA
- Indraprastha Institute of Information Technology, Delhi, India
- Israel Université de Lille Nord de France-University of Tromso, Norway
- Johns Hopkins University, USA
- Memorial Hermann Center for Healthcare Quality and Safety, Houston, USA
- Schizophrenia Cochrane Review Group, Nottingham University, UK
- Stanford Centre for Biomedical Informatics Research Medicine, USA
- UK Medical Informatics Research Centre, Ben-Gurion University of the Negev, Israel
- University of Applied Sciences Weihenstephan-Triesdorf, Bavaria
Our current research streams

HEALTH INFORMATICS
Professor Enrico Coiera
Health informatics and digital health enables Australia’s health system to benefit from the digital revolution and to translate advances into modern health services. The goal for all this work is to improve clinical outcomes, health service safety and efficiency, and ultimately to ensure health system sustainability. Our high level goal is to help build a ‘learning health system’, where digital information is captured at every transaction, and analytics converts this into actionable knowledge, so that the system adapts and evolves over time. Each of the streams at CHI explores different building blocks for this learning health system.

PATIENT SAFETY INFORMATICS
Associate Professor Farah Magrabi
Healthcare information technology (IT) or e-health is integral to the modern day transformations of healthcare delivery systems to improve quality and safety. The focus of our patient safety research is to identify and classify IT incidents, to automate the capture and reporting of IT incident data, to investigate models for e-health safety governance. The use of information technology (IT) or digital health is integral to the modern day transformations of healthcare delivery systems to improve quality and safety. Our research is focussed on monitoring the safety of digital health using reports of critical incidents and automated methods for surveillance of IT systems. We are also investigating models for the safety governance of digital health. Our patient safety classification system adopted by the National Health Service (NHS) in Wales and used by UK and US governments, 2012.

CONSUMER INFORMATICS
Dr Annie Lau
Dr Annie Lau leads the Consumer Informatics team which focusses on those with the highest stake in our healthcare system – patients and healthcare consumers. Her research program investigates the ‘impact’, ‘design’, and ‘science’ of Information and Communications Technology (ICT) on consumers, patients and their carers. The team have developed Healthy.me, a research platform which allows individuals to connect with health services, peers, information sources, and tools to manage their health together with a mobile app for self-management and consumer engagement. They are also researching how patients and consumers use social media for health purposes (i.e. e-health sociology), and examining ways for “social network interventions” to change the network around us to achieve better health outcomes.
CLINICAL DECISION SUPPORT
Dr Guy Tsafnat
The Computable Evidence Lab (CEL), led by Dr Guy Tsafnat, researches, develops and evaluates software tools that help clinicians make effective and evidence-based decisions. These tools include automation of sub-tasks of evidence synthesis, such as the use of machine learning to improve evidence gathering and appraisal and the use of natural language processing to automatically summarise clinical texts. In addition, the team is integrating such software tools into workflows that automatically keep the evidence up-to-date at all times. The team is pushing the envelope on evidence synthesis research by investigating methods for combining evidence from diverse and heterogeneous sources including the scientific literature, clinical records, genetics and more.

EVIDENCE SURVEILLANCE
Dr Adam Dunn
The Evidence Surveillance team, led by Dr Adam Dunn, develops new ways to measure and mitigate biases in evidence-based medicine, spanning the entire process of evidence-based medicine from the design and undertaking of clinical trials through to the representation of evidence in the public domain. The team have expertise in data mining, clinical epidemiology, network science, and machine learning. Currently, the team, researched new methods to support the automatic detection of reporting biases in clinical evidence and used a new system of evidence surveillance to sample health information consumption on Twitter, which will be used to support public health practices.

HEALTH ANALYTICS
Dr Blanca Gallego-Luxan
The Health Analytics Lab focuses on developing and testing new analytic tools to support learning health care systems. The availability of digital biomedical data and the ability to collect, store and analyse has transformed healthcare into a learning system which delivers information in real time at the point of care. The Lab, led by Dr Gallego Luxan is developing and testing models of learning systems for future electronic health record systems, providing clinical decision-support systems which impact on patient safety and quality of care. Our core strength lies in the combination of deep analytic and computing theory and methods with understanding of clinical decision support systems.
Clinical resources, technologies and tools

**HEALTHY.me**
Healthy.me is a personal health management system which allows individuals to connect with health services, peers, information sources, and tools to manage their health. Currently a research platform – web-based and mobile app platform (iOS, Android). Healthy.me is the next-generation technology to improve health behaviours and outcomes. Clinical trials of Healthy.me have been conducted in: asthma, in-vitro fertilisation, influenza vaccination, sexually transmitted infection, breast cancer management, physical and emotional well-being. Healthy.me technologies were commercialised and launched through a start-up venture in 2015.

CONTACT DR ANNIE LAU FOR MORE INFORMATION.

**QUICK CLINICAL**
Quick Clinical is a free federated meta-search engine suitable for clinicians and researchers. Quick Clinical connects to several search engines, queries each one in parallel, and collates the results. In addition, Quick Clinical offers a specialised query interface and pre-specified templates for search strategies tailored for the most common clinical queries such as ‘therapies’, ‘diagnostics’, ‘treatment options’ and ‘patient education’. The technology was commercialised in partnership with New South Innovations in 2005.

TRY QUICK CLINICAL HERE
qc.aihi.mq.edu.au

CONTACT DR GUY TSAFNAT FOR MORE INFORMATION.

**TECHWATCH**
TechWatch is an online system for general practitioners to monitor problems with digital health technologies in their practice that are creating risks for patient care. TechWatch was tested in practices across Australia over a 19-month period between 2012-2013 and is currently under further development. Information collected though TechWatch is used by researchers to gain a better understanding of how to improve the safety of using information technologies in clinical practice. Our findings guide the safe design and use of digital health technologies in general practice.

CONTACT ASSOCIATE PROFESSOR FARAH MAGRABI FOR MORE INFORMATION.
RAC
RAC (Repository of Antibiotic resistance Cassettes) is a free online application that allows microbiologists to browse and explore the gene cassette repository, annotate the cassette array sequences using our knowledge base and the Attacca annotation engine, and contribute new cassettes not yet in the database and obtain unique names for them. RAC includes the world’s largest knowledge base for antibiotic resistance bearing gene cassettes.

TRY RAC HERE
rac.aihi.mq.edu.au/rac

CONTACT DR GUY TSAFNAT FOR MORE INFORMATION

DOXIEVE
Doxieve is a Search Engine Results Page (SERP) for thousands of documents which assists researchers evaluate whether a systematic review is feasible or viable for a research hypothesis. Using Doxieve you can find relevant documents from search pages (eg Google) and from loading local data registries/repositories and simultaneously look at all of the results. The results are presented in a dynamic visual tree map based on labelling rules applied to each document and through which you can drill down to subsets of relevant data based on the rules you have entered. Each label is visualised in a coloured square on the tree map with its size reflecting the number of documents that contain that label.

CONTACT DR GUY TSAFNAT FOR MORE INFORMATION

ESuRFr
ESuRFr is the world’s first automatic citation tracking tool for medical evidence. It extracts citations from PDFs, finds them on the internet, downloads PDFs and can repeat the process as needed. ESuRFr can also conduct Backward Citation Tracking - finding papers that cite relevant literature. While citation tracking has been demonstrated to improve evidence discovery and is considered best practice in evidence based medicine, it is rarely done due to its complexity and tedious nature.

CONTACT DR GUY TSAFNAT FOR MORE INFORMATION
## Our staff

As at Dec 2015

<table>
<thead>
<tr>
<th>NAME</th>
<th>POSITION</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DIRECTOR/PROFESSOR</strong></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Coiera, Enrico</td>
<td>Director CHI</td>
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<td><strong>ASSOCIATE PROFESSOR</strong></td>
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<tr>
<td>Magrabi, Farah</td>
<td>Associate Professor</td>
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<td><strong>SENIOR RESEARCH FELLOWS</strong></td>
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<tr>
<td>Dunn, Adam</td>
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<td>Lau, Annie Ying Shan</td>
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<tr>
<td>Waldie, Jenny</td>
<td>Business Manager</td>
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<td>Tsiros, Denise</td>
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<td>Shi, George</td>
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<tr>
<td>Raichand, Smriti</td>
<td>Research Assistant</td>
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<tr>
<td>Camphausen, Christoph</td>
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<tr>
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<tr>
<td>Hannan, Terry</td>
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<td>Roffe, David</td>
<td>Visiting Fellow</td>
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</tbody>
</table>
Key staff

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