Project Supervisors and their Projects

The following is a list of the staff supervising **Undergraduate 23/24** and **MSc projects and (deferred) UG projects in Summer 2023**. The table tells you who the supervisor is and what their email address is, the kinds of projects they are keen to supervise as well as other relevant information. It also includes a **'Contact?'** field. Some prospective supervisors are keen to discuss projects with prospective supervisees; other supervisors are happy for the algorithm to make allocations. Where a member of staff has indicated they will let the algorithm decide who they supervise them, you should feel free to add them to your list; if the supervisor has set no preferences then students who have made them their first choice will be randomly allocated to them. Other supervisors would like to discuss potential projects. Please have a look at how these preferences are set for your preferred supervisors and proceed accordingly. Note, several supervisors have set multiple options – they may be happy for you to add them to your list without asking and they might also be open to an email discussion or drop-in session. This is guidance designed to give you the best chance of getting your preferred supervisor; you can add whichever names you like to your list though, whether or not you have been in contact with a prospective supervisor.

The list will be updated with time. A few more supervisors will be added. In addition, staff availability may change – staff who are unavailable may become available later, and vice versa. You may be allocated a supervisor not currently on the list because they have since become available.

* Please note that the external supervisors are appreciated for their goodwill to help us and they are not based in the School. If you are working on an external supervisor's project, one of our CS internal supervisors will be appointed to monitor your project.

Supervisor Project Topics

			Theoretical Computer Science	
Name	**Email Address**	**Contact?**	**Project Keywords**	**Furth**
Rajesh Chitnis	r.h.chitnis@bham.ac.uk	Email or Drop-in office hour	Algorithms and complexity. In particular: SAT solvers, implementing streaming algorithms for large datasets, implementing matching and allocation algorithms.	https://rajeshchitnis.github.io/student-p
Martin Escardo	m.escardo@bham.ac.uk	I'm happy for students to chat with me via Teams about projects	Mathematics in computer science, computer science in mathematics, models of computation, graphics, games, embedded systems, function programming, music.	My project supervision interests include fu projects, logical games, combining compu Further details
Paul Blain Levy	p.b.levy@bham.ac.uk	Email or Zoom	Programming languages, musical harmony, anything mathematical.	Maths-related, programming language-rel Further details
Vincent Rahli	v.rahli@bham.ac.uk	Zoom, email, individual meetings	Distributed systems, blockchain systems, programming languages, formal verification	https://vrahli.github.io/student-projects
Miriam Backens	m.backens@bham.ac.uk	Email, individual meetings	algorithms and complexity, quantum computing, physics simulations	I'm interested in supervising projects such games - Physics simulations - Topics in qu existing knowledge of quantum computing
Sonia Marin	s.marin@bham.ac.uk	First contact via Teams or email. Individual meetings via Zoom arranged flexibly.	Logic, Programming Languages, Proofs, Process calculi	https://filipendule.github.io/#projects
Anupam Das	a.das@bham.ac.uk	Email, individual meetings.	Logic, Complexity, Proof theory, Type systems, Rewriting theory	I can propose and supervise projects on (recursion theoretic models of complexity c via proof search). These will be *theoretic
Eric Finster	e.l.finster@bham.ac.uk	Email, Online individual meetings	Type theory, category theory, programming language theory	Interested in Homotopy Type Theory and computer science
Todd Waugh Ambridge	t.waughambridge@bham.ac.uk	Email, Teams, Online individual meetings	Exact representations of real numbers, Formal mathematics (in Agda), Functional programming, Type theory	
			Artificial Intelligence and Computational Intellige	
Name	**Email Address**	**Contact?**	**Project Keywords**	**Furth**
Mubashir Ali	m.ali.16@bham.ac.uk	Email, Zoom or Drop-in office hours	Natural Language Processing, Computational Linguistics, Sentiment	I would be happy to propose and supervis smart services for smart cities, public light

			Analysis, Opinion Mining, Data Science and Data Analytics, NLP Applications in Software Engineering, Energy Management	processing, NLP applications in software e development for low resources languages
Fawad Hussain	s.f.hussain@bham.ac.uk	Zoom, email, individual meetings	Machine Learning, Data Analytics, AI Applications in Engineering, Evolutionary computation, AI in medicine	1. Machine learning with a focus on mult deep learning. 2. Application of AI to other disciplines ir optimization, etc.), medical data (e.g., etc. 3. Building scalable AI algorithms by fus
Mohammed Bahja	m.bahja@bham.ac.uk	NLP and its applications in software engineering, intelligent virtual human systems, Extended Reality, Blockchain driven applications, Agent-based modeling	Natural Language Processing, Virtual Assistants and Chatbots Technologies, AI, Mobile Computing and Augmented Reality, Web Technologies, Agent-Based Simulation (Transportation or Energy Consumption)	NLP (patient experience, crime detection, Immersive Technologies, Software Engine systems, full-stack, microservices, IoT, an **Further details**
Jens Christian Claussen	j.c.claussen@bham.ac.uk	Email	Dynamics of Complex Systems, Network Science, Complexity measures, Evolutionary Computation, Evolutionary Game Theory, Socio-Economic Systems, Computational Biology, Data Science, Nongaussian probability distributions, Information Theory and applications	Focus on Maths & CS and interdisciplinar Graph Complexity measures, Dynamics o oscillations, spatial sleep regulation mode networks, Cellular Automata, data analysi physics-related projects, mathematical pro **page** **https://webmail.inb.uni-luebeck.de/~cla** and related publications are here https://s hl=en&user=fCjDwsIAAAAJ I am not expert or supporting computer ga focused project suggestions. Warmly welcoming student-suggested pro socio/econ), but please make contact befo
Ruchit Agrawal	r.r.agrawal@bham.ac.uk	Email, Zoom, Teams	Natural Language Processing (NLP), Multi-modal Deep Learning, Generative AI using Transformer-based models (eg. ChatGPT), Music informatics, Healthcare AI (Clinical ML), Audio Signal Processing using Machine Learning	Coming up soon. Sample project ic 1) Speech-to-speech translation us (Eng/Italian/Arabic/other languages 2) Multi-lingual translation/dialogue 3) Sentiment analysis from reviews 4) Time-series analysis/prediction u 5) Multi-modal learning from health watches). Keen on anything related to the cut **Publications (rragrawal.github.io**
Shan He	s.he.1@bham.ac.uk	Zoom, email, individual meetings	Machine learning, computational biology, and drug discovery.	Machine learning, computational biology, algorithms for biomedical data analysis; 2 learning for drug discovery See **https://sh**
Miqing Li	m.li.8@bham.ac.uk	Email or Zoom	Combinatorial optimisation (TSP, Knapsack, VRP, Scheduling, Timetabling, Allocation, Bin Packing, etc), evolutionary algorithms, multi-objective optimisation, multi-criterion decision making, visualisation	**https://sites.google.com/view/miqing-li**

Leandro Minku	l.l.minku@bham.ac.uk	I'm happy for this to be done algorithmically, I don't need to meet with students. However, if you would like to have a chat, please feel free to pop in my office hours on Monday 15:00 or 17:00, Room UG39. PS: in the week of 1st and 8th May my office hours will be on Wednesday 14:00-15:50.	Machine learning, data mining, evolutionary computation	https://www.cs.bham.ac.uk/~minkull/indivi You will need to login with your Computer account login details.
Michael P. Oakes	m.p.oakes@bham.ac.uk	by email or come to UG41	computational linguistics, natural language processing, studies of disputed authorship, computational stylometry, corpus linguistics, changes in language with genre, dialect and time.	I am particularly interested in hearing from language, but would also be pleased to he
Phil Smith	p.smith.7@bham.ac.uk	Email, Drop-in to office hours	Natural Language Processing, Computational Linguistics, Sentiment Analysis, Opinion Mining.	**https://www.cs.bham.ac.uk/~smithpm/s**
Peter Tino	p.tino@bham.ac.uk	Zoom, email, individual meetings	Machine Learning, Probabilistic modelling, computational finance, computer-generated art, evolutionary computation, Machine Learning in Health and Astronomy	https://www.cs.bham.ac.uk/~pxt/PROJEC
Shuo Wang	s.wang.2@bham.ac.uk	Email or Zoom	Machine learning: data stream learning (real-time prediction), Automated machine learning, federated learning, Ensemble learning	Some potential ideas of projects can be fo projects.html. Happy to supervise projects and their applications, but not NLP-focuse
Jizheng Wan	j.wan.1@bham.ac.uk	Zoom, email, individual meetings	Natural Language Processing, semantic representation, correlation/connectivity coefficient, machine/deep learning	I am interested in projects related to sema A specific topic here is using an existing m Distributional Semantic Model then asses within this model. For example, some mec Dermatitis (AD) have a higher risk of deve as pink eye, (https://www.aad.org/public/d we use NLP and/or Machine Learning to i from a distributional semantic model.
Ata Kaban	a.kaban@bham.ac.uk	Email. Also happy for it to be done algorithmically.	Properties of high dimensional data spaces; Data projections; Data augmentation; Visualisation; Intrinsic dimension; Statistical learning theory; Data mining applications; Music projects; Interactive teaching	**http://www.cs.bham.ac.uk/~axk/stud-pr**
Leonardo Stella	l.stella@bham.ac.uk	Email, office hours, individual meetings	Game theory, evolutionary game theory, multi-agent systems, dynamical systems, machine learning, optimisation, game AI, virtual reality	More details about the proposed projects **https://www.leonardostella.com/teachi**
Mark Lee	m.g.lee@bham.ac.uk	Email or Zoom	Natural Language Processing, Web Applications, AI	**https://www.cs.bham.ac.uk/~mgl/stude**

Mirco Giacobbe	m.giacobbe@bham.ac.uk	Email, individual meeting	Computer-aided verification, safe artificial intelligence, machine learning for code analysis, formal analysis of heterogeneous systems	I work on automated verification and AI as systems and machine learning. Possible p software and cyber-physical systems to re reasoning, verification and machine learni
Hamid Mukhtar	h.mukhtar@bham.ac.uk	Email, online/individual meeting	machine learning, human-computer interaction, health informatics, data science, visualisation, human behaviour modeling	**Some ideas to start with**
Akila Subasinghe	a.m.subasinghe@bham.ac.uk	Email, Online/Individual Meeting	Landslide Detection, Security Surveillance, Data Fusion, Deep Learning, Machine Learning, Behavior Analysis	**Maritime vessel tracking - Project Desc Description.pdf**
Niloofer Shanavas	n.shanavas@bham.ac.uk	Email, Online/Individual Meeting	Text mining, Machine Learning, Natural Language Processing, Semantic Computing	**https://scholar.google.co.uk/citations?**
Sharu Theresa Jose	s.t.jose@bham.ac.uk	Email, online/individual meeting	Statistical machine learning, information theory, quantum machine learning	I am interested in working on projects focu generalization error of learning algorithms off in bandit learning, meta-learning, and a learning (this will require knowledge of qu Not keen on software and app developme
Venelin Kovatchev	v.o.kovatchev@bham.ac.uk	Email, Zoom, Office Hours	Natural Language Processing, Computational Semantics, Data-centric AI, Natural Language Inference, Psychology and AI	I am interested in working on projects that analyzing, augmenting, and generating da Language Inference, Question Answering NLP.
Dietmar Heinke (External supervisor – Psychology of UoB)	d.g.heinke@bham.ac.uk	Email, zoom	machine learning, Python, Matlab	I've got machine learning methods need to be converted into Python a

Computer Vision and Imaging

Name	Email Address	Contact?	Project Keywords	Furth
Hamid Dehghani	h.dehghani@bham.ac.uk	Office hour	Medical Image Reconstruction, Medical device development and testing, Medical System and data processing, Model-based optimization for image extraction	I will happy to supervise projects regardin applications of Computer Science in healt image segmentation and/or classification. **Further details**
Hyung Jin Chang	h.j.chang@bham.ac.uk	Email or Dedicated office hour	Computer vision, deep learning, machine learning, human-robot interaction.	Computer vision (hand pose, eye gaze, bo estimation, Neural rendering) & deep lear learning) Highly suggested topics: • Eye gaze-based research • Multimodal data combined gaze follov • Efficient quantization techniques for d • Appearance-based pedestrian attribut etc). • Scene context-based human-object d **Further details**
Jinming Duan	j.duan@bham.ac.uk	Email or Zoom	MRI Reconstruction, Image Segmentation, Image Registration, Motion Tracking, Deep Learning, Numerical Optimisation	Machine learning; medical imaging; comp https://www.cs.bham.ac.uk/~duanj/

Kashif Rajpoot	k.m.rajpoot@bham.ac.uk	I'm happy for students to email me about projects, I'm happy for this to be done algorithmically, I don't need to meet with students	medical AI, computational pathology, artificial intelligence, deep learning, generative AI	**Project ideas** **Web profile** **Google Scholar profile**
Alexander Krull	a.f.f.krull@bham.ac.uk	Email, individual meetings	Image Processing, Denoising, Biomedical images, Deep Learning, Machine Learning, Probabilistic approaches	**https://alex-krull.github.io/studer**
Felipe Orihuela-Espina	f.orihuela-espina@bham.ac.uk	Email	Optical neuroimaging (fNIRS and DCS), Statistics, topology, data modelling, data science and data analytics, manifolds, knowledge discovery, ontologies.	I would be happy to propose and supervis applications to optical neuroimaging (fNIR modalities such as electroencephalograph **https://more.bham.ac.uk/cnl/research/p**
Jianbo Jiao	j.jiao@bham.ac.uk	- Email - Arranging individual meetings flexibly (either in-person or online)	Computer Vision, Machine Learning, Image Generation/Translation/Segmentation	Computer Vision: Image classification, Ima image denoising, super-resolution, inpaint (stereo or monocular), Saliency prediction problems (above), Self-supervised learnin text, audio-video) Others: GAN (generativ translation (e.g. apple -> orange), medical **https://jianbojiao.com/**
Qamar Natsheh	q.natsheh@bham.ac.uk	MS Teams	Computer Vision and Imaging: Medical Image Analysis. Cybersecurity: Information Governance, Privacy, and Ethical AI. Data Science.	Multimedia Image Processing, Camera Pi Medical Imaging, Image Segmentation an Informatics. Encrypting Images, Information Governan Data Science.
Amir Hajiyavand	a.hajiyavand@bham.ac.uk	Please email in the first instance	Computer vision, deep learning	Our intention is to develop an computatior human body (face, torso, arms and legs). different parts of electromagnetic spectrur experience in computer vision and deep le
Sang-Hoon Yeo (External supervisor – Sports Science of UoB)	s.yeo@bham.ac.uk	I'm happy for students to email me about projects	Virtual reality, motion capture, eye-tracking, deep-learning in computer vision & robotics	**https://sites.google.com/view/yeolabpr**

Robotics

Name	Email Address	Contact?	Project Keywords	Furth
Mohan Sridharan	m.sridharan@bham.ac.uk	Email to set up in-person or Zoom meeting	Human-robot collaboration, cognitive systems, knowledge representation, machine learning, robot manipulation and control, multiagent systems	I am interested in supervising projects inv robots and humans. This translates to que representation, reasoning, learning, and c please see the section labeled "Project ide **https://www.cs.bham.ac.uk/~sridharm/I**
Masoumeh Iran Mansouri	m.mansouri@bham.ac.uk	Email or Zoom	Robot planning, multi-robot planning and coordination, human modeling for robot planning, hybrid knowledge representation for robotics, culture and robotics	General topics in Robotics and AI (excludi learning); Highly suggested topic: Robot p optimisation, humans/crowd modeling for construction, warehouse automation, agri with social science (only if students have **Further Details (Links to an external sit**
Dietmar Heinke (External	d.g.heinke@bham.ac.uk	Email	Computer vision, control architectures of robot arms	https://comp-psych.bham.ac.uk/projects.p

supervisor – Psychology of UoB)				

Human-Computer Interaction

Name	Email Address	Contact?	Project Keywords	Furth
Hyunyoung Kim	h.kim.4@bham.ac.uk	In-person meetings, Zoom, email. I can be slow at replying to emails.	Computational design, digital fabrication, additive manufacturing, 3D printing, shape-changing interfaces, tangible user interfaces	I'm interested in the area of: - developing design of 3D printed objects - building nev fabricate - conducting user studies for sha projects, visit https://www.hyunyoung.ki
Chris Baber	c.baber@bham.ac.uk	I'm happy for this to be done algorithmically, I don't need to meet with students	Human-AI interaction; Human-Machine Teams; Explainable AI; Characterising Skilled Performance; Sense-making and Intelligence Analysis	Mobile and Ubiquitous Computing; Humar Interaction
Russell Beale	r.beale@bham.ac.uk	Schedule a meeting using Calendly to chat to me about projects, or use MS Teams to send me a chat message. Both these are better than email. I don't need to meet with you - but happy to chat as needed.	Human-computer interaction, user experience (UX); design, mobile and ubiquitous systems, ambient systems, AI for interactive systems, and novel technologies; social media analysis; intelligent systems; behaviour change and behavioural psychology.	Human-Computer Interaction; Behaviour (https://canvas.bham.ac.uk/courses/681
Bob Hendley	r.j.hendley@.bham.ac.uk	I'm happy for this to be done algorithmically, I don't need to meet with students	HCI, WWW, Java, agents, visualization techniques, data mining, AI programming environments.	Human-Computer Interaction; Intelligent I
Pieter Joubert	p.joubert@bham.ac.uk	Email	Game Based Learning, Pedagogy, Programming Languages, Teaching CS, Gaming	Primarily looking at developing digital gam
Massimiliano Di Luca (External supervisor – Psychology of UoB)	M.DiLuca@bham.ac.uk	Email, or zoom meeting booked with: https://calendly.com/massimilianodiluca/30min	Virtual reality, Haptics, agents, music, human perception, analysis of movements, industry collaborations (Mindmaze, Meta, Ultraleap)	Personal website: http://massimilianodil Video introduction: https://www.youtube.com/watch?v=iZke1G1Silc&list=PLRBLD3PiUPlzAn  Recent projects: https://locomotionvault - https://prendosim.github.io - h Possible project: https://docs.google.com/document/d/1A5h usp=sharing

Computing and Communication Systems

Name	Email Address	Contact?	Project Keywords	Furth
Eike Ritter	e.ritter@bham.ac.uk	I'm happy for this to be done algorithmically, I don't need to meet with students	Low-level systems programming, security (eg intrusion detection, authentication mechanisms, trusted	Low-level programming; security; network https://www.cs.bham.ac.uk/~exr/studer

			computing and automated protocol verification).	
Uday Reddy	u.s.reddy@bham.ac.uk	I'm happy for this to be done algorithmically, I don't need to meet with students	Programming languages, program verification, Business IT applications, Finance, email management, mobile applications.	Software engineering, business IT system **https://www.cs.bham.ac.uk/~udr/studer**
Rachid Anane	r.anane@bham.ac.uk	Email or I'm happy for this to be done algorithmically, I don't need to meet with students	Distributed systems, Recommendation systems, Trust management, Data management, Learning technologies.	Distributed systems (load balancing, trust (tutoring systems, adaptive systems, socia Software Engineering applications **https://www.cs.bham.ac.uk/~rza/**
Mian M. Hamayun	m.m.hamayun@bham.ac.uk	Email or Teams	Software Engineering, Parallel and Mobile Computing, Internet of Things, Simulations, Performance Estimation	https://docs.google.com/document/d/1Q_ jeqkkNgDoASpwHLLdEl4YyaOBNddlcE8/
M. Usman Ilyas	m.ilyas@bham.ac.uk	Email or MS Teams	Networking and communication, applied machine learning, social network analysis, IoT / sensor networks	**https://scholar.google.com/citations?u** Algorithmic trading system
Abdul Wahid	a.wahid@bham.ac.uk	Email OR MS Teams	Networks, IoT, Sensor Networks (Underwater Sensor Networks), Vehicular Ad-hoc Networks, Machine Learning applications in networks	**Abdul Wahid - Google Scholar**

Computer Security and Cryptography

Name	Email Address	Contact?	Project Keywords	Furth
David Oswald	d.f.oswald@bham.ac.uk	- Teams chat (preferred) - Email - Ask me personally after lectures	Cyber security, embedded devices, IoT, forensics, trusted execution environments	See **https://www.cs.bham.ac.uk/~oswal** ideas. Note that topics will be always tailo
Tom Chothia	t.chothia@bham.ac.uk	Email or Zoom	Cyber Security (breaking all the things)	• Projects on the security of industrial c • Formal modelling of security protocols • Projects on game hacking and anti-ch • Projects on fintech security banking c I am particular interested to talk to studen analyse it, and to students that are familia **https://www.cs.bham.ac.uk/~tpc/projec**
Mihai Ordean	m.ordean@bham.ac.uk	Email or Zoom	Fundamental concepts involved in designing security-focused systems.	**https://www.mihaiordean.com/#teachin**
Pascal Berrang	p.p.berrang@bham.ac.uk	Email or Zoom	cyber security, privacy	Focus on privacy applied to anything of in topics. For example: - private evaluation/training of machine lea - privacy in the metaverse, - blockchain technology More information: **https://pascal-berrang**
Ian Batten	i.g.batten@bham.ac.uk	I'm happy for this to be done algorithmically, I don't need to meet with students	Networking, network security and operating systems (Unix-derived)	**https://www.batten.eu.org/~igb/projects**
Rishiraj Bhattacharyya	r.bhattacharyya@bham.ac.uk	Email, dedicated office hours	Cryptography	Threshold Cryptography, Implementation
Luca Arnaboldi	l.arnaboldi@bham.ac.uk	- Teams chat - Email - Ask me personally after lectures	Security of Autonomous Cars, Security and Verification of Machine learning Algorithms and Intrusion Detection, Distributed Machine Learning	More project details here: **http://arnabold**

Panagiotis Andriotis	p.andriotis@bham.ac.uk	Please send me an email	Human Factors in Cyber Security, Digital Forensics, Fairness in Recommendation Systems	Take a look here: https://scholar.google.cc have done in the past. I am happy to discu projects.
Marius Muench	m.m.muench@bham.ac.uk	Email, Zoom	System Security, Embedded Systems, Soft- and Hardware Securiy	I'm happy to discuss project ideas on an ir are: - Firmware Analysis & Emulation/Rehostir - Cellular/Baseband Security - Microarchitectural Security However, I'm also happy to discuss any ot binary exploitation, or embedded systems can check [here].

Software Engineering

Name	Email Address	Contact?	Project Keywords	Furth
Rami Bahsoon	r.bahsoon@bham.ac.uk	Email with an abstract of your proposed topic	Software Engineering; Technical Debt Management; Security Software Engineering; Internet of Things; Cloud Computing; digital twins software architectures; compliance management in smart systems; software engineering ethics; software economics; software architecture evaluation methods	E.g. of Projects: tools and techniques for r cloud service selection; Digital Twins relat help Software Engineers in their activities; greening software engineering practices. I **Further details**
Ahmad Ibrahim	a.ibrahim@bham.ac.uk	Email or Zoom	Software Engineering, Cloud Computing, Internet of Things (IoT)	Software Engineering, Programming (desl applications, games), Internet of Things (A https://www.cs.bham.ac.uk/~ibrahima/p
Anis Zarrad	a.zarrad@bham.ac.uk	Zoom, email, individual meetings	Software engineering, Virtual reality and 3D environments for education purposes, and wireless network protocols.	1. Software testing: Machine learning tech Optimization using genetic algorithms. 2. 3D application for education. Translatio 3. Network protocols: Consider a service (that periodically sends an update messag should be reliable - clients should receive **Further details**
Jacqui Chetty	j.chetty@bham.ac.uk	Zoom, email, individual meetings	Education topics (including gamification) for CS, software engineering projects that support learning to programming, auto testing, other software engineering projects, metacognition tools and self regulation	Highly desirable -> reflective thinking (met at developing a suite of tools to create a tc learning, and how they are progressing. T Background: Developing metacognition ar should acquire to mature academically. St academically. Being able to critically think to develop their own academic self-concep have the experience or support that more means that students can analyse their lea true; and develop a feedback mechanism learning. This may lead to a more positive Desirable -> auto testing / marking of asse
Matt Leeke	m.leeke@bham.ac.uk	E-mail, Meetings, Teams/Zoom	Research Interests: Applied Machine Learning; Dependability; Distributed Systems; Privacy; Software Testing Wireless Sensor Networks.	I'm happy to supervise projects based on It's usually more interesting for us to deve starting point is a research idea, a solutior explore.
Madasar Shah	m.a.shah@bham.ac.uk	Zoom, email, individual meetings	Systems for Teaching Programming to Novices, Automated code quality analysis, Full Stack Software Development, Domain-Specific Programming languages, Software	I'm interested in supervising projects relat engineering. Particularly interesting to me program more interactive, collaborative ar systems that support lecturers to deliver p be happy to talk about are: an app for sett

			Modelling or Design Systems, Code Generation/low code programming Systems, Agile Software Engineering studies,	the feedback process when learning to co to support contribution tracking and analys have supervised include: code-pad.me snippets during lectures drone playgrounc flying drones Remote Robot Tutor - a web simple programming concepts
Paola Yánez	w.yanez@bham.ac.uk	Email, Online individual meetings	Cloud Computing, Fog & Edge Computing, Internet of Things (IoT), Integration IoT and Blockchain	I would be happy to propose and supervis integration of Cloud computing, Fog & Edg
Carl Wilding	c.wilding@bham.ac.uk	Email or Zoom	Python, Java, Embedded Systems, Web Development	-Java Programming, Python Programming Development
			Interdisciplinary Research	
Qamar Natsheh	q.natsheh@bham.ac.uk	MS Teams	Computer Vision and Imaging: Medical Image Analysis. Cybersecurity: Information Governance, Privacy, and Ethical AI. Data Science.	Multimedia Image Processing, Can Medical Imaging, Image Segmenta and Imaging Informatics. Encrypting Images, Information Go Data Science.