

## INNOVATING 3D DESIGN EDUCATION

University of Sarajevo's IPM lab harnesses Dell Precision workstations with AMD processors and graphics to transform learning

AMD  
THREADRIPPER  
PRO

AMD  
RADEON  
PRO

### CUSTOMER



### INDUSTRY

Design and manufacturing

### CHALLENGES

Slow performance, cost, multitasking

### SOLUTION

Dell Precision 7865 workstation advanced by AMD

### RESULTS

Enhanced productivity, increased learning opportunities

### AMD TECHNOLOGY AT A GLANCE

AMD Ryzen™ Threadripper™ PRO 5000 WX-Series processor

AMD Radeon™ PRO W7000 Series graphics

### TECHNOLOGY PARTNER

DELL Technologies

**With experience in academia, as an influencer in the CAD and product development sphere, and as a boutique 3D designer for major companies, Assistant Professor Dr. Adi Pandzic of the University of Sarajevo is more than an educator.** He is a visionary determined to reshape the landscape of 3D design education in Bosnia and Herzegovina. He aims to bridge the gap between theoretical knowledge and real-world application, empowering his students to learn and innovate in their field.

Dr. Pandzic established the IPM lab at the University of Sarajevo, an innovation powerhouse supported by a strategic partnership with AMD and Dell. The lab is a hub for cutting-edge research in polymeric materials, 3D printing, product design, additive manufacturing, 3D printed materials, and mechanical engineering. "My focus is to provide students with a modern lab where they will enjoy working and studying and where they will have access to new technologies," explains Dr. Pandzic.

"I offer the lab's capabilities to students for free, and we try to support any student's startup project. Partners like AMD and Dell help me provide students with the systems necessary for modern design and research education," he adds.

The heart of the IPM lab is the Dell Precision 7865 workstation powered by an AMD Ryzen™ Threadripper™ PRO 5945WX CPU and an AMD Radeon™ PRO W7900 GPU with 48 GB of RAM. The workstation is an engine for innovation, providing students with access to resources that

ensure that their education is future-focused, preparing them to navigate and shape the field of design.

### Leaping old technology hurdles

Reflecting on past challenges imposed by outdated technology, Dr. Pandzic describes collaborating with students to design a motorcycle with over 2500 discrete parts using Dassault Systèmes SOLIDWORKS®. The team overcame a worldwide field of engineers and designers to win a Grabcad

*"It is a beast! Our complex projects would be almost impossible if we didn't have high-end workstations from AMD and Dell."*

*Dr. Adi Pandzic, PH.D., assistant professor at the University of Sarajevo*

Golden Gear Award but struggled with technical difficulties. Dr. Pandzic recalls, "To this day, I remember how SOLIDWORKS kept crashing due to poor computer and graphics card performance."

The introduction of the Dell Precision 7865 has profoundly impacted performance and the quality of work. Dr. Pandzic proudly declares, "It is a beast! Our complex projects would be almost impossible if we didn't have high-end workstations from AMD and Dell."

### Multitasking is a must

"I always have a lot of documents, pictures, and videos open in addition to SOLIDWORKS," he says. The Dell Precision workstation can run multiple applications smoothly, without lag or crashes, starkly contrasting with the limitations of Dr. Pandzic's previous workstations.

He notes, “I can feel a significant improvement between my old workstation and the Dell workstation powered by the AMD Ryzen Threadripper PRO processor and AMD Radeon PRO graphics card.”

The ability to multitask is equally critical in the educational sphere. Dr. Pandzic recognizes this and ensures his students are well-prepared for the demands of the professional world. Experience managing and navigating complex workflows is invaluable for students, equipping them with the skills necessary for their future careers.

The workstation’s capacity for high-performance multitasking extends to demanding tasks such as rendering multiple projects, high-resolution renderings, and 4K animations. The difference in performance and efficiency when compared to previous systems is stark. Dr. Pandzic explains, “The workstation’s power truly shines when I effortlessly manage multiple tasks and applications smoothly, in stark contrast to my colleagues’ slow and lagging computers.”

### Accelerating workflows with AMD

“When we first got the Dell workstation, I immediately opened Dassault Systèmes SOLIDWORKS Visualize and, at the same time, opened three models, each made of over 2000 parts. It all just worked. This says a lot.”

Dr. Pandzic’s work often requires creating photorealistic renderings and animations. “The native support for AMD Radeon PRO GPUs

in SOLIDWORKS Visualize speeds up our photorealistic rendering process a lot,” he explains. Such performance has improved the quality of the students’ output and streamlined their workflows, allowing time for more intricate and detailed exploration of advanced 3D modeling, comprehensive material testing, and sophisticated CAD designs.

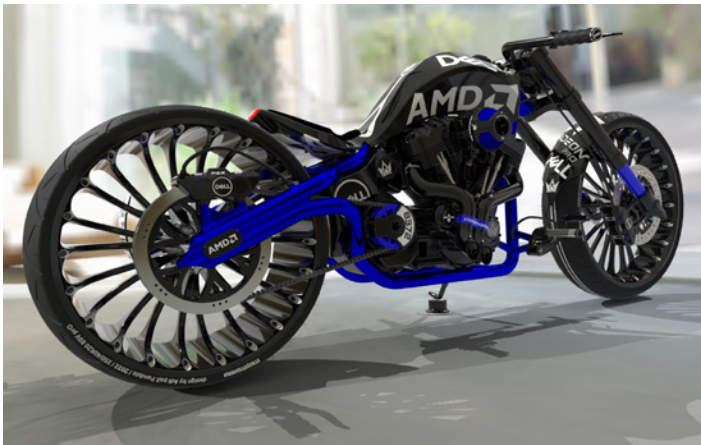
### Removing Barriers and Creating New Opportunity

The availability of Dell and AMD technology is reshaping the educational and design landscapes at the IPM Lab. The lab is also exploring new opportunities, such as leveraging the AMD Radeon PRO GPU for AI projects.

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*Dr. Adi Pandzic, PH.D., assistant professor  
at the University of Sarajevo*

By removing barriers, students are empowered to explore the full extent of their creative and design potential. With hands-on experience in industry-standard tools, they are well-equipped for the professional world, ready to contribute innovatively and effectively. Dr. Pandzic’s efforts not only enhance his own design projects but also nurture a new generation of designers, signaling a promising future where technology and creativity mingle to inspire new possibilities in design.



### About Dr. Adi Pandzic, Ph.D.

Dr. Adi Pandzic is an assistant professor at the University of Sarajevo, a 3D design and 3D printing educator, influencer in the CAD and product development sphere, and boutique designer for major companies. Dr. Pandzic founded a laboratory providing students and faculty top-of-the-line hardware for 3D design, 3D printing, and research with the help of partners like AMD and Dell. Dr. Pandzic utilizes high-performing AMD hardware to design vehicle models for companies, like Epic Games, industry events, and more. To learn more, visit the [LinkedIn](#) page for Dr. Adi Pandzic.

### About AMD

For more than 50 years AMD has driven innovation in high-performance computing, graphics, and visualization technologies. Billions of people, leading Fortune 500 businesses, and cutting-edge scientific research institutions around the world rely on AMD technology daily to improve how they live, work and play. AMD employees are focused on building leadership high-performance and adaptive products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit the AMD (NASDAQ: AMD) [website](#), [blog](#), [LinkedIn](#), and [Twitter](#) pages.

All performance and cost savings claims are provided by Dr. Pandzic and have not been independently verified by AMD. Performance and cost benefits are impacted by a variety of variables. Results herein are specific to Dr. Pandzic and may not be typical. GD-181

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