



Face shields designed at IFF's 3D printing park

milestone to celebrate against Covid-19: the 3D printing park, which is based at the Campos Centro campus of Instituto Federal Fluminense (IFF), has produced 1,131 face shields within a few days. The number refers to the period from 27 March, when it began printing and assembling the face protectors, to 14 April. All the face shields are donations to health care providers in order to be used by frontline workers in fighting the 2019 novel Coronavirus.

The Personal Protective Equipment (PPE) has been donated to 14 organizations, institutions and government agencies in the state of Rio de Janeiro which include the Centro de Controle e Combate ao Coronavírus (Centre for controlling and combating the coronavirus, Campos dos Goytacazes city hall), Policlínica da Polícia Militar do Estado do Rio de Janeiro (Rio de Janeiro State Military Police Polyclinic), 5.º Grupamento de Bombeiro Militar (fire brigade), Hospital Escola Álvaro Alvim (teaching hospital), Associação Norte

Fluminense dos Deficientes Físicos (Association for people with disabilities) and Unimed (healthcare cooperative of the private sector), all in Campos dos Goytacazes and Municipal Health Departments in inland cities of the state.

Rector of IFF, Jefferson Manhães de Azevedo, emphasizes that the positive result is due to the commitment and devotion of many people involved in fighting the Covid-19 pandemic. "We are delighted to have reached this milestone of

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Jefferson Manhães de Azevedo, Rector of IFF

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face shields' production in such a short time. And this achievement is a sign of commitment of several workers, students, cooperators and former students who have volunteered to contribute under the awareness of this pandemic. However, this is only possible because of the donations and the community solidarity to help in this confrontation, especially with equipment that could protect people who are caring for the ones currently infected by the novel Coronavirus".

Jefferson Azevedo believes that this network of solidarity and commitment is a success and should proceed. "This work is going to continue so that we could provide, as far as possible, support and protection to all people in need", he says.

The Director of Internationalisation and Innovation, Henrique Monteiro da Hora, emphasises the fact that because of the raw material donations, the production of 3D-printed face shields does not stop. "And in order to increase productivity, we are in contact with the Industry Federation of the State of Rio de Janeiro (Firjan) so that they could assist us, and consequently perform laser cutting of PET-G which is used for printing the arches to hold the acetate in the face protectors. This partnership will greatly contribute to optimise the process. This project is at an advanced stage.", Says Henrique da Hora.

The 3D-printed face shields are produced by IFF's staff with the assistance of the Institute's



Assembly of face shields

Innovation Hub (Polo de Inovação Campos dos Goytacazes - PICC) in the organisation, operation and maintenance of the printers, and Sprint 3D, a spin-off company which emerged at the Innovation Hub and is incubated at TEC Campos. The Sprint 3D, which had arisen from alumni research of Control and Automation Engineering Programme (IFF – Campos Centro campus), modelled the rods for faster printing of the best face-protector design in record time according to specifications of the Brazilian Health Regulatory Agency (Anvisa).



IFF's 3D printing park where face shields are produced

