Supplementary Materials

Development of an Impregnation End-Effector with Fiber Tension Monitoring for Robotic Coreless Filament Winding

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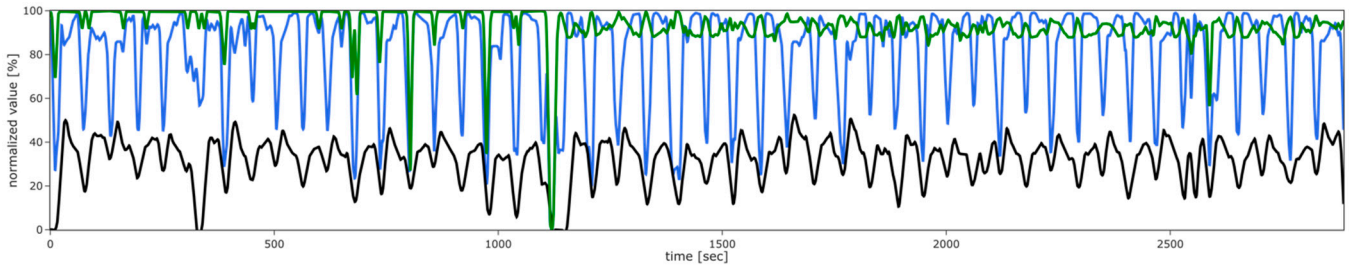
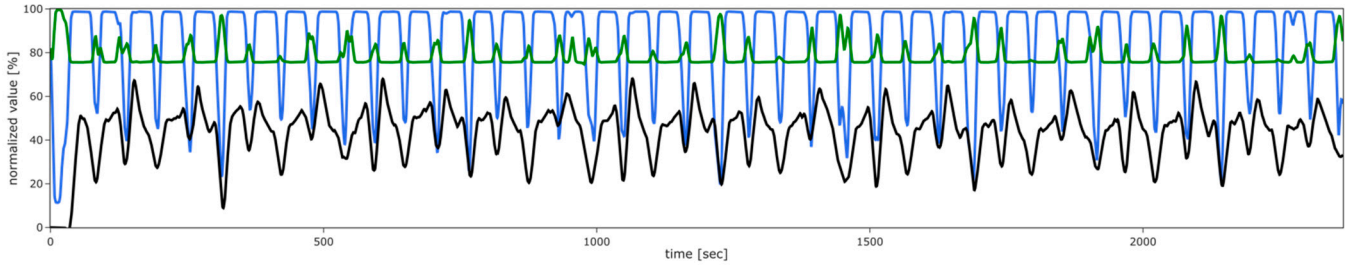
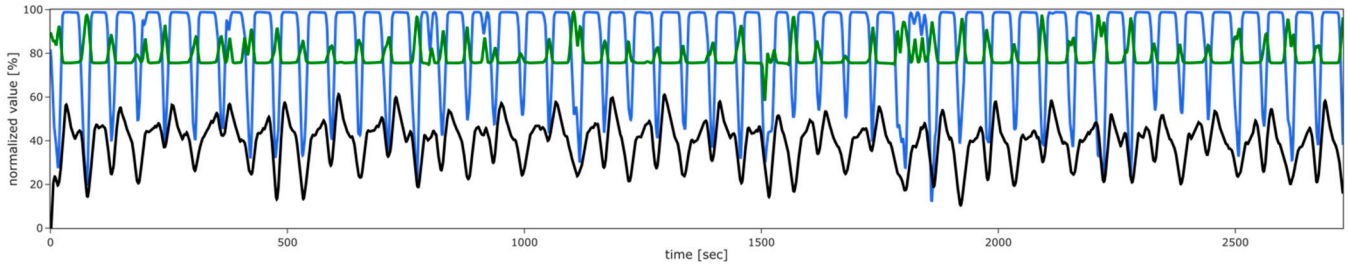


(**a**)

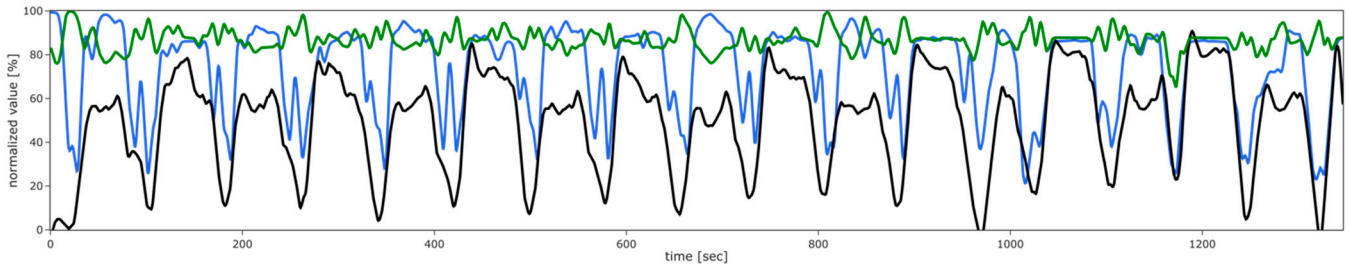


(**b**)

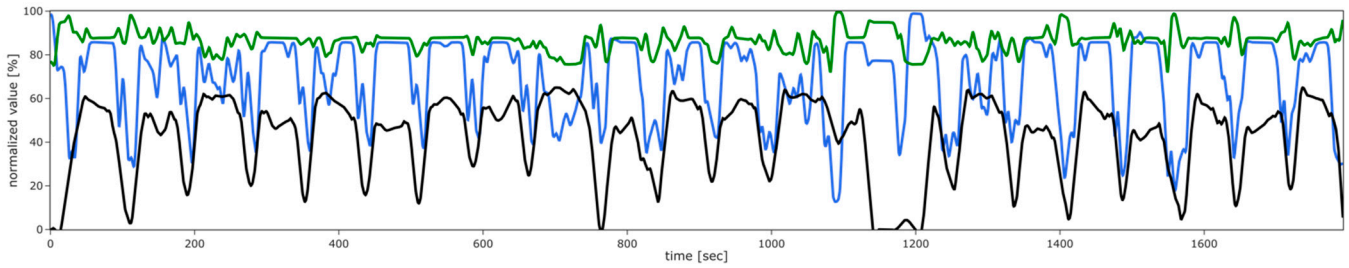


(**c**)

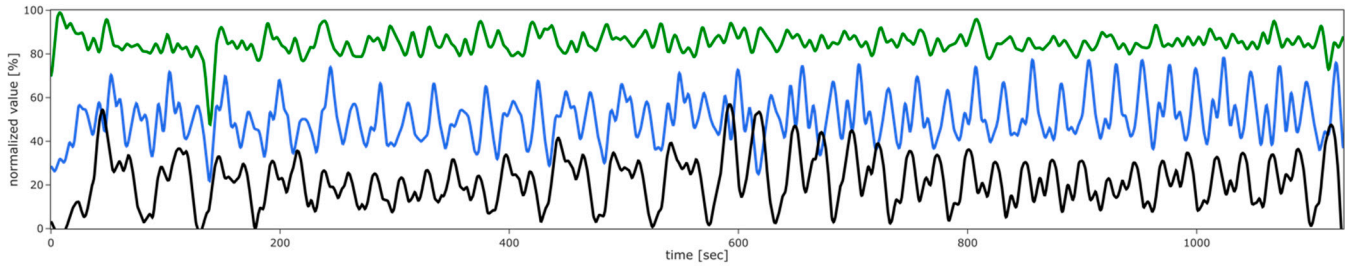
Figure S1. Monitoring datasets of the glass fiber syntaxes. All values are normalized, fiber tension (black), TCP velocity (blue) and resin volume flow (green); (**a**) free spanning syntax (scaffold); (**b**) free spanning syntax (body 1); (**c**) free spanning syntax (body 2).



(**a**)



(**b**)



(**c**)

Figure S2. Monitoring datasets of the carbon fiber syntaxes. All values are normalized, fiber tension (black), TCP velocity (blue) and resin volume flow (green); (**a**) free spanning syntax (part 1); (**b**) free spanning syntax (part 2); (**c**) corner syntax.