

LANCASTER UNIVERSITY

30 JUNE – 4 JULY 2019

Welcome Desk

Delegates can collect their badge, welcome bag and (if applicable) accommodation keys at the NAM Welcome Desk in the following locations:

- Sunday: 15:00-19:00 in LICA (this is the same venue as the Icebreaker)
- All other days: 08:00-17:30 in the Foyer of the Faraday complex.

If the NAM Welcome Desk is closed, accommodation keys can be collected from Lancaster University Conferences+ reception, which is located in Bowland Hall. For late arrivals (after 23:00) accommodation keys will be available from the Security Lodge [SEC on attached map]. NAM badges etc can be collected the next day from the NAM Welcome Desk.

Science Programme

Exhibition Space

The NAM2019 Exhibition Space is located in the atrium of the Physics Building and will be open in parallel to all NAM sessions. Exhibitors include:

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| • Eddington Astronomical Society of Kendal | • Overleaf |
| • Europlanet Society | • Oxford University Press |
| • Interferometry Centre for Excellence | • Royal Astronomical Society |
| • Kielder Observatory | • Science & Technology Facilities Council |
| • National Schools Observatory | • Springer |

Tea & coffee will be available in the Exhibition Space during all morning and afternoon breaks.

Poster session

A dedicated NAM2019 poster session will take place in LICA between 15:00-18:00 on Tuesday. Tea & coffee will be served at 15:00, with High Tea and fizz served at 16:00.

Posters can be put up from 10:30 on Monday. The poster boards are A0 (landscape) and will be individually numbered. Lists will also be available to help you find your own poster number. Posters must be taken down by 11:00 on Wednesday. Any poster left up after this time may be disposed of.

Poster prizes: If you wish your poster to be considered for any of the poster prizes (see descriptions here: <https://nam2019.org/science/posters>) please attach the appropriate sticker to the top right hand corner of your poster. Stickers and further information will be available in the poster hall on Monday - Tuesday. Judging will take place during the poster session on Tuesday 15:00 - 18:00.

Online poster repository: You may upload your poster to our online repository for viewing by delegates during and after the meeting. For the online repository, posters must be a PDF file with a maximum file size

of 10 MB. Please name your PDF file as XXX_Surname.pdf, where XXX is the three-digit abstract ID for your poster, and Surname is the presenting author surname, as listed in the programme.

- You can upload your poster by emailing the PDF file as an attachment to NAM2019.z17v7jvlwj2wmm0c@u.box.com
- The link for viewing posters online is <https://lancaster.box.com/v/nam2019-posters>

Plenary Sessions

All plenary sessions will take place in the Faraday Lecture Theatre. Plenary talks will be live-streamed into the neighbouring Frankland Lecture Theatre (slides and audio only). Unfortunately, it will not be possible for audience members in the overflow venue to ask questions.

NAM2019 Public Lecture

'From Kendal to Príncipe - Eddington & Einstein'

A public lecture by Professor Dame Jocelyn Bell Burnell, at 19:00 on Tuesday 2 July at The Dukes Theatre, Lancaster. Doors open at the Dukes at 18:30 and the talk begins at 19:00. The talk will be followed by a drinks reception and live-streaming of the total eclipse over South America.

<https://www.lancaster.ac.uk/events/the-royal-astronomical-society-public-lecture-by-professor-dame-jocelyn-bell-burnell>

Update: This event is now SOLD OUT.

General Practical Information

Refreshment Breaks

Tea, coffee, juice and water will be available in three locations during morning and afternoon breaks.

- The exhibition space in the Physics Atrium
- The foyer of the Faraday complex
- County South (County College Bar)

Lancaster Conferences+ staff and NAMbassadors will be on-hand to assist and direct.

Lunches

Self-service lunches are clustered around venues in the County South area. Delegates can either dine in these venues, or box up a selection to take away. Lancaster Conferences+ staff will be on-hand to assist and direct.

During the week, there are six specialist lunch sessions scheduled between 12:15-13:15. If you indicated an interest in attending one of these sessions at registration, it would be helpful if you could collect your lunch from the appropriate venue, even if you decided not to participate.

Day	Lunch	Venue
Mon	Diversity Lunch	County South (Private Dining Room) – lunch available in meeting room
Tue	Outreach Lunch	County South (Lecture Theatre) – lunch available in meeting room
Wed	MIST/UKSP Lunch	Cavendish Lecture Theatre – collect lunch from NAM Exhibition Space in the Physics Building
Wed	Publishing Lunch	Bowland North Seminar Room 10 – collect lunch from any County South lunch venue
Thu	Careers Lunch	County South (Private Dining Room) – lunch available in meeting room
Thu	Exoplanet Lunch	Bowland North Seminar Room 10 – collect lunch from any County South lunch venue

Travel

General information on travel to and from Lancaster University can be found at www.lancaster.ac.uk/about-us/maps-and-travel/

Parking: Delegates who selected free on-campus parking at registration will be able to collect parking scratch cards from the Welcome Desk along with their NAM badge and welcome pack.

Taxis: local taxi companies include 848 Taxis (01524 848 848) and 32090-35666 Taxis (01524 35666)

Bus travel: Delegates who selected free local bus travel at registration will have a bus logo on their badge. This allows you to use all local buses (operated by Stagecoach) – simply show the badge to the driver.

If you wish to use a local bus to travel to Lancaster University Campus before you collect your badge, you can show the pass included at the end of this guide*. Either print it out or show it on your mobile device.

In the city centre the main bus stops are at the bus station and Common Garden Street. There is a bus stop near the train station, but services from Common Garden Street are much more frequent. On campus, buses arrive and depart from the bus stops in the underpass beneath Alexandra Square. Bus routes and times can be found at www.stagecoachbus.com or via the Stagecoach app.

**the version of this document that was emailed to all registered delegates prior to the meeting*

Wifi

eduroam enables students and staff at participating institutions to access a secure internet connection across Lancaster campus.

Visitor Wi-Fi enables visitors who cannot use eduroam to access the internet. To connect to Visitor Wi-Fi, look for LU-Visitor in your list of Wi-Fi networks and follow the instructions for visitors. The visitor Wi-Fi network is not secure and is only designed for temporary access. You will need to sign back in every 24 hours.

App & Interactive Schedule

We're offering a host of services via the Lancaster Conferences App. The app includes general information about NAM, campus and city maps, and will provide directions to conference sessions. There is also a chat function for speaking with other delegates. Go to <http://m.lancaster.ac.uk/conferences> for access to the app (web-based, Apple App Store, or Android Play Store). Or search "Lancaster Conferences" in the App Store or Play Store. Enter the access code "NAM2019" & your name when requested.

NAMBassadors

Lancaster's NAM ambassadors, or NAMBassadors, will be on hand to help throughout the meeting and will be wearing distinctive t-shirts. In addition, members of the LOC can be identified by red borders on their badges.

Code of Conduct

NAM is dedicated to providing a harassment-free conference experience for everyone, regardless of sex, gender identity, sexual orientation, marital or parental status, age, disability, race, religion or physical appearance. We will not tolerate harassment of conference participants in any form. All communication should be appropriate for a professional audience including people of many different backgrounds. Sexual language and imagery are not appropriate for any conference venue, including talks. Be kind to others. Do not insult or put down other attendees. Behave professionally. Remember that harassment and sexist, racist, ableist or other exclusionary jokes are not appropriate for NAM. Attendees violating these rules may be asked to leave the conference, without a refund, at the sole discretion of the LOC.

The full Code of Conduct, including information about how to report breaches of the CoC can be found at <https://nam2019.org/lancaster/code-of-conduct>.

Thank you for helping make this a welcoming, friendly event for all.

Bars

County College Bar (in County South) will be open for NAM delegates from 15:00-23:00 every day of the meeting, including Sunday. In addition, Fylde College Bar [FYL on attached map] is open all day throughout the summer for LU staff, students and visitors with hot and cold drinks, food, pool, darts, televised sports etc.

Crèche

The NAM2019 creche is in the Chaplaincy Centre. A drop-in service is available, but please contact Tinies, the creche provider, to confirm availability. Contact: Hayley Jones, h.jones@tinies.com.

For Delegates Staying On-campus

Breakfasts

For delegates staying in on-campus B&B accommodation, breakfast will be served from 07:30-09:00 each day in the following venues:

- Marketplace (County South) for guests staying in John Creed accommodation
- Barker House Farm for guest staying in South West Campus accommodation

On-campus Evening Meals

On-campus evening meals will be available between 18:00-19:00 on Sunday, Monday, Tuesday and Wednesday evenings (pre-booked diners only). These are served in the Marketplace (County South).

If you have not booked evening meals and would like to eat on-campus in the evening, there are a number of other food outlets located on the Spine pedestrian walkway between Alexandra Square and Fylde College [FYL on attached map], and on Edwards Roberts Court (see map for location). The Lancaster House Hotel also has a restaurant and a bar serving food to non-residents and is accessible from the campus perimeter road.

Social Events

Icebreaker (Sunday)

All delegates are invited to an informal canapés and wine reception between 19:00-20:30 on Sunday evening in the Lancaster Institute for Contemporary Arts (LICA).

Castle Tour (Monday)

For delegates who have pre-booked, the private tour of [Lancaster Castle](#) will start at 19:00. Following the tour, delegates may wish to explore and dine in the city.

Update: in response to demand, a bus has been chartered to transfer NAM delegates from the University to the Castle departing at 18:25 from the Underpass accessed from Alexandra Square. This will be operated by Stagecoach and will display a route 4 designation, but will also have a NAM sign on display in the window. A member of the NAM2019 team will be on hand in the underpass to assist. Delegates are responsible for making their own way back to campus (or their accommodation) after the tour.

Social Activities (Monday)

The NAM 5-a-side football tournament: Test your touch on a 3G synthetic pitch in the July evening sunshine. Starts at 19:00 on the Astro turf pitch. Submit your teams [here](#). If you don't have a team yet, just enter your name and the team name 'Solo' and we'll make sure you get to play.

Film night: Catch the mystery film in the campus cinema. 19:30 in Bowland Main Lecture Theatre. Contains mild/extreme peril and strong language (Rated 18).

Geocaching treasure hunt: Join a guided walk on Monday evening to a brand-new NAM cache. Meet at 19:00 in Alexander Square underneath the giant screen. Alternatively, hunt whenever you like throughout the week.

Climbing wall taster session: Come and climb up a difficult wall under the safe guidance of a man named Cliff. Numbers are limited, so you must sign up at the Welcome Desk when you collect your conference pack. This session takes place in the sports centre between 19:30-21:00.

Pie & Quiz Night (Tuesday)

The pie and quiz night will be held on campus in Barker House Farm (South West campus) with a selection of pies to choose from and fabulous prizes to be won! Arrive at 19:00 for pie at 19:15. The quiz starts at 20:00 and the bar will remain open until midnight. Delegates who've booked onto this event will receive a ticket with their badge at the Welcome Desk that entitles them to two drinks* from the bar.

**1 drink = a soft drink, a pint of beer/cider or a glass of wine*

RAS Awards Dinner (Wednesday)

The annual Royal Astronomical Society Awards Dinner, compèred by broadcaster, comedian and RAS Fellow Jon Culshaw, will be held in the Lancaster Institute of Contemporary Arts (LICA) on Wednesday 3 July. The event starts with welcome drinks at 18:45 and is expected to finish around 22:30.

Awards will be announced and presented between courses. Wine and water will be available on each table. Additional beverages can be purchased with card or cash and will be served at-table.

Update: A bus has been chartered for the benefit of guests who need to return to the city centre after the end of the Awards Dinner. This will be operated by Stagecoach and will depart from outside LICA for the City Centre (Common Garden Street) at 22:50.

Morecambe Fringe Event (Thursday)

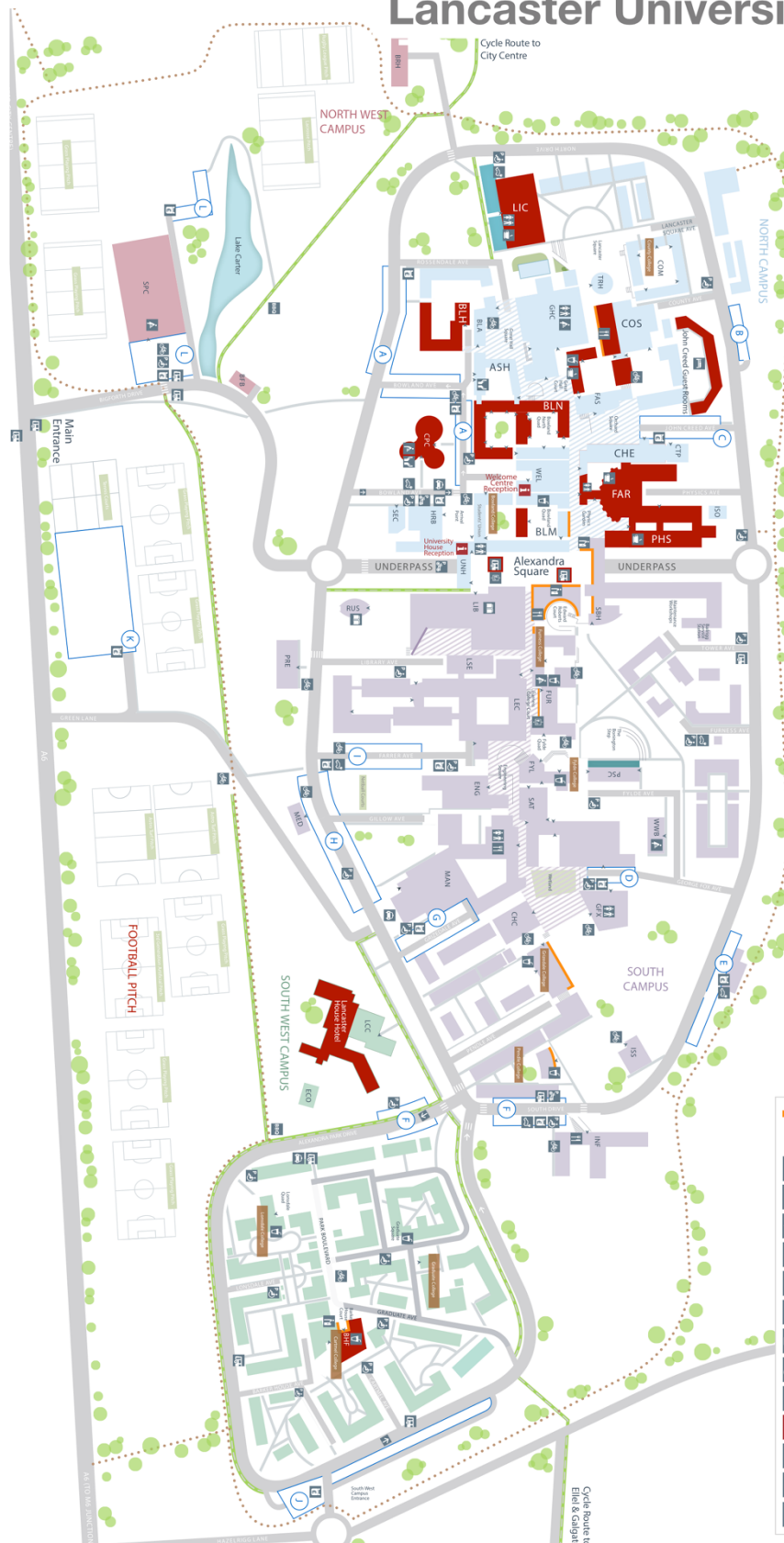
All the Right Planets, Not Necessarily in the Right Order, 19.30-22:00, Alt-Space, Morecambe.

NAM2019 is partnering with local arts organisation Morecambe Fringe to deliver an astronomy-themed pre-fringe event linked with NAM2019. Morecambe Fringe runs a yearly fringe festival in Morecambe's West End and is a celebration of performing arts, theatre, spoken word, poetry and comedy. Our pre-fringe event is an evening of open mic and prepared sets of astronomy- and space-themed comedy, philosophy, poetry, music, history, and a smattering of science.

For more details visit <https://nam2019.org/outreach/fringe-event>

Sunday	Monday	Tuesday	Wednesday	Thursday
	09:00 - 10:30 Parallel Session 1 GroundMag (Faraday LT) ESA M5 (Frankland LT) SolarAtmos 1 (Cavendish LT) GalBlackHoles 1 (Bowland Main LT) AstroLivT 1 (Elizabeth Livingstone LT)	09:00 - 10:30 Parallel Session 4 SolarSTPSHocks (Faraday LT) BaryonGal 1 (Frankland LT) EngagementSTP (Cavendish LT) GalArchaeology 2 (Bowland Main LT) AstroLivT 2 (Elizabeth Livingstone LT) AstroTools (Bowland North SR 10)	09:00 - 10:30 Parallel Session 6 MISTGeneral (Faraday LT) Gaia 1 (Frankland LT) GravWaves 2 (Cavendish LT) ActiveRegions 1 (Bowland Main LT) GalClusters 2 (Elizabeth Livingstone LT)	09:00 - 10:30 Parallel Session 8 GalEvolution 2 (Faraday LT) NumericalAstro 1 (Frankland LT) Transients 2 (Cavendish LT) SolarOrbiter 1 (Bowland Main LT) MachineLearning 1 (Elizabeth Livingstone LT)
	10:30 - 11:00 COFFEE (Faraday Foyer, Physics A07, County Bar, LICA)	10:30 - 11:00 COFFEE (Faraday Foyer, Physics A07, County Bar, LICA)	10:30 - 11:00 COFFEE (Faraday Foyer, Physics A07, County Bar)	10:30 - 11:00 COFFEE (Faraday Foyer, Physics A07, County Bar)
	11:00 - 12:00 Plenary Lecture 1 Selma de Mink (Faraday LT + Frankland LT) <i>From Stellar Birth to Gravitational Wave Chirps: On the lives, deaths and afterlives of Massive stars</i>	11:00 - 12:00 Plenary Lecture 3 Boris Gänsicke (Faraday LT + Frankland LT) <i>Evolved planetary systems around white dwarfs</i>	11:00 - 12:00 Plenary Lecture 4 Joseph Silk (Faraday LT + Frankland LT) <i>The Limits of Cosmology</i>	11:00 - 12:00 Plenary Lecture 5 Nicky Fox (Faraday LT + Frankland LT) <i>Parker Solar Probe and her place in the Heliophysics Fleet</i>
	12:00 - 13:30 LUNCH (County South LT, Marketplace 2) Diversity Lunch (Private Dining Room) (lunch provided in meeting venue)	12:00 - 13:30 LUNCH (Private Dining Room, Marketplace 2) Outreach Lunch (County South LT) (lunch provided in meeting venue)	12:00 - 13:30 LUNCH (County South LT, Marketplace 2) MIST / UKSP Lunch (Cavendish LT) (collect 'takeout' from Physics A07) Publishing Lunch (Bowland North SR10) (collect 'takeout' from County South / Marketplace 2) RAS Council Meeting (Bowland Hall)	12:00 - 13:30 LUNCH (County South LT, Marketplace 2) Careers Lunch (Private Dining Room) (lunch provided in meeting venue) Europlanet Exoplanet Lunch (Bowland North SR10) (collect 'takeout' from County South / Marketplace 2)
	13:30 - 15:00 Parallel Session 2 EqualityDiversity 1 (Faraday LT) IonosThermos (Frankland LT) SolarAtmos 2 (Cavendish LT) GalArchaeology 1 (Bowland Main LT) CosmicWeb 1 (Elizabeth Livingstone LT) PostHST 1 (Marcus Merriman LT)	13:30 - 15:00 Parallel Session 5 MHDWavesSTP (Faraday LT) BaryonGal 2 (Frankland LT) GravWaves 1 (Cavendish LT) GalArchaeology 3 (Bowland Main LT) EduOutrchEngage (Elizabeth Livingstone LT) GalClusters 1 (Marcus Merriman LT) MOONS (Cavendish Colloquium Room)	13:30 - 15:30 STFC and UKSA Community Session (Faraday LT + Frankland LT)	13:30 - 14:30 Plenary Lecture 6 Stephen Smartt (Faraday LT + Frankland LT) <i>Time domain sky surveys, explosive transients and multi-messenger astronomy</i>
	15:00 - 19:00 Welcome and Badge Collection (LICA Foyer / Main Space)	15:00 - 15:30 COFFEE (Faraday Foyer, Physics A07, County Bar, LICA) 15:30 - 16:30 Plenary Lecture 2 Steve Milan (Faraday LT + Frankland LT) <i>Sun et Lumière: the terrestrial magnetosphere revealed through auroral dynamics</i> 16:30 - 18:00 Parallel Session 3 EqualityDiversity 2 (Faraday LT) RadiationBelt (Frankland LT) SolarMHDWav (Cavendish LT) GalBlackHoles 2 (Bowland Main LT) CosmicWeb 2 (Elizabeth Livingstone LT) PostHST 2 (Marcus Merriman LT)	15:00 - 18:00 Poster Session including Afternoon Tea (LICA Main Space) NOTE: All posters may be displayed from 10:30 on Monday until 11:00 on Wednesday (Any posters still up at the end of the coffee break on Wednesday morning will be removed)	14:30 - 15:00 COFFEE (Faraday Foyer, Physics A07, County Bar) 15:00 - 16:30 Parallel Session 9 GalEvolution 3 (Faraday LT) NumericalAstro 2 (Frankland LT) ProAm (Cavendish LT) SolarOrbiter 2 (Bowland Main LT) MachineLearning 2 (Elizabeth Livingstone LT)
			15:30 - 16:00 COFFEE (Faraday Foyer, Physics A07, County Bar) 16:00 - 17:30 Parallel Session 7 GalEvolution 1 (Faraday LT) Gaia 2 (Frankland LT) Transients 1 (Cavendish LT) ActiveRegions 2 (Bowland Main LT) Magnetospheres (Elizabeth Livingstone LT) AstroImpact (Marcus Merriman LT)	
EVENING ACTIVITIES				
19:00 - 20:30 Icebreaker Reception LICA Main Space	18:30 - 21:00 5-a-side Football Tournament 3G Astroturf Pitch, University Sports Centre 19:00 - 20:30 Lancaster Castle Tour Bus from Alexandra Square Underpass at 18:25 19:00 - 21:00 Geocaching Meet in Alexandra Square under the Big Screen 19:30 - 22:00 Mystery Film Screening Bowland Main LT 19:30 - 21:00 Climbing Wall Taster Session University Sports Centre	19:00 - 22:00 Pie & Quiz Barker House Farm, Cartmel College 18:30 - 21:00 The RAS Public Lecture: <i>From Kendal to Principle – Eddington Einstein (Professor Bell Burnell)</i> The Dukes Theatre, Lancaster City Centre 20:20 - 22:50 Total Solar Eclipse Screening Alexandra Square Big Screen	18:45 - 22:30 Conference Dinner & RAS Awards LICA Main Space (Bus to the city centre leaving LICA at 22:50)	19:30 - 22:00 Morecambe Fringe Festival: <i>All the right planets, not necessarily in the right order</i> Alt-Space, 21C Yorkshire St W, Morecambe, LA3 1QE

Lancaster University Campus Map



MAIN CONFERENCE VENUES

- **BLM:** Bowland Main
 - Bowland Lecture Theatre
- **BLN:** Bowland North
 - Elizabeth Livingston LT
 - Marcus Merriman LT
 - Bowland Seminar Rooms
- **COS:** County South
 - County South LT
 - Private Dining Room
 - Themed Lunches
 - NAM Coffee
- **FAR:** Faraday Complex
 - Faraday LT
 - Frankland LT
 - Cavendish LT
 - Cavendish Colloquium Rm
 - NAM Coffee
- **LIC:** LICA Building
 - Poster Hall
 - Awards Dinner
 - NAM Coffee (Mon & Tues)
- **PHS:** Physics Building
 - Exhibition Space
 - NAM Coffee

ALEXANDRA SQUARE

- **Main bus stop** (underpass)

OTHER VENUES

- **BHF:** Barker House Farm
 - Pie & Quiz
- **BLH:** Bowland Hall
 - LU Conferences, Reception
 - RAS Council
- **CPC:** Chaplaincy Centre
 - Crèche
- **SPC:** Sports Centre
- **Parking:** Lots **A** – **L**
- **Cinema:** in Bowland Main

ACCOMMODATION

- **John Creed Guest Rooms**
- **Lancaster House Hotel**

	Shops/ Refreshments
	Building Entrance Point
	Bus Stops
	Taxi Drop Off
	Toilets
	Accessible Parking
	ATM
	Baby Change
	BBQ Area
	Cycle Parking
	Electric Vehicle Charging Point
	Information Point
	Lift Access
	Motor Cycle Parking
	NAM Coffee Venue

A complete campus map & legend is available at lancaster.ac.uk/campusmap

Also visit the mobile site/app at m.lancaster.ac.uk/conferences and use code NAM2019