

**Leeds Beckett University, Leeds, United Kingdom
National Aerospace University KhAI, Kharkiv, Ukraine
IEEE United Kingdom and Ireland Section
IEEE Ukraine Section**

**10th International Conference
DEpendable Systems, SERvices and Technologies
(DESSERT'2019)**

2019 Theme:
**IoT, Big Data and AI for a Smart
and Safe Future**

Programme

Partners

**Research and Production Company Radiy
Association of Industrial Automation of Ukraine
Ukrainian Scientific and Educational IT Society
ALIOT Project Team**

**Leeds, United Kingdom
June 5-7, 2019**

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WELCOME NOTE

Welcome to the 10th International Conference on Dependable Systems, Services and Technologies DESSERT'2019!

Background. Nowadays our world is facing the increasing effect of information, communication and electronic technologies on comfort, living standards, safety and security of each person and society as a whole. IT-based systems are crucial components of modern critical and commercial domains, thus causing the need for ensured dependability and resilience of such systems. The faults and vulnerabilities of implemented components/configuration/technologies lead to new security and safety issues. Computer systems and services dependability highly depends on the components reliability, availability and integrity as well as on human-machine interface quality. Failures and emergencies of critical systems are as a rule caused by several reasons, combination of physical, design and interaction faults and human errors. Thus to ensure the dependability we should analyse all potential risks at each level of the following hierarchy “component – system – infrastructure (system of systems)” considering interactions and interdependencies between those layers. The paradigm “dependable, secure and safe systems out of undependable, insecure and unsafe components” has become especially important for building sustainable and smart environments and autonomous systems where IoT, AI, Big Data and Cloud Computing technologies are widely adopted.

History. The annual DESSERT conference began since 2006 and its primary focus has been on methodologies, techniques and tools for dependability, security and safety assessment and assurance of software and hardware components, computer systems, networks and infrastructures. DESSERT'2019 is responding to current major challenges relating to state-of-the-art information and communication technologies and paradigms such as cloud and fog computing, Internet of things and everything, big data, software defined applications, cyber physical systems and etc. Relevant areas of interest encompasses regulations, analysis, modelling, development, verification, operation and maintenance of hardware, software and human related components, computer systems, networks and infrastructures for safety-, mission- and business-critical applications.

Topics. This year DESSERT'2019 is addressing the main dependability challenges related to the IoT, Big Data and AI for a Smart and Safe Future. Major topics of interests include:

- Methodology and trends of dependable and resilient computing
- Methodologies and trends of smart and pervasive computing
- Methodologies and trends in sustainable and green computing and communications
- Safety and security of instrumentation and control systems (I&C) of critical infrastructures
- Dependability, security and resilience of web, Internet-, cloud-, fog- and dew- computing
- Dependability, safety and cyber security of IoT systems for human and industry domains
- Formal methods for development and verification of safety-critical systems
- Assurance case-based techniques for safety and security critical applications
- AI and intelligent systems for safety and security
- Reliability and safety of unmanned vehicles, drones and UAV fleets
- Big data and data mining techniques for business and critical domains
- Blockchain security and trustworthiness

Statistics. DESSERT'2019 statistics:

- 57 papers have been submitted by 176 authors from 17 countries (Bulgaria, China, Denmark, Estonia, France, Germany, India, Italy, Montenegro, Netherlands, Norway, Oman, Poland, Portugal, Russia, Syria, Slovakia, Spain, Sweden, Ukraine, United Arab Emirates, United Kingdom, United States, Vietnam);
- number of members of PC committee is 47 from 14 countries;
- each paper has been reviewed by at least 3 reviewers;
- 40 papers have been accepted (70%) and published in conference proceedings to be included in IEEE Explore Library and indexed by Scopus;
- number of keynote speakers is 3.

Acknowledgements. First, we would like to thank all authors and keynote speakers for their interest and research contribution. We are especially grateful to Leeds Beckett University for holding the event and financial support of DESSERT Conference. Finally, we thank members of Organizing, Program, Local and Information Committees and International Advisory Board for their hard but fruitful work.

Professor Vyacheslav Kharchenko

Professor Colin Pattinson

General Chairs of DESSERT'2019 Conference

DESSERT'2019 Committees

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Volodymyr Kazymyr, Chernihiv National University of Technology, Ukraine
Yevhen Brezhniev, National Aerospace University “KhAI”, Ukraine
Yuriy Kondratenko, Petro Mohyla Black Sea National University, Ukraine

DESSERT'2019 Timetable

June 5, Wednesday		June 6, Thursday			June 7, Friday		
10.45- 12.45	Arrival, Registration (Coffee from 12.00)	9.00- 9.30	Registration		09.15- 10.30	Session SE1 (LT-C)	Session SA1 (LT-D)
		09.30- 10.30	Keynote Talk 2. Prof. Juan Carlos Augusto (LT-C)				
		10.30- 11.00	Coffee-break		10.30- 11.00	Coffee-break	
		11.00- 13.00	Session FM (LT-C)	Industrial session (LT-D)	11.00- 13.00	Session AI (LT-C)	Session DA2 (LT-D)
12.45- 13.00	Opening welcome from DVC Research (LT-C)						
13.00- 14.00	Keynote Talk 1. Prof. Mike Hinchey (LT-C)	13.00- 14.00	Lunch		13.00- 14.00	Lunch	
14.00- 15.45	Session DE1 (LT-C)	14.00- 15.00	Keynote Talk 3. Prof. Geyong Min (LT-C)		14.00- 15.15	Session SE2 (LT-C)	Session SA2 (LT-D)
15.45- 16.15	Coffee-break	15.00- 15.30	Coffee-break		15.15- 16.00	Closing session (LT-C)	
16.15- 18.00	Session DE2 (LT-C)	15.30- 17.30	Session DA1 (LT-C)				
19.00	Conference Dinner						

Sessions

DE	Dependability of smart systems and IoT
FM	Formal methods of ensuring safety and security of smart systems
DA	Data analytics to evaluate performance, safety and security of smart systems
AI	AI and machine learning for smart systems and applications
SE	Security of smart systems and IoT
SA	Safety of mission-critical smart systems

Locations

LT-C	Lecture Theatre C, James Graham, Headingley Campus, Leeds Beckett University
LT-D	Lecture Theatre D, James Graham, Headingley Campus, Leeds Beckett University

Keynote Speakers

Professor Mike Hinchey

Lero; University of Limerick
Ireland

Keynote talk: Is There Anything That Isn't Software?

In this rapidly changing world, evolving technologies such as Artificial Intelligence, Robotics, Machine Learning, Cloud Computing, Big Data, the Internet of Things, and Mobile Computing are combining to disrupt traditional models and radically change how we live, work, and interact. More importantly, these technologies change the way we live and do business: the world's largest bookstore is a Cloud Computing provider, and the largest fleet of cars in the world is operated by an app provider. Areas such as healthcare have been transformed dramatically, with better analysis, imaging, detection, diagnosis, treatment, robot-assisted surgery, and even significant advances in sharing health records. We eagerly await the day when cars, buses, trucks, and railways are self-driven, and Industry 4.0 is already upon us. All of these advances are entirely dependent on software. We ask the question: is there anything that isn't software?

Brief Bio



Professor Mike Hinchey is Chair of IEEE UK & Ireland Section for 2018-2019. He is President of IFIP, the International Federation for Information Processing (www.ifip.org) and is Emeritus Director of Lero-the Irish Software Research Centre and Professor of Software Engineering at University of Limerick, Ireland. Prior to joining Lero, Professor Hinchey was the Director of the NASA Software Engineering Laboratory. In 2009, he was awarded NASA's Kerley Award as Innovator of the Year and is recognized in the NASA Inventors Hall of Fame. Professor Hinchey holds a B.Sc. in Computer Systems from University of Limerick, an M.Sc. in Computation from University of Oxford and a PhD in Computer Science from University of Cambridge. Professor Hinchey is a Chartered Engineer, Chartered Engineering Professional, Chartered Mathematician and Chartered Information Technology Professional, as well as a Fellow of the IET, British Computer Society and Irish Computer Society, of which he was recently elected President. He is Editor-in-Chief of Innovations in Systems and Software Engineering: a NASA Journal and Journal of the Brazilian Computer Society. In January 2018, he became an Honorary Fellow of the Computer Society of India.

Professor Geyong Min

University of Exeter
UK

Keynote Talk: Big Data Analytics for Intelligent Cloud and Network Management

To achieve high performance and reliability of Cloud computing and networking systems, our vision is to develop efficient big data analytics in order to dig valuable knowledge and actionable insights hidden in network big data for improving the design, operation, management, and intelligence of Cloud and networks. This talk will present the innovative big data modelling, representation and processing technologies, real-time incremental data analysis tools, and a cost-effective distributed platform we have developed to support better decision-making for system design, anomaly detection, resource management and optimization. This talk offers the theoretical underpinning for efficient processing of big data, and also opens up a new horizon of research and development by exploiting the key intelligence and insights hidden in content-rich big data for the design and improvement of Cloud computing and networking systems.

Brief Bio



Professor Geyong Min is a Chair in High Performance Computing and Networking and the Academic Lead of Computer Science in the College of Engineering, Mathematics and Physical Sciences at the University of Exeter, UK. His recent research has been supported by European Horizon-2020, FP6/FP7, UK EPSRC, Royal Society, Royal Academy of Engineering, and industrial partners including British Telecom, Huawei Technologies, IBM, INMARSAT, Motorola, and InforSense Ltd. He has published more than 200 research papers in leading international journals including IEEE/ACM Transactions on Networking, IEEE Journal on Selected Areas in Communications, IEEE Transactions on Computers, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Communications, and IEEE Transactions on Wireless Communications, and at reputable international conferences, such as SIGCOMM-IMC, INFOCOM, and ICDCS. He is an Associated Editor of several international journals, e.g., IEEE Transactions on Computers, and IEEE Transactions on Cloud Computing. He served as the General Chair/Program Chair of a number of international conferences in the area of Information and Communications Technologies.

Professor Juan Carlos Augusto

Middlesex University
London
UK

Keynote Talk: Aligning Smart Environments services with User Expectations

During this talk we will explore issues Intelligent Environments Systems (IES) design and development. Especial focus will be given to the assumption the primary expectation on these systems is they should serve humans and the influence this have on the creation process. Different inter-related methodologies will be considered and their use illustrated through their application in various projects of varying size and complexity.

Brief Bio



Prof. Juan Carlos Augusto, (Licenciate in Computer Science - 1992, Ph.D. in Artificial Intelligence – 1998, M.Sc. in Higher Education Practice - 2009) is Professor of Computer Science at Middlesex University, London, UK. He is also the Head of the Research Group on Development of Intelligent Environments and its Smart Spaces Lab. With a technical background on Artificial Intelligence, Software Engineering and Human-Computer Interfaces, his research interests are on the design and implementation of Intelligent Environments with special interest in the improvement of the intelligence, interfaces and development process of systems in this area. His interests intersect with several areas, for example, User-centred computing, Context-awareness, Internet of Things, and Ubiquitous/Pervasive Computing. He has contributed to the research community with more than 230 publications. He is Editor in Chief of the Book Series on *Ambient Intelligence and Smart Environments* (IOS Press), co-Editor in Chief of the *Journal on Ambient Intelligence and Smart Environments* (IOS Press); and co-Editor in Chief of the *Journal on Reliable Intelligent Environments* (Springer). He has participated in fourteen research projects and has been the Principal Investigator for eight of them. He is a member of several European advisory boards for government and funding organizations, and a member of the following professional organizations: ACM, IEEE-SMC, AAI (Senior Member) and BCS (Professional Fellow).

**10th International IEEE Conference
Dependable Systems, Services and Technologies
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June 5-7, Leeds, UK
Program**

June 5

9.45 – 12.45. **Arrival. Registration**

12.45 – 13.00. **Opening welcome**

- *Professor Andrew Slade*, Deputy Vice Chancellor, Research & Enterprise, Leeds Beckett University
- *Professor Vyacheslav Kharchenko*, General Co-Chair of the IEEE DESSERT'2019 Conference, Head of Computer Systems, Networks and Cyber Security Department, National Aerospace University KhAI

13.00 – 14.00. **Keynote Talk 1. Prof. Mike Hinchey. Is There Anything That Isn't Software?**

14.00 – 15.45. **Session DE1. Dependability of smart systems and IoT**

Moderators: *Professor Juan Carlos Augusto, Dr Oleg Illiashenko*

- Oleksandr Drozd, Vyacheslav Kharchenko, Andrzej Rucinski, Thaddeus Kochanski, Raymond Garbos and Dmitry Maevisky. DEVELOPMENT OF MODELS IN RESILIENT COMPUTING
- Juan Carlos Augusto, Mario Quinde and Chimezie Oguego. CONTEXT-AWARE SYSTEMS TESTING AND VALIDATION
- Peter Sedlacek, Patrik Rusnak, Andrej Forgac, Oleg Illiashenko and Vyacheslav Kharchenko. STRUCTURE FUNCTION BASED METHODS IN EVALUATION OF AVAILABILITY OF HEALTHCARE SYSTEM
- Patrik Rusnak, Miroslav Kvassay, Elena Zaitseva, Vyacheslav Kharchenko and Herman Fesenko. RELIABILITY ASSESSMENT OF HETEROGENEOUS DRONE FLEET WITH SLIDING REDUNDANCY

15.45 – 16.15. *Coffee-break*

16.15 – 18.00. **Session DE2. Dependability of smart systems and IoT**

Moderators: *Professor Anatoliy Sachenko, Dr Anton Kamenskih*

- Aleksandr Serkov, Valeri Kravets, Igor Yakovenko, Gennady Churyumov, Volodymyr Tokariev and Wang Nannan. ULTRA WIDEBAND SIGNALS IN CONTROL SYSTEMS OF UNMANNED AERIAL VEHICLES
- Anton Kamenskih and Sergey Tyurin. INVESTIGATION AND DESIGN OF A THRESHOLD ELEMENTS
- Roman Kochan, Orest Kochan, Anatoliy Sachenko and Volodymyr Kochan. INCREASING METROLOGICAL RELIABILITY OF MEASURING CHANNELS FOR DISTRIBUTED AUTOMATED CONTROL SYSTEMS
- Anton Kamenskih, Yuri Stepchenkov, Yuri Diachenko, Yuri Rogdestvenski and Denis Diachenko. FAULT-TOLERANCE OF THE SELF-TIMED CIRCUITS

June 6

9.00 – 9.30. **Registration**

9.30 – 10.30. **Keynote Talk 2. Prof. Geyong Min. Big Data Analytics for Intelligent Cloud and Network Management**

10.30 – 11.00. *Coffee-break*

11.00 – 13.00. **Session FM. Formal methods of ensuring safety and security of smart systems**

Moderators: *Dr Sc Oleksandr Letychevskyi, Dr Gert Kanter*

- Gert Kanter and Jüri Vain. TESTIT: AN OPEN-SOURCE SCALABLE LONG-TERM AUTONOMY TESTING TOOLKIT FOR ROS
- Maryna Kolisnyk, Vyacheslav Kharchenko and Iryna Piskachova. IoT SERVER AVAILABILITY CONSIDERING DDOS-ATTACKS: ANALYSIS OF PREVENTION METHODS AND MARKOV MODEL
- Juan Carlos Augusto, Mario Quinde and Nawaz Kahn. USING FORMAL METHODS TO GUIDE THE DEVELOPMENT OF AN ASTHMA MANAGEMENT SYSTEM
- Anastasiia Strielkina, Bohdan Volochiy and Vyacheslav Kharchenko. MODEL OF FUNCTIONAL BEHAVIOR OF HEALTHCARE INTERNET OF THINGS DEVICE
- Vladimir Peschanenko, Oleksandr Letychevskyi, Viktor Radchenko, Victor Yakovlev and Yaroslav Hryniuk. ALGEBRAIC PATTERNS OF VULNERABILITIES IN BINARY CODE

13.00 – 14.00. *Lunch*

14.00 – 15.00. **Keynote Talk 3. Prof. Juan Carlos Augusto. Aligning Smart Environments Services with User Expectations**

15.00 – 15.30. *Coffee-break*

15.30 – 17.30. **Session DAI. Data analytics to evaluate performance, safety and security of smart systems**

Moderators: *Professor Gennadiy Krivoulya, Dr Sc Anatoliy Gorbenko*

- Inna Skarga-Bandurova, Maksym Nesterov, Tetiana Biloborodova, Gennadiy Krivoulya, Igor Kotsiuba and Oleg Biloborodov. DATA FUSION TECHNIQUE TO PREDICTING DATABASE PERFORMANCE ISSUES
- Fash Safdari and Anatoliy Gorbenko. EXPERIMENTAL EVALUATION OF PERFORMANCE ANOMALY IN MIXED DATA RATE IEEE802.11AC WIRELESS NETWORKS
- Olga Chovancova, Jan Rabcan, Jozef Kostolny and Denisa Macekova. HUMAN RELIABILITY EVALUATION THROUGH ANALYSIS OF DEPRESSION PREDICTION BASED ON METABOLOMIC DATA
- Oladapo Babajide, Tawfik Hissam, Anna Palczewska, Anatoliy Gorbenko , Arne Astrup, Alfredo Martinez, Jean-Michel Oppert and Thorkild Ia Sørensen. APPLICATION OF UNSUPERVISED LEARNING IN WEIGHT-LOSS CATEGORISATION FOR WEIGHT MANAGEMENT PROGRAMS
- Volodymyr Zaslavskyi and Maya Pasichna. INFORMATION TECHNOLOGY OF DIVERSIFICATION AND OPTIMIZATION OF THE ENERGY GENERATION CAPACITIES OF THE ENERGY COMPANIES

June 7

9.15 – 10.30. *Session SEI. Security of smart systems and IoT*

Moderators: Professor Inna Skarga-Bandurova, Dr Bo Jiang

- Bo Jiang, Xinjun Du and Yuxiao Yang. SECURE FORMATION COMMUNICATION METHOD BASED ON THE OPPORTUNITY THEORY
- Serhii Semenov, Denys Voloshyn, Viacheslav Lymarenko, Anna Semenova and Viacheslav Davydov. METHOD OF UAVS QUASI-AUTONOMOUS POSITIONING IN THE EXTERNAL CYBER ATTACKS CONDITIONS
- Dmytro Zubarev and Inna Skarga-Bandurova. CROSS-SITE SCRIPTING FOR GRAPHIC DATA: VULNERABILITIES AND PREVENTION

9.15 – 10.30. *Session SAI. Safety of smart systems and IoT*

Moderators: Dr Ah Lian Kor, Professor Vyacheslav Kharchenko

- Abiodun Yusuf, Ah Lian Kor and Hissam Tawfik. A SIMULATION ENVIRONMENT FOR INVESTIGATING IN-FLIGHT STARTLE IN GENERAL AVIATION
- Vladimir Sklyar and Vyacheslav Kharchenko. ASSURANCE CASE BASED LICENSING FOR NUCLEAR POWER PLANT POST-ACCIDENT MONITORING SYSTEM BASED ON UNMANNED AIRCRAFT VEHICLES
- Hanna Ukhina, Valerii Sytnikov, Oleg Streltsov, Pavel Stupen and Dmitry Yakovlev. TRANSFER FUNCTION COEFFICIENTS INFLUENCE ON THE PROCESSING PATH BANDPASS FREQUENCY-DEPENDENT COMPONENTS' AMPLITUDE-FREQUENCY CHARACTERISTICS PROPERTIES AT THE NPP TP ACS

10.30 – 11.00. *Coffee-break*

11.00 – 13.00. *Session AI. AI and machine learning for smart systems and applications*

Moderators: Dr Bhupesh Mishra, Dr Sudhir Rao Rupanagudi

- Yehor Boltov, Inna Skarga-Bandurova, Igor Kotsiuba, Mykhailo Hrushka, Gennady Krivoulya and Rostyslav Siriak. PERFORMANCE EVALUATION OF REAL-TIME SYSTEM FOR VISION-BASED NAVIGATION OF SMALL AUTONOMOUS MOBILE ROBOTS
- Richard Rudd-Orthner and Lyudmila Mihaylova. NON-RANDOM WEIGHT INITIALISATION IN DEEP LEARNING NETWORKS FOR REPEATABLE DETERMINISM
- Balbir Singh and Hissam Tawfik. A MACHINE LEARNING APPROACH FOR PREDICTING WEIGHT GAIN RISKS IN YOUNG ADULTS
- Bhupesh Mishra, Dhavalkumar Thakker, Suvodeep Mazumdar, Daniel Neagu and Sydney Simpson. USING DEEP LEARNING FOR IOT-ENABLED SMART CAMERA: A USE CASE OF FLOOD MONITORING
- Sudhir Rao Rupanagudi, Varsha G Bhat, Shreya K Gurikar, S Pranava Koundinya, Sumedh Kumar M S, Shreyas R, Shilpa S, Suman N M, Rachana R Bademi, Manisha Koppiseti and Vasanthi Satyananda. A VIDEO PROCESSING BASED EYE GAZE RECOGNITION ALGORITHM FOR WHEELCHAIR CONTROL

11.00 – 13.00. *Session DA2. Data analytics to evaluate performance, safety and security of smart systems*

Moderators: Professor Nataliia Kussul, Dr Pip Trevorrow

- Danyal Akarca, Philip Xiu, Dave Ebbitt, Bara Mustafa, Hasan Al-Ramadhani and Abdullah Albeyatti. BLOCKCHAIN SECURED ELECTRONIC HEALTH RECORDS: PATIENT RIGHTS, PRIVACY AND CYBERSECURITY
- Grace Phiri and Pip Trevorrow. SUSTAINABLE FOOD WASTE MANAGEMENT USING SMART TECHNOLOGY
- Sanela Lazarevski, Steven Haynes, Prudencia Estin, Mekala Soosay and Ah-Lian Kor. DATA ANALYTICS: FACTORS OF TRAFFIC ACCIDENTS IN THE UK

- Nataliia Kussul, Andrii Shelestov, Mykola Lavreniuk, Andrii Kolotii and Vladimir Vasiliev. LAND COVER AND LAND USE MONITORING BASED ON SATELLITE DATA WITHIN WORLD BANK PROJECT
- Leonid Shumilo, Nataliia Kussul, Andrii Shelestov, Yuliia Korsunska and Bohdan Yailymov. SENTINEL-3 URBAN HEAT ISLAND MONITORING AND ANALYSIS FOR KYIV BASED ON VECTOR DATA

13.00 – 14.00. *Lunch*

14.00 – 15.15. **Session SE2. Security of Smart systems and IoT**

Moderators: *Professor Oleksandr Drozd, Joakim Kargaard*

- Erik David Martin , Joakim Kargaard and Iain Sutherland. RASPBERRY PI MALWARE: AN ANALYSIS OF CYBERATTACKS TOWARDS IoT DEVICES
- Tetiana Polhul. CONCEPTUAL MODEL OF AN INTELLIGENT SYSTEM FOR DETECTING FRAUD DURING MOBILE APPLICATIONS INSTALLATION
- Kostiantyn Zashcholkin, Oleksandr Drozd, Olena Ivanova, Ruslan Shaporin, Olga Veselska and Hanna Stepova. EMBEDDING THE DIGITAL WATERMARKS INTO FPGA-PROJECTS CONTAINING THE ADAPTIVE LOGIC MODULES

14.00 – 15.15. **Session SA2. Safety of Smart systems and IoT**

Moderators: *Dr Rob Aspin, Dr Oleg Illiashenko*

- Sergiy Dotsenko, Oleg Illiashenko, Vyacheslav Kharchenko and Sergiy Kamenskyi. INTEGRATED CYBER SAFETY & SECURITY MANAGEMENT SYSTEM: INDUSTRY 4.0 ISSUE
- Asaad Qasim, Rob Aspin and Farid Meziane. INTEGRATION OF DIGITAL WATERMARKING TECHNIQUE INTO MEDICAL IMAGING SYSTEMS
- Gennadiy Kostyuk, Nikolay Nechiporuk and Kateryna Kostyk. DETERMINATION OF TECHNOLOGICAL PARAMETERS FOR OBTAINING NANOSTRUCTURES UNDER PULSE LASER RADIATION ON STEEL OF DRONE ENGINE PARTS

Awards. Closing

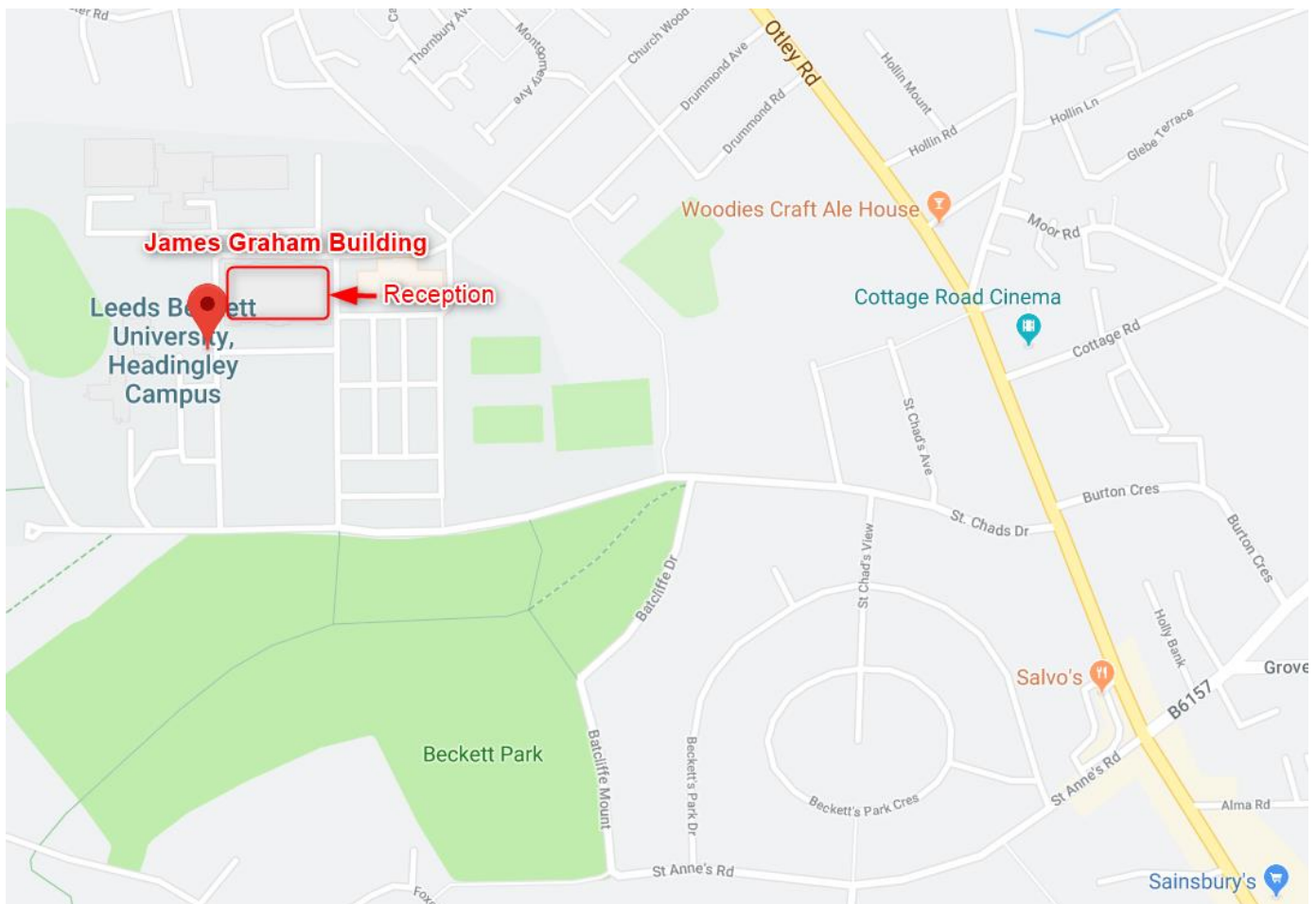
LOCATION

The **DESSERT'2019** will be held in Leeds (June, 5-7), at the Leeds Beckett University in Headingley Campus.

Address: Lecture Theatre C, D, James Graham Building, Headingley Campus, Church Wood Ave, Leeds LS6 3QS.



<https://www.google.com/maps/place/53%C2%B049'38.0%22N+1%C2%B035'34.7%22W/@53.8272222,-1.5951609,17z/data=!3m1!4b1!4m14!1m7!3m6!1s0x48795924dfcca409:0x3e8c3d542eb19018!2sLeeds+LS6+3QT,+UK!3b1!8m2!3d53.8269185!4d-1.5939671!3m5!1s0x0:0x0!7e2!8m2!3d53.827215!4d-1.5929579>



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