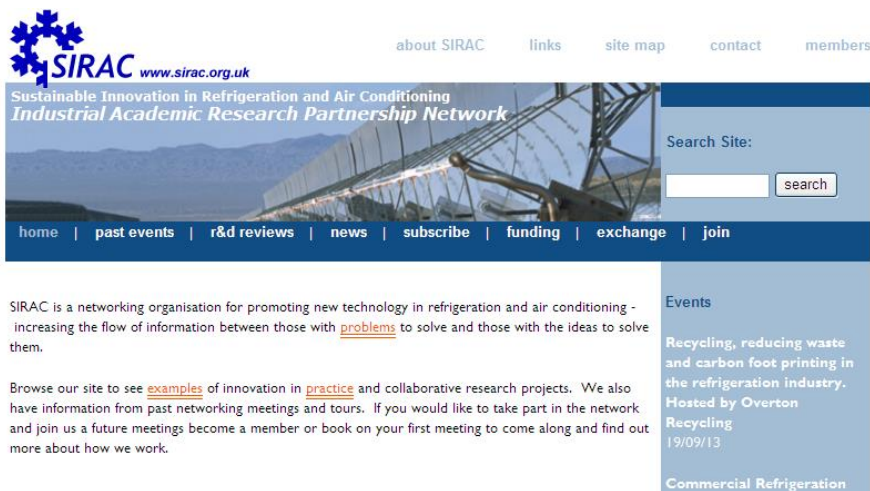


SIRACH-(Sustainable Innovation in Refrigeration, Air Conditioning and Heat Pumps)

Judith Evans, Metkel Yebiyo & Graeme Maidment



- A dissemination network
- Sustainable Innovation in Refrigeration, Air Conditioning and Heating
- Built on SIRAC – a successful Network with 400 members, website, etc



The screenshot shows the SIRAC website homepage. At the top left is the SIRAC logo and the URL www.sirac.org.uk. Below this is the tagline: 'Sustainable Innovation in Refrigeration and Air Conditioning Industrial Academic Research Partnership Network'. A navigation menu includes links for 'about SIRAC', 'links', 'site map', 'contact', and 'members'. A search bar is located on the right side of the header. The main content area features a large image of a solar panel array. Below the image is a navigation bar with links: 'home', 'past events', 'r&d reviews', 'news', 'subscribe', 'funding', 'exchange', and 'join'. The main text describes SIRAC as a networking organization for promoting new technology in refrigeration and air conditioning, increasing the flow of information between those with problems to solve and those with ideas to solve them. It also mentions examples of innovation in practice and collaborative research projects. A sidebar on the right titled 'Events' lists 'Recycling, reducing waste and carbon foot printing in the refrigeration industry. Hosted by Overton Recycling 19/09/13' and 'Commercial Refrigeration'.



What are our deliverables?

- Disseminate i-STUTE results via Network meetings.
- Hosting Network meetings in the UK and overseas.
- Provide regular features in a key monthly journal.



Past & Future Meetings

Event name	Date	Subject	Attendees
Emerson Technologies, Northern Ireland	25 February 2014	Heat pump and compressors	29
Spirax Sarco, Cheltenham	21 May 2014	Heat powered cycles	36
ICCC International Conference - London	25 June 2014	Challenges to implementing sustainability	35
Mitsubishi Electric – Edinburgh	2 September 2014	Innovation in Air Conditioning and Heat Pumps	32
Sainsbury’s Supermarket – Leicestershire	22 October 2014	Commercial refrigeration, cooling and heating	50
Climate Center – Leamington Spa	5 February 2015	Components for Air Conditioning and Heat Pumps	42
Arctic Circle, Hereford	23 April 2015	Development in Heating and Cooling Technologies	35
IRC Congress, Yokohama, Japan	16 - 22 August 2015	Sustainable heating and cooling	48
Newcastle University	01 October 2015	District heating and cooling	58
Daikin Training Centre Woking	20 January 2016	Domestic and Commercial Heating and Cooling - next generation technologies .	
Brunel University	20 April 2016	Energy reduction and sustainability in the food chain.	
Ireland Energy Research Centre in Cork	23rd November 2016	Title programme to be confirmed.	

The Objectives of the proposed workshop were to:

1. Provide attendees with a thought provoking and informative workshop on technology innovation and application.
2. Share the similarities and differences in sustainable market transitions between Europe, the US and Japan.
3. Explore opportunities for joint thinking and working together.
4. Expand the SIRACH network and increase international membership.

**SIRACH
WORKSHOP-
International
Congress of
Refrigeration (ICR)
2015**

Article Title	Published Month
Innovation in Air Conditioning and Heat Pumps (Edinburgh)	November 2014
Commercial refrigeration, cooling and heating (Leicester)	January 2015
Components for Air Conditioning and Heat Pumps (Leamington Spa)	March 2015
An eye on the future of heating and cooling technologies- Introduction	April 2015
Magnetic heating and cooling	May 2015
Development in Heating and Cooling Technologies (Hereford)	July 2015
Upcoming Articles	
Innovation and how it is carried out in various parts of the world	Due September 2015
Electrocaloric Refrigeration	Due October 2015
District Heating and Cooling (Newcastle University)	Due November 2015
Thermoacoustic	Due December 2015
Domestic and Commercial Heating and Cooling - next generation technologies	Due January 2016
Absorption	Due February 2016
...	...



REFRIGERATION AND AIR CONDITIONING MAGAZINE

rac

“ - The Cooling Awards have played a major role in improving the industry [click here for editor's view](#) ”

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STI SIRACH | Exploring innovations in heating and cooling

October to explore the topic of heating and cooling

presentations and a tour of an innovative supermarket

ing presentations will take place at the Abbey

ce and Technology, displaying Leicester's industrial,

ent to the National Space Centre, a visit to the two

technology from the early days of steam and

the future

re Dearman Engine,

Friday of Lancaster

re sustainably minded

SIRACH Innovation in heating, energy storage and cooling technologies

THE NETWORK FOR SUSTAINABLE INNOVATION IN REFRIGERATION AIR CONDITIONING AND HEAT RECOVERY

SIRACH AUTUMN 2014 MEETING

Innovation in Air Conditioning and Heat Pumps

THE TRANSITION TO LOW CARBON HEATING

presentations from SIRACH meetings please visit www.sirach.org.uk

adoption of innovation to be better identified, understood and worked

SIRACH UPDATE

SIRACH MEETING - ENERGY SOLUTIONS FOR GREEN BUILDINGS

The SIRACH networking meeting was held on 5th February 2015 at the Climate Center at their Sustainable Building Center in Leamington Spa. Metkel Yebiyo reports.

THE MAIN FOCUS OF THE SIRACH EVENT WAS TO EXPLORE THE LATEST DEVELOPMENTS AND INNOVATIONS THAT ARE CREATING ENERGY SOLUTIONS FOR GREENER BUILDINGS.

The event included a series of presentations, an interactive group networking session and a tour of the UK's first commercial showcase for

According to DECC it is estimated that 4.5 million heat pumps will be installed by 2030. Key to their application is their high efficiency whilst fitting into the conventional space currently occupied by a gas boiler, the economics associated with their purchase and their proven reliability during development

a unique combination of a high efficiency gas combi boiler combined with the air to water heat pump. The boiler and the heat pump can run in combination or in isolation to maximize energy efficiency, minimise running costs dynamically in response to variable electricity and gas tariffs. Hybrid heat pump with condenser and

RHI incentives which provides subsidy back to the user of 7.3 p/kWh heat generated. On a typical house this provides an annual return around £2300/year.

The final presentation was from the 2014 IOR, I&E Hall Gold Medal Winner, Professor Ruzhu Wang of Shanxiang Jiao Tongz Universit, Wanz

Thank You.

Any Questions, Comments,
suggestions.....