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COMPARATIVE ANALYSIS OF CAD/CAM – SISTEMS FOR GARMENT CONSTRUCTION

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Abstract: The contemporary apparel manufacturing industry is undergoing intensive digitalization, with CAD (Computer-Aided Design) and CAM (Computer-Aided Manufacturing) systems playing a key role. These technologies facilitate and automate the processes of design, grading, pattern cutting, and production, thereby enhancing precision, efficiency, and sustainability.

CAD systems enable digital pattern creation and 2D/3D visualization of garments, while CAM systems manage the actual production process through automated material placement and cutting. Leading platforms in the industry include Lectra Modaris, Gerber AccuMark, Tukatech, Optitex, CLO 3D, Investronika, and others—each offering distinct advantages depending on the scale and specific needs of production.

The study aims to compare the leading CAD/CAM systems based on criteria such as functionality, automation, accessibility, and visualization capabilities. The results emphasize that the choice of a CAD/CAM system depends largely on the enterprise’s scale and strategic objectives. The conclusion highlights that established systems remain dominant in mass production and continue to shape the direction toward a digital, sustainable, and creative fashion industry.

CAD/CAM technologies are at the core of the modern transformation of the fashion sector. They ensure high precision, resource optimization, and significant reduction in product development time. Although there is no universally superior system, each platform offers unique advantages that contribute to the digital evolution of fashion manufacturing.

Keywords: *fashion, design, technology, apparel, CAD/CAM systems, 3D*

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