Computational-Digital Processing for Sustainable Food Manufacturing in Industry x.0

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Within the last decade, introducing computational-digital food processing for sustainable manufacturing have become an important concern in manufacturing. Non-polluting and economically efficient approaches in the view of sustainability were coincided under the umbrella of European Green Deal. Additional challenges were the recent food safety issues (e.g., microbial safety concerns in low moisture foods). Digital technologies supported with the computational (mathematical modeling) approaches are to efficient solutions for these required advances. Therefore, the objective of this presentation was to present the possible applications of this background for sustainable food manufacturing in industry x.0. A hypothetical example of a complete computational process supported with digital technologies (digital twins) for data flow, control abilities, and process control, design and optimization features with decision mechanism will also be presented.