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Workshop

"Robots Building Robots" ***Digital Manufacturing and Human-centered Automation for Building Consumer Robots***

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Title of your presentation: *My robot is not your robot: the craftsmanship behind designing personalized robots*

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Abstract (about 1 page, Font: Verdana; Size 12; characters: about 4.000)



While robots are starting to be more massively produced and become consumer goods the question of adequacy to the task and the user becomes more and more relevant. In this short presentation I survey briefly why robot need to be personalized and how this is done now. Robots are not exactly like any consumer goods and more particularly when it comes to robots that have a social relation with the user. For that the creation of robot "contents" is crucial and that's where engineers are failing, and this part should be done by end-users. I then present a few of the solutions that we have developed based on our experience of creating contents for research with children, with elderly for different purposes. The work presented here is divided in three parts: (1) the NEP framework to connect easily all kind of robots and sensors together and create the necessary foundation for interactive robots and systems. (2) RIZE, an interface for user with zero knowledge in programming or computers that enables them to create interactive content for robots. (3) our control framework to generate expressive movements given a desired task, using priority task control. I will finally conclude with some perspectives about the things that we are still missing to move from total craftsmanship of engineer programmed robots from end-users program robots, which will allow for a personalized experience.