



RSSC 2022
Abstract Workshop
23.3.22/30.3.22

Chairs Dr Suman Lodh, Dr Paula Nottingham
RDA Sofia Atsopardi



Research Students Summer Conference 2022

Knowledge in Action

The Research Students Summer Conference 2022 Steering Committee has chosen this year's theme to align with our new Middlesex University (MU) Strategy 2031 'Knowledge into Action'.

We think the theme 'knowledge in action' is a great way to share how you are using your doctoral research to produce greater impact and innovation within practice. **For example, within the various disciplines, your research in your abstract / paper or poster presentations could consider the health and well-being of our society and look for new discoveries and new evidence that underpins social justice. Knowledge in action looks for impact that goes beyond theoretical debate to support the use of lifelong learning elements such as social, economic and personal goals to create impact for people, organisations, and policy.**





What does 'Knowledge in Action' mean to you?



What does 'Knowledge in Action' mean to you?

Incorporate what you see as 'Knowledge in Action' into your submission for RSSC 2022 about your research.

What does 'Knowledge in Action' mean to you?



- The abstract looks at potential outcomes, some of this research has not been carried out yet or some aspects of the research project are still ongoing.
 - for example - early research might concentrate on the literature review, later research on emerging or final outcomes.
- The intention is that the theme for the conference could be embedded into your own work to enhance some of the points you wanted to communicate.
- You can still talk about the research design and your experience as a part of the presentation.

What is an abstract?

- An abstract is a brief piece of writing to explain or summarise your research. This year we have asked for a 350 words that can be uploaded as text or as a pdf if there are symbols or images. The abstract is reviewed before the conference, and you will receive advice and comments.

Things to consider in your Abstract

- what has challenged you?
- link the debate to what you have done, what has been done?
- what has not been done?

What is a poster and what is a paper?

- At the conference your work will be shown as poster or paper.
- The 'academic' poster represents your work in a 1 page format – these can be quite simple or more elaborate dependent on disciplinary conventions and stage of research
- The paper presents the work in a 15 minute slot with 5 minutes Q&A. conventions of using a PowerPoint slides to explain and discussion the ongoing research project dependent on the stage you are now undertaking.
- The poster format is recommended for first year presenters.

Refer to current strategic plan for ideas about how your work represents Knowledge in Action

The concept of 'knowledge in action' relates to our new Middlesex University 2031 strategic plan but relate to how your own research topic could ultimately impact the world around you.

Try to frame what you are doing to what you expect to contribute – link this to the ideas related to the University research themes.

Our Strategy to 2031

MIDDLESEX UNIVERSITY 2031:
KNOWLEDGE INTO ACTION

Integrating themes Strategic priorities Middlesex approach Community principles

We create knowledge and put it into action to develop fairer, healthier, more prosperous and sustainable societies. Our vision is to transform outcomes for individuals, communities and organisations and to empower people to change their lives. Our learning community has practice at the heart of what we do across education, research and knowledge exchange, and engagement. We work in partnership and bring people together to create solutions to complex problems.

ABOUT MIDDLESEX UNIVERSITY | A DIFFERENT KIND OF UNIVERSITY

Our integrating themes

- Equity and improvements in health and wellbeing
- Inclusive socio-economic development and enriching lives through culture
- Sustainability of communities and the environment

Find out more about where we focus >

The three new themes for MU 2031 are:

Equity and improvements in health and wellbeing

Inclusive socio-economic development and enriching lives through culture

Sustainability of communities and the environment

Refer to online information

The screenshot shows the UniHub website for the Research Students' Summer Conference (RSSC) 2022. The page features a dark blue header with the Middlesex University UniHub logo and navigation icons. The main content area has a white background with a large image of a conference hall. Text on the page describes the RSSC as an annual event for all research students, highlighting the 2022 edition as a hybrid virtual and on-campus conference. A navigation bar below the image contains five red buttons: 'Call For Abstracts', 'Key Dates', 'Preparation Seminars', 'Keynote Speakers', and 'Social Media'. Below this is a section titled 'RSSC 2022 edition | Knowledge in Action | 22-23 June 2022' with a 'Welcome message from the Organising Committee'. A 'Chat with us' button is visible on the right side of the page.

Middlesex University UniHub

COVID-19 – Latest MDX updates and FAQs

Home › Study › Types of study › Postgraduate Research Degrees › Research Students' Summer Conference

Research Students' Summer Conference

SAVE THIS PAGE

Our Research Students Summer Conference (RSSC) is an annual event for all research students.

RSSC 2022 edition will be a hybrid (virtual and on-campus) conference to showcase the research being carried out by research students across the Faculties, our Collaborative Partner Institutions and our overseas campuses. It's an opportunity to share ideas, create fruitful collaborations and celebrate research.

Call For Abstracts | Key Dates | Preparation Seminars | Keynote Speakers | Social Media

RSSC 2022 edition | Knowledge in Action | 22-23 June 2022

Welcome message from the Organising Committee

Dear all RSSC 2022 participants,

Welcome to the International Research Student Summer Conference 2022 on 'Knowledge in action'.

We would like to thank everyone who contributed in previous years and helped make it such a great event. The RSSC is an annual event for

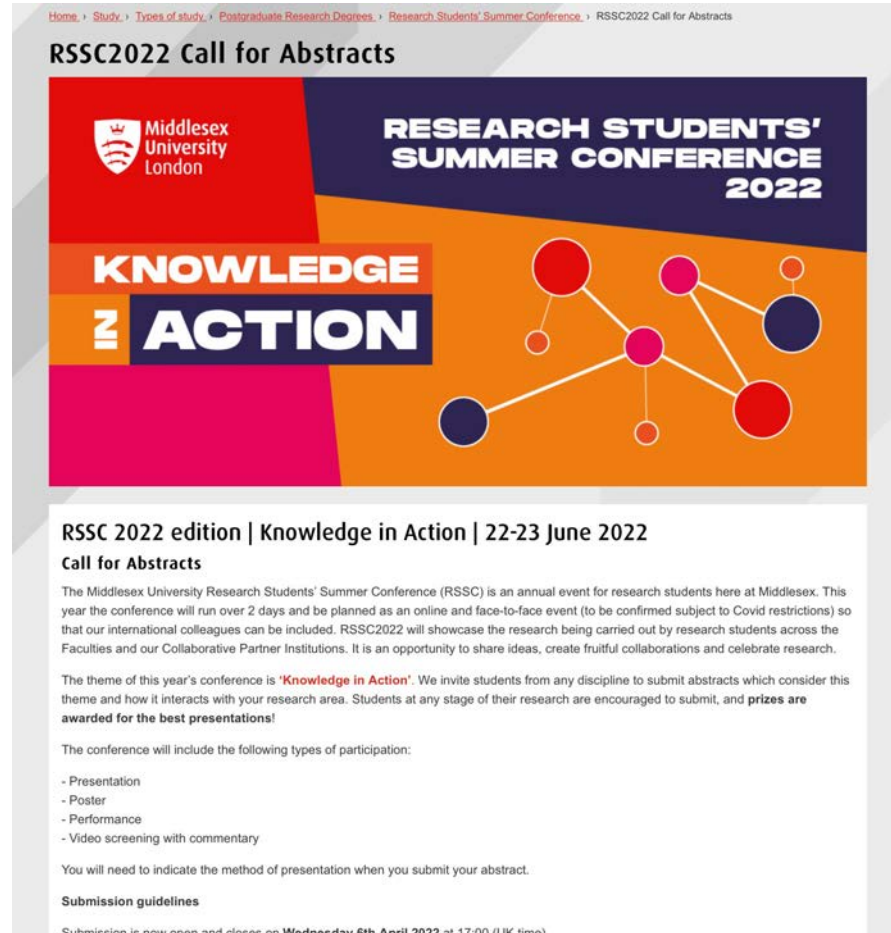
Chat with us

<https://unihub.mdx.ac.uk/study/types/research-at-middlesex/research-student-conference>

Refer to online information

Watch out for notices about and any extensions to the submission deadline.

Keep checking the online social media for any updates...



Home > Study > Types of study > Postgraduate Research Degrees > Research Students' Summer Conference > RSSC2022 Call for Abstracts

RSSC2022 Call for Abstracts

Middlesex University London

RESEARCH STUDENTS' SUMMER CONFERENCE 2022

KNOWLEDGE IN ACTION

RSSC 2022 edition | Knowledge in Action | 22-23 June 2022

Call for Abstracts

The Middlesex University Research Students' Summer Conference (RSSC) is an annual event for research students here at Middlesex. This year the conference will run over 2 days and be planned as an online and face-to-face event (to be confirmed subject to Covid restrictions) so that our international colleagues can be included. RSSC2022 will showcase the research being carried out by research students across the Faculties and our Collaborative Partner Institutions. It is an opportunity to share ideas, create fruitful collaborations and celebrate research.

The theme of this year's conference is '**Knowledge in Action**'. We invite students from any discipline to submit abstracts which consider this theme and how it interacts with your research area. Students at any stage of their research are encouraged to submit, and **prizes are awarded for the best presentations!**

The conference will include the following types of participation:

- Presentation
- Poster
- Performance
- Video screening with commentary

You will need to indicate the method of presentation when you submit your abstract.

Submission guidelines

Submission is now open and closes on **Wednesday 6th April 2022** at 17:00 (UK time)

<https://unihub.mdx.ac.uk/study/types/research-at-middlesex/research-student-conference/rssc2022-call-for-abstracts>

EasyChair is online to submit



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Session timeout! You have to log in again.

Email address or user name:

Password:

Log in

[Forgot your password?](#)

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[Create an account](#)

Follow the instructions to set up an account on EasyChair and upload your abstract.

https://easychair.org/account/signin_timeout#

Abstract advice – for journals but can be helpful to structure

- LOCATE - now a significant issue because – expand by up to 1 sentence
- FOCUS - in this paper I will focus on
- Anchor - what the paper draws on (I draw on) findings from a study of which use in order to show
- REPORT- the analysis of the findings show
- ARGUE the paper argues that and concludes by suggesting that – in a proposal state – this can be about anticipating certain outcomes

Thompson and Kamler (2013)

Abstract advice

- The position of the abstract is in respect to particular problems and issues encountered in the literature or in practice or in research
- Start with general issue of the abstract – it is a part of a conversation with ‘your field’ or area of practice, then move to specific methodology, conclusions, contribution
- Are you making general points and illustrating them with evidence?
- Review the draft - is it ambiguous what you are doing here – be explicit about what you are doing.

Thompson and Kamler (2013)

Refer to Abstracts from last year

RESEARCH STUDENTS' SUMMER CONFERENCE 2021

Programme and book of
abstracts



Author/s: Jack S. Suparman, Ajit J. Shah, Richard Bayford and Darshna Yagnik

Department: Natural Sciences

Title: Development of LC-MS/MS method for measurement of biomarkers for early detection and monitoring of sepsis.

Sepsis is a life-threatening condition that is caused by organ dysfunction due to dysregulated host-response to systemic pathogen infection. The most common sepsis diagnostic methods such as blood culture and molecular assays are often costly, time-consuming, and lack sensitivity. There is a need to develop alternative diagnostic methods which can produce faster results and aid clinicians in their decision making. The study aimed to develop and validate a tandem mass spectrometry (MS)-based approach that has the potential for the simultaneous measurement of multiple biomarkers in septic patients. Surrogate peptides were identified to represent sepsis protein biomarkers C-reactive protein and Procalcitonin for quantitation. Two different tandem MS modes: multiple reaction monitoring and parallel reaction monitoring were developed using triple quadrupole and Orbitrap mass spectrometer, respectively for measurement of fragment ions of the chosen surrogate peptides. The performance such as limit of detection and linear range of these two methods were compared. The result highlighted superiority of parallel reaction monitoring method developed using the Orbitrap compared to multiple reaction monitoring in the triple quadrupole. Detection of biomarkers in serum sample using MS remains a challenge due to the presence of high-abundance proteins. Immunocapture technique using magnetic beads adopted in this study greatly improved detection of sepsis biomarker in human serum and achieved up to 80% recovery. This study demonstrated that tandem MS coupled with upstream immunocapture using magnetic beads method can be used in the detection of biomarker of sepsis in human serum and has a potential to be adopted in clinical laboratory.

Word count 251 – 282 with title

Author/s: Cephas Mpungu

Department: Computer Science

Title: Investigating the implementation of Digital Forensics Readiness in Wireless Medical Networks using Blockchain Technology.

Security threats especially data breaches have increased in the healthcare sector over the past few years. These threats, coupled with the sensitivity of healthcare data, as well the GDPR's tough legislation regarding data breaches have intensified the need for Digital Forensics Readiness (DFR) within healthcare. DFR simplifies digital investigations whilst also enforcing the security structures of an organisation's network. Some researchers have proposed digital forensics readiness frameworks within Wireless medical networks but their proposals have suggested systems based on centralised logging mechanisms which may create single points of failure and compromise to evidential data. This presentation focuses on investigating an implementation of DFR in wireless medical networks using a decentralised evidence logging and management mechanism. The presentation will discuss a proposal to implement a blockchain technology-based logging facility for a tamper-proof management of evidential data. Light weight blockchain technology will be implemented at the evidence management layer in order not to affect the throughput of the network. The importance and novelty of the proposed work will also be discussed.

Wordcount 169

Department: Psychology

Title: Criminal Appeal Court Assessment of the Admissibility of Expert Forensic Evidence.

With forensic evidence frequently being presented in criminal proceedings, questions have been raised over which expert evidence should be admitted, how it should be used and whether it is reliable or valid. Focusing on DNA, Fingerprint and Digital forensic evidence, the present study set out to examine how the Criminal division of the Court of Appeal assessed whether expert forensic evidence (i) had a sufficiently reliable scientific basis and, (ii) whether it fell within the scope that the expert could give. 201 Criminal Appeal court Judgements (criminal division) taken from the British and Irish Legal Information Institute database (2010-2020) were analysed using a researcher devised coding scheme. The findings revealed that the courts considered the reliability of the scientific evidence in only 9.5% of cases and they questioned the credentials of only 7 DNA, digital or Fingerprint experts within 5 cases. In 69% of cases involving forensic evidence, appeal applications were dismissed. A higher percentage of cases involving digital evidence were dismissed compared to DNA and Fingerprint evidence. The courts questioned the credentials of experts at the trial more than at the appeal stage, as well as the credentials of experts representing counsel for defense rather than prosecution. Where the court of appeal does not consistently assess whether the forensic evidence has a sufficiently reliable scientific basis or whether it falls within the scope that the expert could give, this raises questions as to whether evidence admissibility decisions are consistently being justified.

Wordcount 242

Examples of posters



Tides and timing: the role of pheromones in rhythmic behaviour of *Anurida maritima*

Elise Michele Heinz, Martijn Timmermans and Steve Kett

Anurida maritima (Collembola), a seashore springtail, is a coastal arthropod up to 3mm in length. It is dark/slate blue in colour, and has a six segmented abdomen with one pair of legs on each of three thoracic segments. *A. maritima* are found in clusters or aggregations of up to several hundred on rocks or the surface of still water rock pools around upper intertidal Zones. At low tide they move down-shore, feeding primarily on dead molluscs and crustaceans.



Figure 1. *A. maritima* on beach, Wells-next-the-Sea, Steve Kett

Aggregation and circatidal rhythms



Figure 2. *A. maritima* tidal aggregation, Wells-next-the-Sea, Steve Kett

Adherence to circatidal rhythms is observed by many littoral species. These are endogenous cycles, synchronised with the tides and approximately 12.4 hours in length. Research has shown that *A. maritima* aggregate in response to a pheromone, migrating upshore at high tide to avoid inundation (Salmon *et al.* 2019).

Pheromones

Pheromones are chemicals produced and released into the environment by animals, triggering a response in or affecting the behaviour of members of the same species. They are capable of acting like hormones outside the body of the individuals that secreted them; and are used as a form of communication in:

- territory marking
- species and gender recognition
- searching for food and sexual partners
- stimulation of sexual behaviour
- triggering/controlling destructive interactions



Research questions

- is *A. maritima* continually responsive to an aggregation pheromone, or is it time/temperature/humidity/abiotic factor dependent?
- are aggregation pheromone responses and circatidal rhythms connected? If so, in what way?
- chemoperception processes - are pheromone molecules volatile (olfactory) and detected through antennae, or do they require direct contact (gustatory)?
- what is the solubility of the pheromone? What solvents can be used to extract and transfer it so we can observe *A. maritima*'s reactions?
- is the pheromone subject to ambient/photo/UV-degradation? How long does it remain detectable in its area of release?
- can the pheromone be isolated and structurally identified through chemical assay such as GC-MS?

In vitro aggregation

To confirm Manica *et al.*'s (2001) study concerning associations between aggregation and tide times, and responses to previously conditioned filter paper, animals collected at Maldon, Essex in October 2020 were observed in the lab. Specimens were kept in pots for four days to condition the filter paper, and a continuously-recording digital camera was used over five days to observe any connection between aggregation behaviour, time of day and tide times where sampling took place (Figure 3).



Figure 3. In vitro aggregations of *A. maritima* Pre-transplanted filter paper portions with aggregations are shown within the blue circles; non-aggregated animals in red. The time stamp corresponds with high tide at Maldon, Essex - 00:52 on 1st November, 2020 (www.tideforecast.org.uk)

High tide aggregation numbers for the five days were statistically tested using Manica *et al.*'s (2001) methods. Binomial testing (Minitab®18) where $n=30$, $p=0.00545$; indicating that the presence of *A. maritima* at these specific positions is statistically significant. Further analyses will also investigate aggregation patterns at different times, e.g. -1 hour after high tide when the animals would normally begin to move around and scavenge for food.

Chemoperception

To identify whether *A. maritima*'s aggregation pheromone molecules are olfactory or gustatory, the following experiment and apparatus are in development (Figure 4).

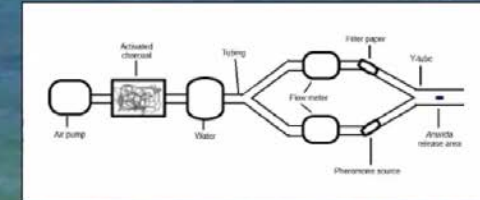


Figure 4. Y-tube olfactometer (adapted from Biasazin *et al.* 2018).

Pheromones will be collected on filter paper as described in the previous section. Air flow will be created by an aquarium pump, filtered through activated charcoal and humidified. Air will then be regulated at a 0.5 l/min flow-rate using flow meters (Biasazin *et al.* 2018) before passing through a pheromone source and a control chamber, giving the *Anurida* specimen a two-directional choice of path to follow - and ascertaining the mode of chemoperception.

References

- Biasazin T D, Chernet H T, Herrera S L, Bengtsson M, Karlsson M F, Lemmen-Lechell J K, Dekker T (2018) *Detection of volatile constituents from food lures by Tephritid fruit flies*. Insects 9(3): 119
- Manica A, McMechnan F K, Foster W A (2001) *An aggregation pheromone in the intertidal collembolan Anurida maritima*. Entomologia Experimentalis et Applicata 99: 393-395
- Salmon S, Rebuffat S, Prado S, Sablier M, Haese C, Sun J-S, Ponge J-F (2019) *Chemical communication in springtails: a review of facts and perspectives*. Biology and Fertility of Soils 55(5): 423-430



An Exploration of Women's Representation in Senior Leadership Positions in the English National Health Service

Research Question & Objectives: Does a Glass Ceiling Exist in the English National Health Service and, if so, what are the factors acting as barriers to women accessing senior leadership positions?

The research objectives are, to 1. Explore whether figures on female representation at NHS boards indicate a GC; 2. Discover, if a GC is proven, why it exists; and 3. Suggest recommendations to address any gender imbalance.

Andrew Atherton, School of Health, Social Care & Education

1. Introduction

Most meetings when I first joined the NHS



My first board meeting



The origin of this research into a glass ceiling (GC) in the English National Health Service (NHS), is derived from my own observations as a former NHS employee. Initially, most attendees at the meetings I went to were female managers, this contrasted with my first board meeting at which only one female Executive Director was present. This led me to question why, when women comprise 77% of the NHS workforce, do they constitute only 44% of leadership roles (NHS, 2016)?

Agenda for Change Pay Bandings



Female Managers outnumber men in all but the top two levels in the NHS.

2. Methods

Mixed Methods

QUANT + QUAL → Findings & Interpretations

- | | |
|--|---|
| <p>Quantitative:</p> <ol style="list-style-type: none"> 1. Review male / female composition of boards 2. Review number of applicants Vs. number of appointments for board roles | <p>Qualitative – Interviews:</p> <ol style="list-style-type: none"> 1. Five interviewees per group 1. Female NHS employees on the Nye Bevan Development Program 2. Female NHS employees at board level 3. Female NHS employees below board level 4. Male NHS employees operating at board level |
|--|---|

3. Results

Quantitative Findings:

- Women are underrepresented on NHS boards, especially CEO, Director of Finance and Medical Director positions.
- Women equally likely as men to apply for board level development programs.
- Women less likely to apply for board level positions, but more likely to be successful if they do apply.

Interview Findings

- Agenda for Change (the system for ensuring parity in salary bandings) is effective but can be gamed
- Recruitment into the NHS is a closed shop, and interview panels have unconscious biases.
- Gender discrimination was evident.
- Home life, especially childcare for women is a key barrier.
- Flexible working – a solution but not for executives
- Mentoring & networks are effective but not favoured by all.

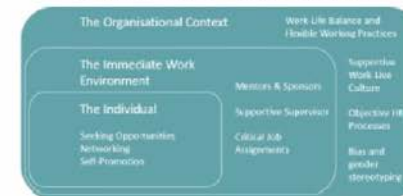
4. Analysis

The qualitative research demonstrated that more must be done to address the main barriers to gender equality, which are the responsibility for childcare and overcoming the 'old boys' network.' To ease the burden of childcare, organisations can implement job sharing and flexible working. The NHS advocates these measures for lower positions, but not at board level, due to the accountability and visibility required for executive positions. The main opportunity to breach the 'old boys' network', is for women to create their own networks, and by supporting each other through mentoring and signposting of employment opportunities.

5. Discussion

To address the barriers to female career progression the NHS ought to provide and help empower women to take advantage of a range of development opportunities and policies, which can help in meeting the needs identified by the Kenexa Career Progression Framework.

The Kenexa's Career Progression Framework



Source: Wichert (2012)

The Framework shows that several means of breaking the glass ceiling are within the reach of female employees (such as seeking out training courses, networks, and role models). My research suggested there needs to be a modification to the Kenexa framework to incorporate wider macro factors, including the role of government in driving forward initiatives, such as national frameworks for flexible working.

NEXT Steps

- **Look at your current work in terms of the Abstract**
- **Compose your Abstract summary within the word limit (350 words)**
- ***Discuss with your Supervisor***
- **Finalise and upload by the 6th of April – if it is done – upload now**
- **Keep checking the information about the conference and any news and any extensions <https://unihub.mdx.ac.uk/study/types/research-at-middlesex/research-student-conference>**
- **You should be hearing from the reviewer after Easter**

Links that might be of interest for the Abstract

- <https://www.blogs.hss.ed.ac.uk/pubs-and-publications/2019/04/08/abstract-writing-how-to-write-a-conference-proposal/>
- https://history.ncsu.edu/grad/conference_abstracts.php
- <https://conferenceinference.wordpress.com/2020/05/04/capturing-the-abstract-what-are-conference-abstracts-and-what-are-they-for-james-burford-emily-f-henderson/>
- <https://www.wcu.edu/WebFiles/PDFs/WritingConferencesrevision.pdf>

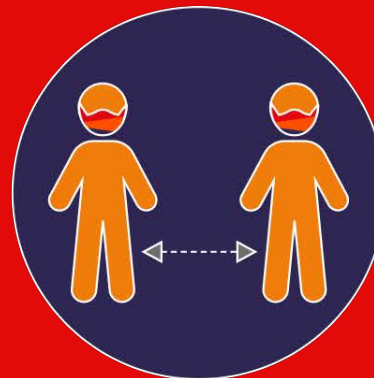
Links that might be of interest to get your started for the poster and paper presentations.

- https://unihub.mdx.ac.uk/_data/assets/pdf_file/0025/613852/Research-Conference-2021-Creating-a-good-poster.pdf
- <https://unihub.mdx.ac.uk/study/writing-numeracy/Resources-for-AWL/giving-presentations>
- <https://summerconferencemdx.wordpress.com/2021/07/06/rssc-2021-an-international-research-gathering/>

More advice will be on the main RSSC 2022 sites for the conference posters and paper presentations for the 22nd and 23rd June 2022 – so watch this space!

BE SAFE DURING CORONAVIRUS

WE'RE IN THIS TOGETHER



KEEP YOUR DISTANCE



WEAR YOUR FACE
COVERING



RESPECT THOSE
EXEMPT FROM WEARING
A FACE COVERING



WASH YOUR HANDS



STAY HOME IF UNWELL