



INM373

RESEARCH METHODS & PROFESSIONAL ISSUES (RMPI)

Academic excellence for
business and the professions

LECTURE 1. INTRODUCTION

Dr Ernesto Priego, Module Leader
Ernesto.Priego.1@city.ac.uk

Department of Computer Science
Centre for HCID

YOUR MODULE LEADER

Dr Ernesto Priego

ernesto.Priego.1@city.ac.uk

Office: A208 (HCID, College Building)

Appointments via City Outlook Calendar app (use scheduling function)

Course officer: David Mallo-Ferrer (all Admin!)

RMPI

Module code: INM373

Postgraduate Module

Core to *all* Computer Science

postgraduate programmes

The Moodle Site is your home:

<https://moodle.city.ac.uk/course/view.php?id=33362>

BOOKMARK IT!

OBJECTIVES TODAY

1. Get to know each other
2. Introduce the module
3. Discuss some approaches to research
4. Persuade you that research is important and provides some options for you
5. Persuade you to come to RMPI lectures and do the readings and activities!

TIME WILL PASS.

WILL YOU?

(don't just focus on the clock)

AUTUMN
EQUINOX
TODAY

(shorter days and cooler nights ahead)

KEY FOR
SUCCESS?

ENGAGEMENT



Brian Eno
@dark_shark

Following



"A mind is like a parachute. It doesn't work if it's not open". - Frank Zappa

1:05 AM - 3 Oct 2017

279 Retweets 559 Likes



9

279



559



Eno, B. [dark_shark]. (2017, Oct 03). "A mind is like a parachute. It doesn't work if it's not open". - Frank Zappa [Tweet]. Retrieved from https://twitter.com/dark_shark/status/915004930397683712 (Accessed 3 October 2017).

LEARNING RMPI



LEARNING RMPI

10 Lectures: 1hr 50 mins each

Endless hours of independent study

If you are looking for textbooks, I suggest the following two volumes:

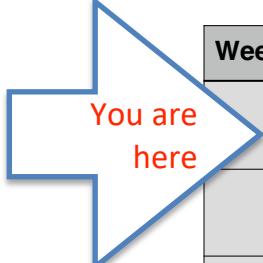
Researching information systems and computing by Briony Oates (2006); ebook available via City Library at <http://tinyurl.com/y49o6ffs>

Projects in computing and information systems: a student's guide by Christian Dawson (2015); ebook available via City Library at <http://tinyurl.com/yyacyc2v>

<http://moodle.city.ac.uk/>

A COLLECTIVE, COLLABORATIVE MODULE

RMPI 2019 Weekly Lectures



Week	Topic	Lecturer
1	Intro to RMPI	Ernesto Priego
2	Creativity	Stephann Makri
3	Literature Review	Ernesto Priego
4	Mixed Methods	Simone Stumpf
5	Quantitative Methods I	Nikos Komninos
6. Reading Week	No lecture	N/A
7	Quantitative Methods II	Andrey Povyakalo
8	Qualitative Methods	Alex Taylor
9	Design & Build	Cristina Gacek
10	Research Ethics	Ernesto Priego
11	Project Planning and Proposals	Course Directors

ASSESSMENT – INDIVIDUAL COURSEWORK

- FINAL TASK -**100% Project Proposal**

submitted: end of term 2 – April 2020

Exact deadline date and time TBC

RMPI: OBJECTIVES

What is research?

What do I have to do?

How will I do this?

Get the skills to inform a Project Proposal

- ★ **How do I know what's known?**
- ★ **creativity** – research question and objectives
- ★ **systematic design**
- ★ **robust methods [systematic & repeatable]**
- ★ **safety** – no harm done or discomfort felt
- ★ **the law** – act appropriately at all times
- ★ **planning**

RESEARCH

- Methods
- Professional *Issues*

MSc - Master of Science

"RESEARCH IS A PARTICULAR
KIND OF EVERYDAY THINKING"

– Briony J.Oates (2006: 4)

RESEARCH

“creative work undertaken on a systematic basis in order to increase the stock of knowledge ... and the use of this stock of knowledge to devise new applications.”

The Frascati Manual - OECD (2002)



RESEARCH

“the creation of new knowledge,
using an appropriate process,
to the satisfaction of the users of the research”

Briony Oates (2006, p.7)

analysis, development and use
of computer-based products

NOBEL PRIZE-WINNING RESEARCH!

home > science

Nobel prizes  Why discovering gravitational waves was a big deal - video


↳ 192

Fred McConnell and Josh Strauss, Source: Guardian

 @fredmcconnell

Tuesday 3 October 2017 15.14 BST



Ad · 0:06 ⓘ Visit Advertiser's Site ▾

Video will play after ad

0:08 / 0:15

Gravitational waves are ripples in the fabric of spacetime and were anticipated by

<https://www.theguardian.com/science/video/2017/oct/03/why-discovering-gravitational-waves-was-a-big-deal-video>

WE CAN BE HEROES



Black hole picture captured for first time in space breakthrough

[Read more](#)

The [first visualisation of a black hole](#) looks set to revolutionise our understanding of one of the great mysteries of the universe. And the woman whose crucial algorithm helped make it possible is just 29 years old.

Dr Katie Bouman was a PhD student in computer science and artificial intelligence at the Massachusetts Institute of Technology (MIT) when, three years ago, she led the creation of an algorithm that would eventually lead to an image of a supermassive black hole at the heart of the Messier 87 galaxy, some 55m light years from Earth, being captured for the first time.

SPECTATOR
INDEX

The Spectator Index
@spectatorindex



IMAGE: Reaction of Katie Bouman, who led the creation of an algorithm to produce first image of black hole.

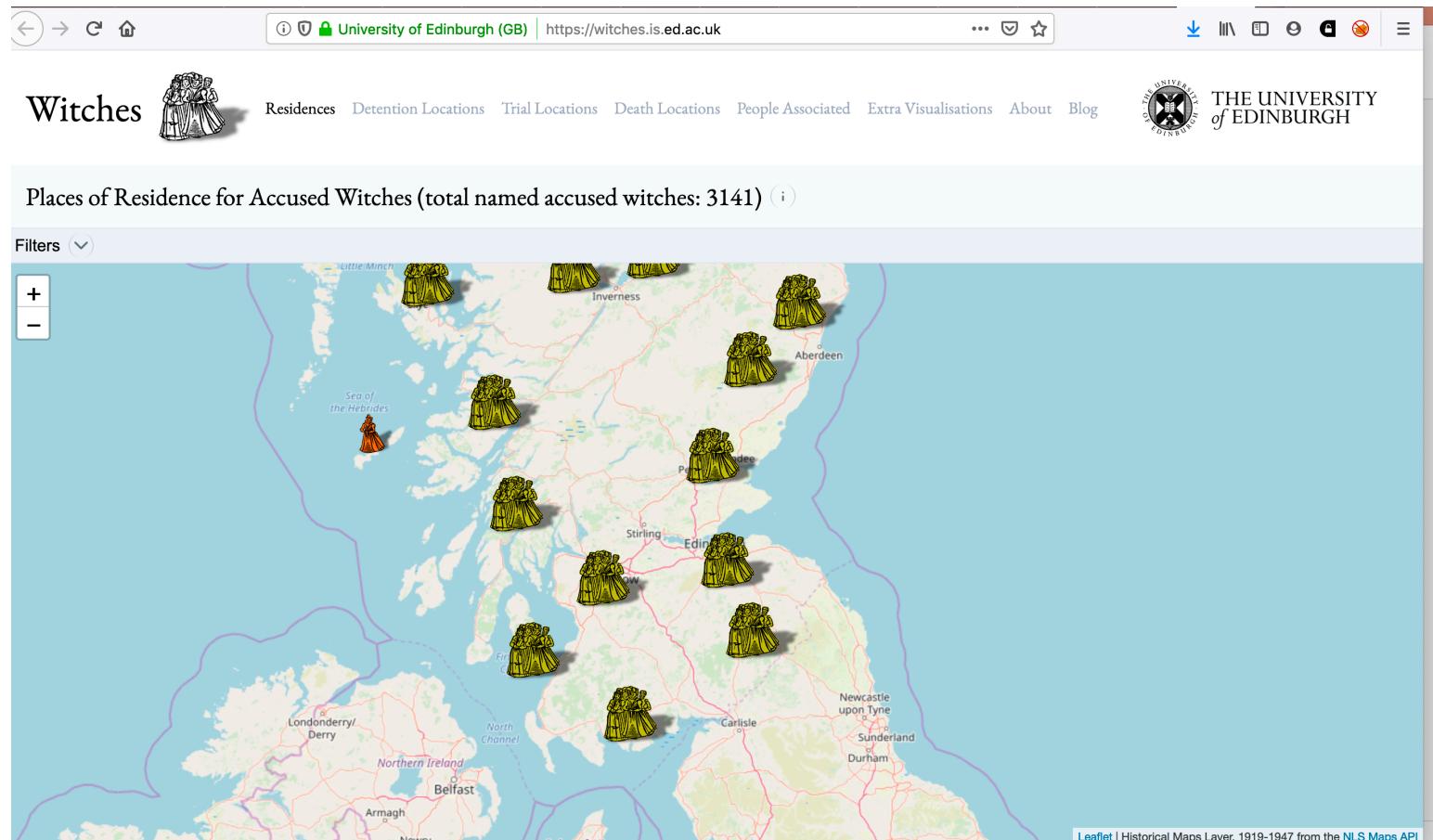


8,519 1:15 AM - Apr 11, 2019



<https://www.theguardian.com/science/2019/apr/11/katie-bouman-black-hole-photo>

OLD OPEN DATA; NEW DATA; NEW INSIGHTS



<https://witches.is.ed.ac.uk/>

RESEARCH: FROM DATABASE TO COMIC BOOK...

CITY UNIVERSITY LONDON

The Suffolk Brokerage

skillsforcare

CareNShare
sharing best practice across the older adult care sector

In which work setting might this situation be found?
(Choose as many as needed)

Residential/nursing home Acute care
 Live-in care Day services
 Domiciliary/hourly care/sheltered housing Other

What is your role?

Caret/senior carer Housekeeping/Domestic staff
 Manager GP
 Activities staff Specialist (eg OP/PT/SALT/SW)
 Catering/kitchen Other

Enter a suitable name/title for this case

Please describe the situation

How did this situation make you feel?

carenshare.city.ac.uk/casedetails.php

CareNShare

Back to other matched good care practices

Reflect on how the different people experienced the situation below, and use their care plan to create a care plan for your current situation. You can also use the creative guidance at the bottom of the page to help you.

Alarmed by reflections

Create PDF

The Situation

 When my husband James who is living with dementia, saw his reflection in television screens and window glass, he would interpret this as other people. He would get out of his chair, point, wave his arms, glare and shout "Go, gone away!" But if you shout at your reflection what does it do - it shouts back. James would race over to the windows and, still shouting, bang on the glass. I would try and comfort him, saying "there's nobody there" and "there's nothing to worry about," but often he could not be consoled. This case is adapted from *And Still The Music Plays* by Graham Stokes, pages 66-70

How Different People Experience The Situation

▶ How the staff member(s) felt
▶ How the older person might be feeling

Care Plan / Action Plans: Good Practice Examples

▶ The Environment

So the carers in this case...

tried to eliminate the chances of this happening by encouraging the resident to be in one of two rooms – a small, cosy lounge and the resident's bedroom – both of which they removed mirrors and TVs from, and kept the curtains drawn when dark. How could you implement this good practice in your care work?

And more generally, have you considered...

💡 how the older person's personality affects their wants and needs?
💡 which activities match the older person's interests?

Other considerations

For more learning, these external links might be useful...

💡 SCIE: elements friendly environments
💡 Kios Fund: Developing supportive design for people with dementia

Comments

(Contributed comments are moderated by our team before being made public. Click [here](#) to learn more.)

Add comment

© 2018 Creative Care Consultancy.



<http://carenshare.city.ac.uk/>

<https://blogs.city.ac.uk/parablesofcare/>

RESEARCH AT CITY! START SEARCHING



[Home](#) | [FAQ & Contacts](#) | [Browse by Year](#) | [Browse by Subject](#) | [Browse by Schools and Departments](#) | [Browse by City Author](#) | [Browse by Author](#)

[Login](#)

Welcome to City Research Online

City Research Online is a digital archive of research and enterprise output produced by City University London staff.

To search City Research Online's content, use the search options below. To browse its content, use the links in the menu bar above.

For further information and contact details, please see our [Frequently Asked Questions & Contacts](#) page.



Follow us on Twitter! For new additions to the repository, and for updates on the service, please click the Twitter icon.

Quick Search

[Advanced search](#)

[Latest Additions](#)

<http://openaccess.city.ac.uk/>

RESEARCH: CHARACTERISTICS

“the creation of new knowledge, using an appropriate process, to the satisfaction of the users of the research”

Briony Oates (2006, p.7)

- speedy?
- well founded: replicable, robust, confidence

RESEARCH: CHARACTERISTICS

everyday thinking ...

poor data

incomplete data

hasty thinking

good academic research ...

sufficient data sources

appropriate data sources

accurately recorded

thoroughly analysed

no hidden assumptions

conclusions well-founded

properly presented

... as judged by

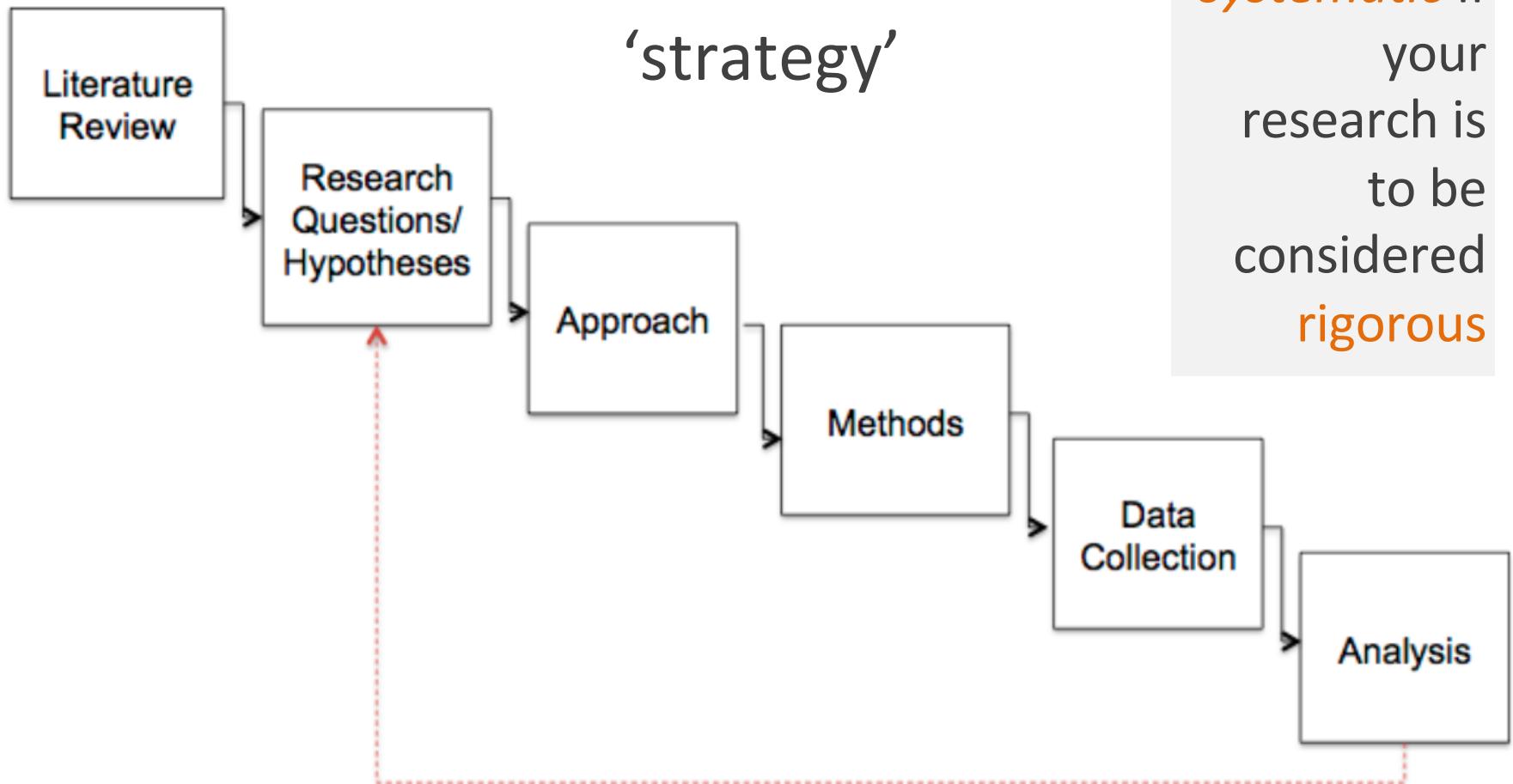
users of the research

RESEARCH: PROCESS

1. Identify a Problem
2. Gather Data
3. Analyse the Data
4. Interpret the Data
5. Gather more Data
6. Analyse the Data
7. Interpret the Data
8. Draw Conclusions
9. Consider Implications

RESEARCH: PROCESS

Must be
structured &
systematic if
your
research is
to be
considered
rigorous



RESEARCH: PROCESS – STRATEGIES

Survey	systematic means of obtaining data from a small group that is representative of a larger group
Design & Creation	new IT artefacts: application, process, model or method
Experiment	cause / effect: before / after measurements under controlled conditions
Case Study	focus on one instance for a rich and detailed insight
Action Research	researcher does something, reflect and cycle plan-act-reflect
Ethnography	take part in the lives of people in the field to understand their culture

REFLECT IN YOUR OWN TIME:

HOW ARE RESEARCH METHODS DIFFERENT ACROSS
DISCIPLINES?

DO I KNOW WHAT ARE THE MAIN METHODOLOGIES
EMPLOYED IN MY DOMAIN?

TAKE NOTES.

WE WILL DISCUSS THESE AGAIN ON WEEK 3.

SELF-GUIDED EXERCISE: READING

Researching information systems and computing by

Briony Oates (2006) - **chapters 1-3**

ebook available via City Library at

<http://tinyurl.com/y49o6ffs>

Revision Slides on Moodle: The 6 Ps of Research

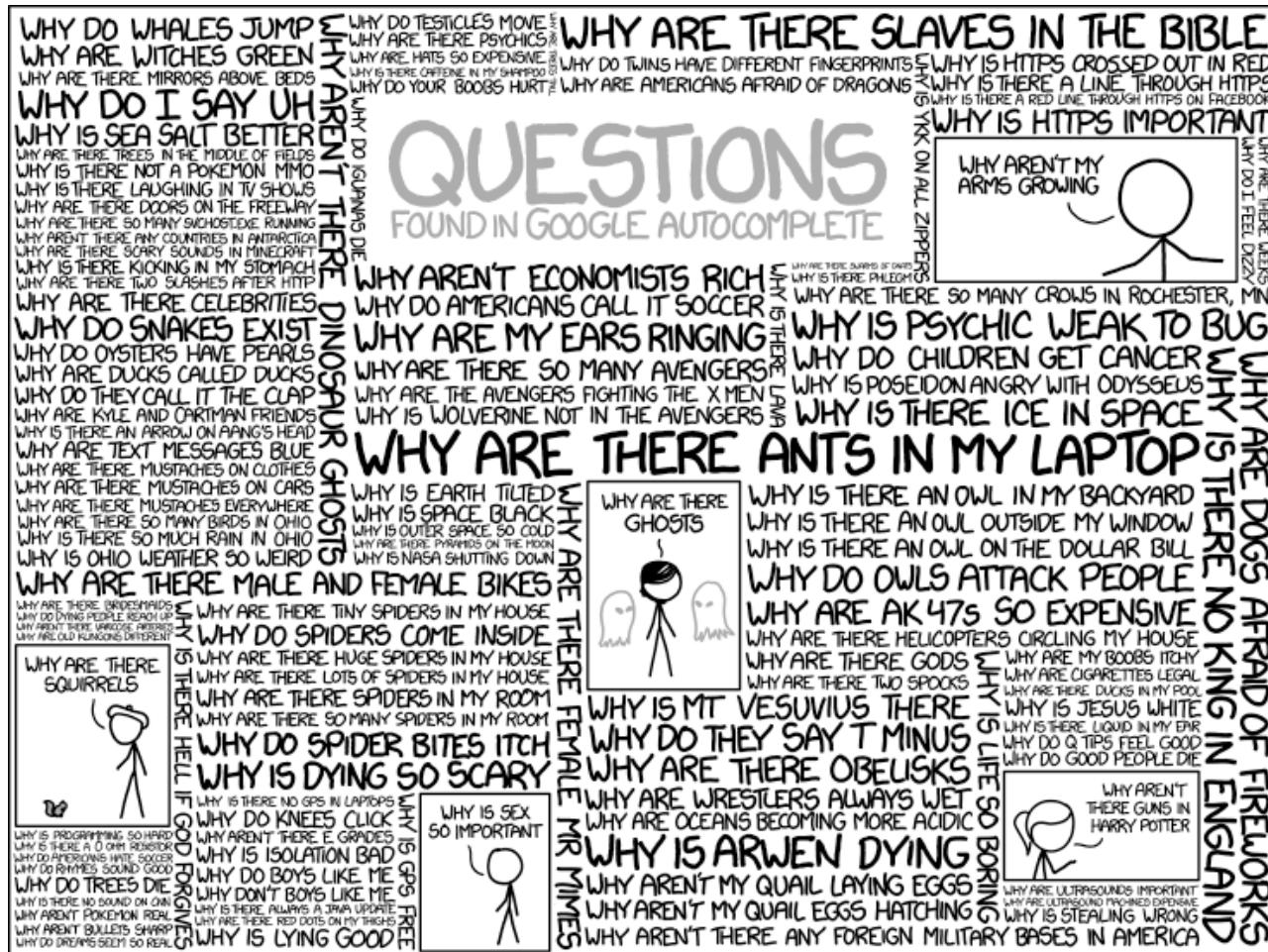
IMPORTANT: ENGAGE TO SATISFY!

You're doing an MSc

RMPI is a non-compensatable core module

ENGAGE

RMPI is the difference between PGCert & MSc



IT'S A LONG WAY



TO THE TOP

(IF YOU WANT TO GET YOUR MSc)