

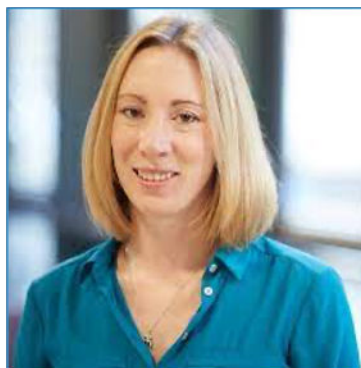


**Welcome**

# UK-HyRES: Research Challenges in Hydrogen and Alternative Liquid Fuels



**Principal Investigator**  
**Prof Tim Mays**  
University of Bath



**Co-Investigator**  
**Prof Rachael Rothman**  
University of Sheffield



**Co-Investigator**  
**Prof Shanwen Tao**  
University of Warwick



# SUMMARY

This short presentation provides an update (@ 2nd February 2023) of

**Co-ordinator** for Research Challenges in  
Hydrogen and Alternative Liquid Fuels

*the aim of which is to build a*

**Hub** for Research Challenges in  
Hydrogen and Alternative Liquid Fuels



## HUB VISION

- ❖ Flagship UK hub for hydrogen research
- ❖ Unique network and collaboration for stakeholders
- ❖ Addressing critical needs to achieve Net Zero
- ❖ Global centre of excellence



# MANAGEMENT TEAM



**Project Manager**  
**Dr Yankı Keleş**  
University of Bath



**George Neville**



**Project Support**  
**Carla Teale**  
University of  
Sheffield



**Matt Phillips**  
University of Warwick

## Facilitation and Visualisation

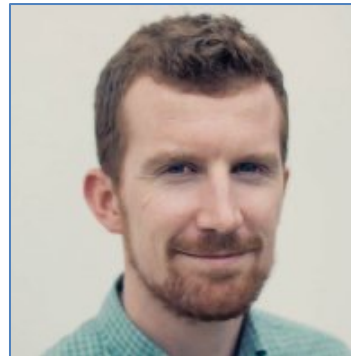




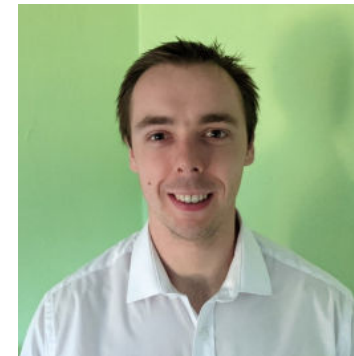
## RESEARCHER TEAM



**Research Support**  
**Dr Rajan Jagpal**  
University of Bath



**Research Support**  
**Dr Diarmid Roberts**  
University of Sheffield



**Research Support**  
**Dr John Humphreys**  
University of Warwick



# SPECIAL ADVISOR TEAM



## CO-ORDINATION ACTIVITIES

- Ongoing community engagement including 1-2-1 interviews with academic, industry and policy leaders in H&ALFs
- Strong engagement with Systems Co-ordinator
- Further analysis / synthesis of all engagement outcomes
- Funded Phase 2 co-ordination from 1 October 2022 to 31 April 2023
  - Activities until proposed Hub start include in-person Roadshows with a focus on regional industrial engagement around the UK
- Re-arranged Showcase held on 21 October 2022; report online
- Hub proposal under review (interview on 22 March 2023) after submission on 2 November 2022
- Regular meetings of Co-ordination, Hub and EPSRC teams



# HUB PROPOSAL SUMMARY



- Five years from 1 May 2023 with review points
- £10.0M initial EPSRC funding (= 80 % FEC)
- Significant contributions (£9.2M) from partner universities
- At least £3.0 M leveraged funding by Hub start
- At least a further £7.0M leveraged funding during Hub
- Over 80 companies and other organisations already associated with HyRES
- Hub Costs: Operations + Research Themes + Projects
- Core projects at start plus £4.7M FEC flexible fund for projects during Hub
- Four TECHNICAL Themes: Production, Storage, End Use , ALFs
- Four CROSS-CUTTING Themes: Economic, Environmental, Social, Safety
- Plans include additional UKRI and other funding, serious international engagement and looking to 5, 10, 27+ years beyond Hub

# INITIAL HUB STRUCTURE

## Technical Themes

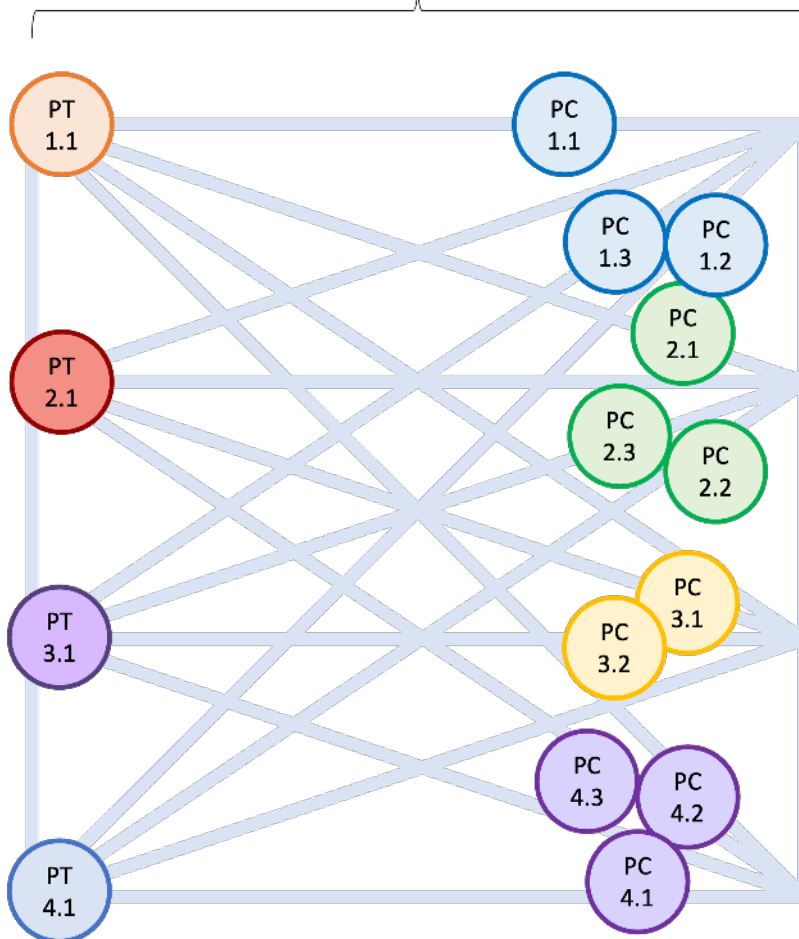
**TT1:**  
**Production**  
John Irvine

**TT2:**  
**Storage & Distribution**  
Tim Mays

**TT3:**  
**End Use**  
Qiong Cai

**TT4:**  
**Alternative Liquid Fuels**  
Shanwen Tao

## Core Projects



## Cross-cutting Themes

**CT1:**  
**Economic**  
Paul Dodds

**CT2:**  
**Environmental**  
Rachael Rothman

**CT3:**  
**Social**  
Chris Jones

**CY4:**  
**Safety**  
Joan Cordiner

Co-I



Director & PI



Co-I



Co-Director & Co-I



Co-I



Co-Director & Co-I



Co-I



Co-I



# HUB'S STRATEGIC ADVISORY BOARD

## Co-chairs



**Prof Marcus Newborough**  
ITM Power



**Prof Joe Howe**  
University of Chester



**UK-HyRES**

<https://ukhyres.co.uk>

## Mini Showcase: GKN Aerospace Partnership

- Huge interest in decarbonising aerospace including airports
- Jet Zero, ATI, ...
- Close links between GKN and Bath
- Composites, hydrogen storage, ...
- 15 PhD studentships
- EPSRC Prosperity Partnership
- Support for UK-HyRES



# Roadshow Afternoon Session Table Allocations

<b>Table 1</b>	<b>Production</b>	<b>John Irvine</b>
<b>Table 2</b>	<b>Storage &amp; Distribution</b>	<b>Tim Mays</b>
<b>Table 3</b>	<b>Alternative Liquid Fuels</b>	<b>Shanwen Tao</b>
<b>Table 4</b>	<b>Nuclear</b>	<b>Allan Simpson</b>