NUFACT 2020 in Manchester
Physics and Astronomy

The School of Physics and Astronomy is home to outstanding research, leading facilities and internationally-renowned physicists and astronomers.

The School includes the Jodrell-Bank Observatory, which hosts the Lovell Telescope and the SKA Headquarters, and the National Graphene Institute. It has an outstanding historical record of achievements, from Ernest Rutherford and the detection of the atomic nucleus, to the recent discovery of graphene. Most notably for this conference, this also includes the discovery of strangeness by Rochester and Butler in 1946, which celebrates its 75th anniversary in 2021.

Our tradition of excellence has been established by many eminent teachers and researchers, including 11 Nobel Prize winners, such as Rutherford, Bohr, Bragg, and Blackett. Our most recent Nobel Laureates are Professors Sir Andre Geim and Sir Konstantin Novoselov, who were awarded the prestigious honour in 2010 for their pioneering discovery of graphene.

The School also has a very active outreach programme, from a number of student-led initiatives to the regular TV and radio presenter Professor Brian Cox and Professor Theresa Anderson, who is director of the Jodrell Bank Discovery Centre.

The High-Energy Physics group is one of the largest in the UK and looks back on a long history in the field. Group members have held a number of leadership positions over the years and currently include the co-spokespeople of the DUNE and Muon g-2 collaborations and the deputy spokesperson of the LHCb collaboration. The group has significant involvement in detector development and operation as well as physics exploitation and also includes a strong theory group.
Manchester Airport serves over 200 non-stop global flight routes

Globally accessible
Manchester is one of the most accessible cities in Europe thanks to its world-class airport and strategic position in relation to the UK’s rail and road network. It has, therefore become the natural choice for organisers of national and international conferences.

**Internationally accessible**

Manchester Airport is the global gateway to the North of England, and the largest UK airport outside of London.

The airport offers **non-stop flights from over 200 destinations** including almost every major European city as well as global hubs in North America, the Middle East and Asia Pacific.

The city centre is 15-20 minutes by train (c.£5.00) or 20-25 minutes by taxi (c.£25.00).

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**Air**

Manchester Piccadilly is one of three main stations in Manchester and offers direct services to most major UK cities.

There are 60 direct trains a day from London (every 20 minutes), with a journey time of just over two hours.

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**Rail**

With direct rail services from across the country, getting to Manchester by train couldn’t be easier.

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**Road**

Manchester is well connected to the rest of the UK via excellent motorway links. The M60 ring road connects the city to motorways north, south, east and west.

National Express and Megabus provide coach services from all over the country into Chorlton Street Coach Station in the heart of the city centre.
Public Transport

Getting around Manchester

Exchange Square
A compact city-centre

Manchester is easily explored on foot, with a city centre that delegates can navigate within 20 minutes. As well as enjoying the proximity to the city’s hotels, restaurants, bars and attractions, delegates will have extra time to take part in the conference programme and network with colleagues.

**On foot**
Manchester is easily explored on foot, with a city centre that you can navigate within 20 minutes. City Hosts are dotted around the city centre to guide you with directions, public transport information and details on events taking place.

**Free shuttle bus**
Within the city centre, delegates can use Metroshuttle – a free ‘hop on, hop off’ service linking all of the main railway stations, shopping areas and business districts. There are three circular routes across the city.

**Tram**
The Metrolink network is the largest urban tram system in the UK. The tram can transport delegates to popular attractions and venues across the region and, if delegates are planning on sightseeing.

**Car parking**
In the city centre NCP has over 13,000 car parking spaces across 43 sites. They also offer a pre-book service in Manchester, so delegates can guarantee a car parking space before their journey begins.
Conference Venue

The University of Manchester
Affordable delegate accommodation

The conference will benefit from almost 10,000 hotel rooms in Manchester’s city centre and over 22,000 across Greater Manchester - a complete offer that will meet the requirements of delegates, exhibitors, staff and speakers.

From luxury accommodation to budget beds, countryside retreats to serviced apartments, Manchester offers the full range of housing provision for all conference participants.

Manchester’s hotel industry has blossomed over the last decade and with an additional 4,500 hotel rooms coming in the next three years alone, the city region’s accommodation offering continues to grow at a rapid pace.

We are aware of the importance of attracting those travelling on a budget to the conference. Established chains such as Holiday Inn Express, Ibis and Premier Inn provide value and quality.

Student accommodation is available in Weston Halls on Charles Street at c.£40.00 per night. Over 600 beds are available in hostel accommodation from c.£13.00 per night.

Participants looking for recognisable international hotel groups will find familiarity and comfort in brands such as Hilton, Marriott and IHG. Those looking for a high standard of luxury and service will enjoy hotels such as The Midland, Radisson Blu Edwardian, The Lowry Hotel and the newly-renovated Principal Manchester.

For delegates who enjoy a home away from home, there are a number of three to five star aparthotels which are perfect for families.

Visitors who are seeking a quintessentially British experience on their visit may consider a countryside retreat. There are a number of properties offering beautiful views, peace and quiet and easy access to stunning English landscapes.

<table>
<thead>
<tr>
<th>City centre Manchester</th>
<th>Greater Manchester</th>
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<tbody>
<tr>
<td><strong>Type</strong></td>
<td><strong># Properties</strong></td>
</tr>
<tr>
<td>5* hotel</td>
<td>3</td>
</tr>
<tr>
<td>4* hotel</td>
<td>20</td>
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<tr>
<td>3* hotel</td>
<td>17</td>
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<tr>
<td>Budget</td>
<td>~</td>
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<tr>
<td>Unaccredited</td>
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<td>Self/catering</td>
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<tr>
<td>Guesthouse/B&amp;B</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
</tr>
</tbody>
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| **Type**               | **# Properties**   | **# Bedroom** |
| 5* hotel               | 4                  | 534           |
| 4* hotel               | 42                 | 6,859         |
| 3* hotel               | 102                | 10,137        |
| Budget                 | 38                 | 2,761         |
| Unaccredited           | ~                  | ~             |
| Self/catering          | ~                  | ~             |
| Guesthouse/B&B         | 11                 | 350           |
| Total                  | 365                | 22,939        |

Estimated nightly rates for demonstration purposes only and a subject to request. These figures have been based on experience of similar events at a comparable time of year and are for single occupancy rooms including breakfast and taxes.
Greater Manchester

A vibrant destination

The Quays and MediaCityUK
Manchester

A vibrant destination

The Bluedot Festival is a music festival held annually at Jodrell Bank Observatory, combining music, live science experiments, expert talks and immersive artworks.
What to see & do in Manchester

Museums & Galleries
Attendees have a huge choice of over 90 museums and galleries – most of which are free to enter.

Science & Industry Museum
Manchester Museum
People’s History Museum
National Football Museum
IWM North
Manchester Art Gallery
Whitworth Art Gallery
The Lowry Gallery
John Rylands Library
Chethams Library

Theatre & Live Music
Greater Manchester has music in its soul and opportunities to experience live music are as varied as they are exciting. The spectacular Bridgewater Hall is home to the Hallé Orchestra and welcomes musical talent from all over the world. Chamber music, folk, jazz, roots, rock and pop all have their place and major international acts perform regularly in the 20,000-seat Manchester Arena.

Attendees will find everything from opera to comedy to experimental theatre at the Palace Theatre, Royal Exchange, Contact Theatre and The Lowry.

Sport
Greater Manchester is known all around the world for its sporting prowess and the best sporting entertainment is to be found here.

However, it isn’t all about football - with an extensive calendar of events and fixtures as well as top-quality facilities, there are bountiful opportunities for delegates to watch or take part in world-class sport.

Food & Drink
Greater Manchester has a great reputation for its food and drink, offering cuisine from practically every nation and to suit any budget. From high-end restaurants and renowned chefs setting up camp here, to independent good value eateries, Greater Manchester has cemented itself as a culinary city.

A visit to the region would not be complete without exploring some of the city’s lively bars and clubs. Each area of the region boasts its own unique style and collection of bars, pubs and nightlife.

Heritage
The city region’s status as ‘Cottonopolis’ is on show for all to see, with Victorian textile warehouses and canal systems evident all over the region. Greater Manchester’s medieval roots can be seen around the Shambles as well as the 500-year-old Manchester Cathedral and Chethams Library.

The best way for delegates to experience Manchester’s rich history is by guided tour, and numerous tours led by expert guides can be booked – including bespoke tours themed to science and physics.

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Attendees arriving in Greater Manchester for the first time? For an entertaining insight into the stories which have shaped Greater Manchester and created the vibrant region that it is today, delegates can join one of Greater Manchester’s many themed walking tours – a great way to discover the city and meet new people.

The Sightseeing Manchester hop-on, hop-off open top bus tour can take delegates on a 90-minute trip round Manchester’s main sights on a route of 15 stops.

For those delegates bringing their families there’s lots of activities in Manchester suitable for the whole family such as the Sea Life Centre aquarium, the Transport Museum, Chester Zoo, Legoland Discovery Centre, an indoor snow park, indoor sky diving and our very own Crystal Maze.

Greater Manchester has miles of inspiring countryside, crisscrossed by historical waterways and dotted with picturesque towns and fascinating attractions that make for a great day out from the hustle and bustle of the city.

Greater Manchester is the shopping capital of the North of England, offering a diverse and unique shopping experience.

From stylish shopping malls to specialist market stalls, quirky boutiques to vintage treasure troves, the city offers a unique and diverse shopping experience.

Greater Manchester has more gardens and parks than most, all of which are just a short journey from the city centre.

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Networking

Social Programme

Science & Industry Museum Manchester
Venues for the social programme

Manchester has an extensive selection of venues capable of hosting social events. On the following two pages we set out our top suggestions.

We are keen to deliver a truly memorable social programme for all participants.

Our plan is to showcase the ‘Best of British’ by reflecting the traditions and local heritage of Manchester and the UK. Here are some suggested venues…

Science & Industry Museum
Manchester’s Science & Industry Museum is situated on the site of the world’s first inter-city passenger railway.

Its Revolution Manchester Gallery is a wonderful space to host social events. Guests can dine surrounded by fascinating exhibits which chronicl Manchester’s contributions to the world of science and innovations.

Whitworth Hall
The University of Manchester’s neo-Gothic Whitworth Building is a real Manchester treasure.

This elegant, Grade II listed venue offers the stunning Whitworth Hall, which is ideal to host drinks receptions or conference dinners.

The Monastery
The Monastery of St. Francis & Gorton Trust was established 21 years ago and is still responsible today for this iconic and magnificent building.

The transformation from a state of near dereliction to an award-winning events venue has been an incredible tale of almost miraculous achievement.

Manchester United
The world-renowned venue of Old Trafford, the home of Manchester United, is steeped in a history of sporting success and the perfect setting for any event.

Old Trafford is a completely unique venue with 20 suites and 150 meeting rooms. Many of the suites and rooms overlook the historic pitch. Packages can be tailored to include added extras such as the Museum & Stadium Tour.

City centre
450 – drinks reception
270 – banqueting

University campus
600 – Drinks reception
300 - Banqueting

2 miles from city centre
600- Drinks reception
450 - Banqueting

2 miles from city centre
1,100 – Drinks reception
950 - Banqueting
Manchester Art Gallery has a varied range of event spaces, from elegant cocktail parties amongst the Pre-Raphaelite collections, to stylish dinner dances in the Modern Glass Atrium.

The National Football Museum is the largest museum dedicated to Football in the world. It is located in the iconic Urbis Building in Manchester’s city centre.

Guests can access the extensive galleries on the history of the beautiful game.

The Factory will be a world-class cultural centre. It will be the permanent home of the Manchester International Festival and will host a year-round arts and performance programme, as well as offering flexible spaces for events.

Chetham’s is a unique and atmospheric location, ideal for events from seminars and meetings to private dinners and concerts.

Dating back to 1421, Chetham’s medieval buildings were built as a college for the priests of St Mary’s Parish Church, now Manchester Cathedral. It is the most complete late-medieval residential complex to survive in the north west of England.

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Excursions & day trips

Pre & post
Excursions

Greater Manchester’s rich cultural and historical offerings present a range of exciting and engaging full and half-day excursion options, adding value for visitors.

Options within one hour of Manchester range from leisurely visits to the region’s rich array of stately homes and gardens, to experiencing the vibrancy of the city and town centres.

Greater Manchester is perfectly placed to explore the rest of the UK. With Cheshire to the south, Merseyside to the west, Lancashire and Cumbria to the north and Derbyshire to the east, visitors are spoilt for choice.

Here are some suggestions for how the delights of Northern England and the rest of the UK can be incorporated into visitors’ itineraries:

The Quays & MediaCityUK

Opened by Queen Victoria in 1894, the Salford Docks became the busiest in the UK, serving the ships that came up the Manchester Ship Canal.

Today, The Quays is Manchester’s waterfront destination, the location of MediaCityUK, a huge purpose-built media hub that’s home to the BBC and ITV, as well as world-class cultural attractions.

15 minutes from the city centre

Imperial War Museum North | The Lowry | The Lowry Outlet Mall | BBC Tours | Ordsall Hall | City Centre Cruises | Helly Hansen Watersports Centre

Football Fanatics Itinerary

Manchester is of course famous all over the world for its football and a visit to one of the city’s football stadia is a must whether it’s for a tour or the full match day experience. Delve into the social history and culture of the beautiful game, exploring football’s past and present at the world’s biggest and best football museum. Visitors can even go for full football emersion with an overnight stay at Hotel Football.

City centre and within 15 minutes

Premier League football matches at Old Trafford and The Etihad | Manchester United Museum and Tour | Manchester City Stadium Tour | National Football Museum | Hotel Football | Café Football | Watch a match in a traditional pub

Liverpool & The Beatles

Liverpool is world-famous as the home of The Beatles and visitors can relive the magic of the Beatles era with a visit to the Cavern Club or on a magical mystery tour. The city’s maritime history is on display on its historic waterfront and the Albert Dock – a UNESCO World Heritage site. Liverpool’s cultural highlights include Tate Liverpool, Walker Art Gallery and the Museum of Liverpool.

45 minutes from Manchester

The Beatles Story | Cavern Club | Albert Dock | Maritime Museum | Tate Liverpool | Walker Art Gallery | Museum of Liverpool | Mersey Ferries

The Lake District & Cumbria

The Lake District is the most famous national park in England. Its stunning waterfalls, lakes, mountains and areas of natural beauty inspired writers such as Beatrix Potter and Wordsworth.

Cumbria’s scenery is truly unique, with picturesque towns, villages and castles. Fans of outdoor pursuits will find endless opportunities for hiking, mountain climbing, water sports and cycling.

1 hour 15 mins from Manchester

Windermere Lake Cruises | World of Beatrix Potter | Wordsworth’s houses | Muncaster Castle & Gardens | Grasmere Gingerbread Shop | Ullswater Steamers | Ravenglass & Eskdale Railway | Hill Top
Dunham Massey & Altrincham
A National Trust property set in the grounds of an 18th century house. Nearby is Altrincham, a bustling town with a popular indoor market and vintage fairs. 
- 25 minutes from Manchester city centre
- Dunham Massey House & Gardens | Dunham Massey Brewing Company | Red House Farm | Altrincham Market

RHS Bridgewater & Canal & Worsley
Currently the largest garden project in Europe, The RHS is transforming the 154 acre gardens of Worsley New Hall to their former glory and a top-notch visitor attraction.
- 45 minutes form Manchester city centre
- RHS Garden Bridgewater | Walled Garden | Worsley New Hall | Bridgewater Canal

Peak District & Chatsworth House
Contrasting natural beauty of moors, rivers and springs can all be found within the Peak District National Park, known and loved by millions for its breath-taking views.
- 1 hour 10 mins from Manchester city centre
- Chatsworth House & Gardens | Lyme Park & Gardens | Underground caverns | Bakewell | Alton Towers Resort

Historic Chester
One of Britain’s most popular cities, Chester has a bewitching beauty and unique atmosphere. Take a stroll around the most complete Roman and Medieval town wall in Britain.
- 1 hour from Manchester city centre
- Roman heritage | City walls | River Dee cruise | House Races | Chester Zoo | Chester Rows

Tatton Park
Set in 1,000 acres of beautiful open Parkland, Tatton is regarded as one of the most complete historic estates in the country, with a Mansion, Tudor Old Hall and extensive gardens.
- 1 hour from Manchester city centre
- Deer park | Formal Gardens | Working farm | Gardener’s Cottage Tea Rooms | Japanese Garden

Jodrell Bank Radio Telescope
One of the largest radio telescopes in the world, visitors can discover the fascinating history of the Lovell Telescope at the Jodrell Bank Discovery Centre.
- 1 hour from Manchester
- Jodrell Bank Discovery Centre | The Lovell Telescope | Gardens & Arboretum

East Lancashire Railway & Bury
Experience the sounds, smell and stunning surroundings of this heritage railway. Winding through the scenic Irwell Vale along a 12 mile journey past quaint villages and rural vistas.
- 30 minutes from Manchester city centre
- Rail Ale Trail | Themed railway weekends | Bury Market | Fusilier Museum

Quarry Bank Mill
This former cotton mill is a National Trust property. It is a unique experience, demonstrating how cotton was processed at the height of the Industrial Revolution.
- 50 minutes from Manchester city centre
- Mill House | Woodland Walks | Apprentice House | Working machinery
Medieval York, The Minster & Vikings

Renowned for its exquisite architecture, tangle of quaint cobbled streets, the iconic York Minster and a wealth of attractions, York is a flourishing city.

1 hour from Manchester city centre

York Minster | Yorvik Viking Centre | National Railway Museum | Castle Howard | Museum of York | River Ouse | Clifford’s Tower

The Royal Armouries in Leeds

Leeds boasts a heay mix of arts, culture, heritage, shopping and a thriving food and drink scene.

45 minutes from Manchester city centre

The Royal Armouries | Kirkstall Abbey | Trinity Leeds | Harewood House

Lancashire and Lancaster

A county of contrasts, Lancashire has breathtaking countryside and is home to the UK’s best-loved holiday resort – Blackpool.

1 hour from Manchester city centre

Lancaster Castle | Forest of Bowland | Pendle Hill | Blackpool Pleasure Beach

North Yorkshire Coast

The Yorkshire coastline encompasses some of the UK’s most rugged and charming countryside, from tiny fishing villages clinging to rocky cliffs to glorious stretches of white sand and family-friendly resorts.

2 hours from Manchester

Whitby | Robin Hood’s Bay | Scarborough | North York Moors | Cleveland Way | Staithes

Newcastle & Northumberland

Spectacular vistas, world-class culture, vibrant nightlife and inspiring heritage are linked here, as nowhere else, by the famous Geordie spirit.

3 hours 15 mins from Manchester

Angel of the North | Quayside and bridges | Baltic Centre | Bamburgh Castle | Alnwick Castle & Gardens

World of Wedgwood

Discover 250 years of design and production on a tour of the World of Wedgwood in the Potteries, the UK’s centre of ceramic production since the 17th century.

1 hour from Manchester city centre

Factory tour | Wedgwood Museum | Luxury afternoon tea | ‘throw’ your own pot or design a plate

London

One of the world’s most visited cities, London is just 2 hours from Manchester and has something for everyone, including history, culture and pomp and ceremony.

2 hours 10 mins from Manchester

Buckingham Palace | Tower of London | Tower Bridge | Hyde Park | Houses of Parliament | Big Ben | River Thames cruises | Tower Bridge | Museums and galleries

Scotland

With deserted beaches, nature reserves, mountains, lochs and forests, Scotland’s legendary beauty brings visitors back again and again to experience its unique mix of rugged landscape and culture.

3 hours from Manchester

Edinburgh | Holyrood Palace | Glasgow | Loch Lomond | Golfing | Cairngorms | Loch Ness
As one of the UK’s most dynamic cities, Manchester is a world centre for academic, business, cultural and sporting activity. As such Manchester has played host to major association conferences.

Here is a small sample of organisations that have chosen Manchester as their host destination.

**EPS-HEP 2007**  
Chair: Stefan Söldner-Rembold

**TAU 2010**  
Chair: George Lafferty

**CHARM 2013**  
Chairs: Marco Gersabeck & Chris Parkes

**SUSY 2014**  
Chair: Apostolos Pilaftsis

**UK IOP-HEPP 2015**  
Chair: Stefan Söldner-Rembold

**PASCOS 2019**  
Chair: Apostolos Pilaftsis

**LIDINE 2019**  
Chair: Andrzej Szlec

**IEEE NSS/MIC 2019**  
Chair: Cinzia Da Vià

**XXX International Symposium on Lepton Photon Interactions at High Energies**  
9-14 August 2021 in Manchester

**L2021**, Chair: Marco Gersabeck
**Budget:**

- We expect the conference to have a similar budget as PASCOS this year (which had the same format and similar attendance).
- About £300 ($370) for registration fee (incl. reception, lunches, present, dinner, coffee).
- We hope to have other local UK universities co-sponsor the conference.