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| **Risk Assessment** | | | | |
| **Risk Assessment for the activity of** | **All Social Events and Gatherings** | | **Date** | **08/09/2021** |
| **Club / Society / Group** | **Southampton Robotics Outreach** | **Assessor *(Name, Role and position to qualify sign off of document e.g. Coach)*** | **Tommy Poll (President)** | |
| **Committee member (name and role)** | **Mihai Stefan Merlas (Treasurer)** | **Signed off** |  | |

**COVID-19 Notice**

**This risk assessment must be read in conjunction with the club or society’s COVID-19 Risk Assessment on their SUSU page. Should any information in this risk assessment conflict with the measures listed in the COVID risk assessment, then the COVID risk assessment takes precedence over this document.**

| **Part A** | | | | | | | | | | |
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| **Hazard** | **Potential Consenquences** | **Who might be harmed**  **(user; those nearby; those in the vicinity; members of the public)** | **Inherent** | | |  | **Residual** | | | **Further controls (use the risk hierarchy)** |
| **Likelihood** | **Impact** | **Score** | **Control measures (use the risk hierarchy)** | **Likelihood** | **Impact** | **Score** |
| COVID 19 | Members may become unwell. | * Clubs/Soc Members * Vulnerable groups – Elderly, Pregnant members, those with existing underlying health conditions * Anyone else who physically comes in contact with you in relation to your activity | **1** | **5** | **5** | * Follow SUSU and university advice on COVID 19:   <https://www.southampton.ac.uk/coronavirus.page> | **1** | **3** | **3** |  |
| Activities involving electrical equipment e.g. laptops/ computers | Risk of eye strain, injury, electric shock | Members | **2** | **4** | **8** | * Ensure regular breaks (ideally every 20mins) when using screens * Ensure screen is set up to avoid glare, is at eye height where possible * Ensure no liquids are placed near electrical equipment * Ensure all leads are secured with cable ties/mats etc | **1** | **4** | **4** | * Request support and advice from SUSU IT/Tech teams e.g. via activities team * For external venues pre-check equipment and last PAT testing dates * Seek medical attention as required |
| Medical emergency | Members may sustain injury /become unwell  pre-existing medical conditions  Sickness  Distress | Members | **3** | **5** | **15** | * Advise participants; to bring their personal medication * Members/Committee to carry out first aid if necessary and only if qualified and confident to do so * Contact emergency services as required 111/999   Contact SUSU Reception/Venue staff for first aid support | **2** | **5** | **15** | * Incidents are to be reported on the as soon as possible ensuring the duty manager/health and safety officer have been informed. * Follow [SUSU incident report policy](https://www.susu.org/groups/admin/howto/protectionaccident) |
| Insufficient Fire Safety awareness | If a fire alarm is triggered, people may not know where to go-  Crushing, falls, burns and smoke inhalation arising from induced panic, reduced space in buildings and external walkways, obstructed fire exits, build-up of flammable materials i.e. waste cardboard/boxes. | Members | **2** | **10** | **5** | * ensure that members know where the nearest fire exist are and the meeting place is outside, should it be needed * Build-up of rubbish is to be kept to a minimum. Excess build up is to be removed promptly and deposited in the designated areas. | **1** | **5** | **5** | * All incidents are to be reported as soon as possible ensuring the duty manager/health and safety officer have been informed. * Call emergency services and University Security: * Emergency contact number for Campus Security: * Tel: +44 (0)23 8059 3311 * (Ext:3311). |
| Overcrowding | Physical injury | Event organisers and attendees | **1** | **3** | **3** | * Do not push/shove * If large crowds form, barriers can be requested by SUSU facilities team (if available on the day) to assist with | **1** | **3** | **3** | * Seek medical attention if problem arises * With support from a SUSU Activities coordinator Inform UoS security team of the event (– on campus 3311, off campus 02380 593311. [unisecurity@soton.ac.uk](mailto:unisecurity@soton.ac.uk)) |
| Li-Po batteries | Electric Shock/fire | Event organisers and attendees | **3** | **3** | **9** | * No sharp objects near the battery. * Store the batteries in a fire-proof bag if unused. * Do not allow the attendees to touch the batteries. * When handling the batteries, do not touch the exposed part of the connector. * Only event organisers can charge and connect the batteries to the robot. * Do not leave drinks near the batteries. * Double check the connectors are in the correct orientation prior to inserting them into the charger or robot. * If the Li-Po battery is puffy and hard, discharge it completely. | **1** | **3** | **3** | * If a battery is venting, quickly disconnect it and put it in a fire-proof bag. * If you are unsure on how to charge the battery, check the knowledgebase. |
| Charging Li-Po batteries | Fire | Event Organisers and attendees | **3** | **3** | **9** | * Only trained volunteers can charge the batteries. * Batteries should only be charged if the balance leads are connected to the charger. * Batteries should be charged to their rated voltage and with an appropriate current (check the voltage and c-rating printed on the battery). * After use, batteries should be storage charged. * Do not charge puffy and hard batteries or batteries that have physical damage. | **1** | **3** | **3** | * If you are unsure on how to charge the battery, check the knowledgebase. |
| Splinters | Physical injury | Event organisers and attendees | **3** | **1** | **3** | * Event organisers should check that there are no splinters left on the chassis of the robot. * If the splinter is found, you should use a sandpaper to remove it. * Warn attendees to look out for splinters before touching the robot. | **2** | **1** | **2** |  |
| Moving robots | Physical injury and broken property | Event organisers and attendees | **4** | **1** | **4** | * Warn attendees of moving robots. * Use bright colours on the robot to make it easier for attendees to notice the moving robot. * Mark an area where robots can operate. Attendees should not wander into the area and it should be marked out using tape. |  |  |  | * The battery cover on the rub-bots is bright pink. |

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| ***PART B – Action Plan*** | | | | | | |
| **Risk Assessment Action Plan** | | | | | | |
| **Part no.** | **Action to be taken, incl. Cost** | **By whom** | **Target date** | **Review date** | **Outcome at review date** | |
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| Responsible manager’s signature:  Stefan | | | | Responsible manager’s signature: | | |
| Print name: Mihai Stefan Merlas | | | Date:21/09/2021 | Print name: Tommy Poll | | Date:21/09/2021 |

**Assessment Guidance**

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| 1. Eliminate | Remove the hazard wherever possible which negates the need for further controls | If this is not possible then explain why |  |
| 1. Substitute | Replace the hazard with one less hazardous | If not possible then explain why |
| 1. Physical controls | Examples: enclosure, fume cupboard, glove box | Likely to still require admin controls as well |
| 1. Admin controls | Examples: training, supervision, signage |  |
| 1. Personal protection | Examples: respirators, safety specs, gloves | Last resort as it only protects the individual |

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| **LIKELIHOOD** | 5 | 5 | 10 | 15 | 20 | 25 |
| 4 | 4 | 8 | 12 | 16 | 20 |
| 3 | 3 | 6 | 9 | 12 | 15 |
| 2 | 2 | 4 | 6 | 8 | 10 |
| 1 | 1 | 2 | 3 | 4 | 5 |
|  | | 1 | 2 | 3 | 4 | 5 |
| **IMPACT** | | | | |

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| Impact | | Health & Safety |
| 1 | Trivial - insignificant | Very minor injuries e.g. slight bruising |
| 2 | Minor | Injuries or illness e.g. small cut or abrasion which require basic first aid treatment even in self-administered. |
| 3 | Moderate | Injuries or illness e.g. strain or sprain requiring first aid or medical support. |
| 4 | Major | Injuries or illness e.g. broken bone requiring medical support >24 hours and time off work >4 weeks. |
| 5 | Severe – extremely significant | Fatality or multiple serious injuries or illness requiring hospital admission or significant time off work. |

Risk process

1. Identify the impact and likelihood using the tables above.
2. Identify the risk rating by multiplying the Impact by the likelihood using the coloured matrix.
3. If the risk is amber or red – identify control measures to reduce the risk to as low as is reasonably practicable.
4. If the residual risk is green, additional controls are not necessary.
5. If the residual risk is amber the activity can continue but you must identify and implement further controls to reduce the risk to as low as reasonably practicable.
6. If the residual risk is red do not continue with the activity until additional controls have been implemented and the risk is reduced.
7. Control measures should follow the risk hierarchy, where appropriate as per the pyramid above.
8. The cost of implementing control measures can be taken into account but should be proportional to the risk i.e. a control to reduce low risk may not need to be carried out if the cost is high but a control to manage high risk means that even at high cost the control would be necessary.

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| Likelihood | |
| 1 | Rare e.g. 1 in 100,000 chance or higher |
| 2 | Unlikely e.g. 1 in 10,000 chance or higher |
| 3 | Possible e.g. 1 in 1,000 chance or higher |
| 4 | Likely e.g. 1 in 100 chance or higher |
| 5 | Very Likely e.g. 1 in 10 chance or higher |