Prof. Nishan Canaranajah, Vice Chancellor, University of Leicester, UK.
CC: Mr. Gary Dixon, Chair of Council.
Prof. Sarah Dixon, Head of College of Science and Engineering.
Prof. Mark Purnell, Dean of Research.
Prof. Graham Wynn, Pro Vice Chancellor for Education.
Dr. Sandeep Hanna, Dean of Education, College of Science and Engineering.
Prof. Lu Liu, Head of School of Informatics.
Ms. Mia Nembhard, President of the Students Union.
Ms. Deirdre O'Sullivan, The Leicester UCU branch.

Dear Vice Chancellor,

The undersigned are former members of the erstwhile Department of Computer Science, and presently the School of Informatics at the University of Leicester. We enjoyed its passion for quality teaching, its vibrant research discussions, and the enduring sense of community. In short, Leicester was a great place to be.

A SUCCESSFUL TRANSFORMATION At the turn of the millennium, when the dot-com bubble burst and student numbers fell, it was crucial that the Department of Mathematics and Computer Science react: it did so with a change of direction. A decision was made to shift the focus from the foundations of computing (and maths) into a School branching out into software engineering and related areas. We added many successful masters degrees, attracting students from all over the world to Leicester. In this process Mathematics and Computer Science split into separate departments, enabling Computer Science to expand into more applied areas, but, crucially, retaining a strong Foundations of Computing group. The importance of a rich blend of foundational ideas and of practical applications was recognised. All this was achieved in a lively atmosphere where academic staff were fully involved in all decision processes. The transformation was successful because the decisions were shared and owned by the academics. Its implementation required a huge effort from all members of staff: this dedication was possible because of the excellent working environment. Further long term improvements are witnessed by the improvements from RAE 2008 to REF 2014.

CHANGE IN MANAGEMENT Around 2016 the style of management changed. Many academics felt that decisions were imposed by senior leadership, with little or no consultation. The great atmosphere of cooperation was being lost. An example of this was a decision to invest in a new degree (Creative Computing); the School's concerns, suggestions, and doubts were to a great extent ignored. The perception was that the University was shifting from a goal of research excellence to one of vocational teaching. This resulted in a number of people leaving. The current plans for "Foundations of Computing" (FoCo) confirm this trend, with a reduction in research active staff, the offer of two teaching focussed AI lectureships, and the abandonment of research in Pure Maths and of "highly theoretical" FoCo research.

RESEARCH FoCo comprises a large number of different areas of mainstream computer science such as algorithms, programming languages, software engineering, concurrency, and verification. Much of *current* FoCO research substantially underpins many modern developments in AI. The research of FoCo's members demonstrates world-wide leadership. Besides several EPSRC and EU grants over the years, FoCo has secured an ERC consolidator grant (Piterman), a COST action on

reversible computing (Ulidowski), an EPSRC grant (Erlebach), and a Facebook collaboration with funding (Crole). Moreover, Professor Mousavi's grant shows that FoCo can take leadership on one of the main challenges of AI research, namely the problem of interpretability and explainability. We note that EPSRC AI funding (23m current) is much lower than the combined funding of Theoretical Computer Science (19m) and Verification and Correctness (12m), which fall within FoCo's remit.

FLAWED PROCESSES Following an initial consultation in Oct/Nov 2020, there was no engagement with either FoCo academics, or the wider intellectual community of scholars, industry, professional bodies, and external examiners. At no point were staff explicitly asked to focus on AI; and no window of opportunity to realign their research has been given. We understand that the first time FoCo staff knew of the detailed business case for a new School of AI was over a week after the receipt of redundancy letters. **This is truly shocking, and an appalling way to treat senior, experienced and very hard working staff. How do you think retained staff will feel moving forwards?** Everyone has made enormous efforts during the Covid-19 pandemic, and the School is highly profitable, with a very high student:staff ratio.

FLAWED SCREENING Staff are now being screened to see how their research aligns with a new focus on AI, and will be made redundant if they fail the screening. The process seems to raise very serious questions. The quality of research of the affected staff has not been considered, nor the funding and world-leadership noted above. The contributions to research funding are not recognised. Much of current work in AI and data science originated from foundational work, and a **broad** FoCo presence is **paramount** to *maintain excellence in research (and teaching) moving forwards*. This cannot be stated strongly enough.

TEACHING Students need to learn the foundations of computing to give them long term knowledge and make them adaptable; and this knowledge needs to be taught by experts. Industry is crying out for such students now, and will demand them in the future. Quoting a report of the Federal Aviation Authority and NASA: "*Formal methods should be part of the education of every computer scientist and software engineer, just as the appropriate branch of applied maths is a necessary part of the education of all other engineers*". Foundations do not change from year to year; they provide much needed stability.

QUESTIONS By cutting yourself off from such broad expertise, essential for stable teaching and research, and also for the long-term needs of business and industry, how does your strategy hold up in a few years time when hot funding for AI recedes? What is your opinion of the damage to the reputation of the UoL that results from (attempted) firing of successful and long serving academics? Is the aim of the current transformation to turn the UoL from an institution with world class research in a number of different areas (including pure mathematics and computer science) to an institution largely dedicated to vocational training?

CONCLUSION We strongly urge that you reconsider your decision. If the redundancies happen, it will throw into doubt the integrity of the School's programmes. This strategy risks undoing the achievements of the last two decades and puts the long-term perspectives of CS research in question. Please reflect on how UoL was perceived prior to 2016, and the great successes of the expansion of Software Engineering in parallel with the retention of the Foundations of Computing. We believe that UoL should foster its historical reputation, and work with the FoCo team in a positive and constructive manner.

Looking forward to a reply to our questions,
Kind regards,

Prof. Alexander Kurz (former professor),
Chapman University, Orange CA, USA.

Prof. Gavin Lowe (former lecturer, and UG External Examiner for UoL),
Department of Computer Science, University of Oxford, UK.

Prof. Stephan Reiff-Marganiec (former assoc Prof and Director of the Leicester Innovation Hub),
Head of School of Computing and Engineering, University of Derby, UK.

Prof. Rick Thomas (former professor),
Emeritus Professor, University of Leicester, UK.

Prof. Nobuko Yoshida (former lecturer),
Imperial College, London, UK.

Dr. Nick Bezhanishvili (former post-doc),
Assistant Professor at University of Amsterdam, The Netherlands.

Dr. Laura Bocchi (former post-doc),
Senior Lecturer, School of Computing, University of Kent, UK

Dr. Rayna Dimitrova (former lecturer),
CISPA Helmholtz Center for Information Security in Saarbrücken, Germany.

Dr. Nicola Gambino (former lecturer),
Associate Professor in Pure Mathematics and Director of Research and Innovation, University of Leeds, UK.

Dr. Christian Kissing (former PhD student)
Software engineer.

Dr. Julien Lange (former PhD student),
Lecturer, Department of Computer Science, Royal Holloway, University, University of London, UK.

Privatdozent Dr. Tadeusz Litak (former post-doc),
Akademischer Oberrat am Department Informatik, Technische Fakultät, FAU Erlangen-Nürnberg, Germany.

Dr. Leandro L. Minku (former lecturer),
Lecturer in Intelligent Systems, Director MSc Data Science, School of Computer Science, University of Birmingham.

Dr. Alberto Momigliano (former post-doc),
Associate Professor, Department of Computer Science, Università degli Studi di Milano, Italy.

Dr. Andrzej Murawski (former lecturer),
Associate Professor of Computer Science, Department of Computer Science, University of Oxford.

Dr. Dirk Pattinson (former lecturer),
Associate Professor, Research School of Computer Science, Australian National University.

Dr. Daniela Petrisan (former RA and PhD student),
Associate Professor (Maîtres de conférences), Université de Paris, France.

Dr. Gabriela Rino Nesin (former PhD student),
Senior lecturer, University of Brighton.

Dr. Emilio Tuosto (former associate professor),
Associate Professor at Gran Sasso Science Institute, Head of the Formal Methods Group.

Dr. Nervo Xavier Verdezoto (former lecturer),
Lecturer, School of Computer Science and Informatics, Cardiff University.

Dr. Neil Walkinshaw (former senior lecturer),
Senior Lecturer in Testing, Department of Computer Science, University of Sheffield.

Claudia Cauli (former PhD student),
Ph.D. Student, University of Gothenburg, Sweden.