2019 YCCSA SUMMER SCHOLARSHIP PROJECT SUBMISSION

This form is for prospective project supervisors to submit their projects to be included in the YCCSA Summer Scholarships Programme for 2019.

It is the purpose of the YCCSA Summer School that any projects submitted are novel and interdisciplinary in nature.

Date	*7th December 2019*
Supervisors' Names and Departments / Affiliation and Contact Email	Sarah Allen (Health Sciences) Christina van der Feltz-Cornelis (Health Sciences) David A. Mitchell (YCCSA) Angelika Sebald (YCCSA and Chemistry), *angelika.sebald@york.ac.uk* *christina.vanderfeltz-cornelis@york.ac.uk* *david.mitchell@york.ac.uk* *sarah.allen@york.ac.uk*
Project Title	Tailored health-related information using the 'magic triangle' QoL assessment tool
Project Description	This will be a mini-group project for two students to work collaboratively on new content of an existing health-information based website (maxfacts.uk) and an online quality of life (QoL) assessment tool for maxillofacial surgical patients. Maxfacts.uk is a website providing accurate information about conditions, treatment, and management of the consequences of treatment in the mouth, jaws, and face. The website is being developed for maxillofacial patients, carers and healthcare professionals alike; with the goal of encouraging patients to take ownership of their conditions and help them to help themselves. Maxfacts.uk is still a work-in-progress, many areas of the site are incomplete and further work is required. As such, the formulation of expert-written and evidence-based mental health content for addition to the website will comprise one aspect of this current project. Maxfacts.uk also contains a prototype interactive self-assessment tool; the 'magic triangle' which was developed using a clinical model of a maxillofacial surgical patient, and can be adapted and implemented in the place of various health-related QoL questionnaires. The working of the tool is underpinned by the mathematical properties of an equilateral triangle and currently provides users with a numerical (percentage) summary of their session. This project will develop further this 'magic triangle' assessment tool, by essentially adding a further step directing patients to tailored (i.e. based on their output) self-help advice and information on mental health, specific to maxillofacial patients.

	It is therefore anticipated that the project team will work to address the following main objectives: 1) To develop an algorithm to tailor the output of the 'magic triangle' quality of life assessment tool so it can direct users to 'self-help' information relevant to identified areas of personal importance. 2) To translate evidence-based and population-specific mental health information into appropriate content for inclusion on the maxfacts.uk. There will also be the scope to develop a prototype of the 'magic triangle' assessment tool for use in other illness populations (e.g. chronic pain patients).
Required Skills	This would ideally suit one student with computer science background and an interest in human-computer interfaces, and another student from a medical/health subject. Programming skills will be required for the development of the 'magic triangle' tool (open source code: https://github.com/laurenkt/magic-triangle; demo version: https://laurenkt.github.io/magic-triangle/). A knowledge of mental and physical health co-morbidities, and the ability to clearly present health/medical information to a range of (non-academic) audiences are desirable for the medical/health role. Both roles will require excellent communication and logistical skills in addition to the ability to work cohesively within a multidisciplinary team.
Supervision and Collaboration Arrangements	The whole supervisory team will be actively involved and available throughout the summer. Work will progress via regular and frequent face-to-face meetings and email correspondence with both students and the supervisory team. Sarah Allen will act as primary contact and coordinator; however the team will work collaboratively throughout the project. The 'Maxfacts core team' comprises of David Mitchell; a head & neck, and oral & maxillofacial surgeon, and Angelika Sebald whose expertise and content contribution lies in the science areas (e.g. physics of food). Christina van der Feltz-Cornelis is a Psychiatrist with expertise in the interface of somatic and mental health and development of algorithms applicable in the clinical setting. Sarah Allen is a Psychologist with interests in physical and mental health comorbidities.
Project Dates	The summer school runs for 9 weeks, starting on Monday, 08 July 2019 and finishing on Friday, 06 September 2019.
Other Information	The results of the project are likely to be publishable and will have implications for future research aiming to develop interactive online-based interventions in chronic illness populations with mental health comorbidities.
References	1. Brown, R., Tomasello, L., Mitchell, D.A., Sebald, A. and Stepney, S., 2017. *Ternary graph as a questionnaire: a new approach to assessment of quality of life?*. British Journal of Oral and Maxillofacial Surgery, 55(7), pp.679-684.

	2. Mitchell, D.A., Sebald, A. and Tomasello, L., 2018. *Making and working of a new electronic resource for patients, carers and professionals: maxfacts. uk*. British Journal of Oral and Maxillofacial Surgery, 56(1), pp.14-18. 3. Bradbury, E., 2012. *Meeting the psychological needs of patients with facial disfigurement*. British Journal of Oral and Maxillofacial Surgery, 50(3), pp.193-196. 4. De Sousa, A., 2008. *Psychological issues in oral and maxillofacial reconstructive surgery*. British Journal of Oral and Maxillofacial Surgery, 46(8), pp.661-664. 5. Surah, A., Baranidharan, G. and Morley, S., 2014. *Chronic pain and depression*. Continuing Education in Anaesthesia Critical Care & Pain, 14(2), pp.85-89.

When complete, please email the form to sarah.christmas@york.ac.uk