



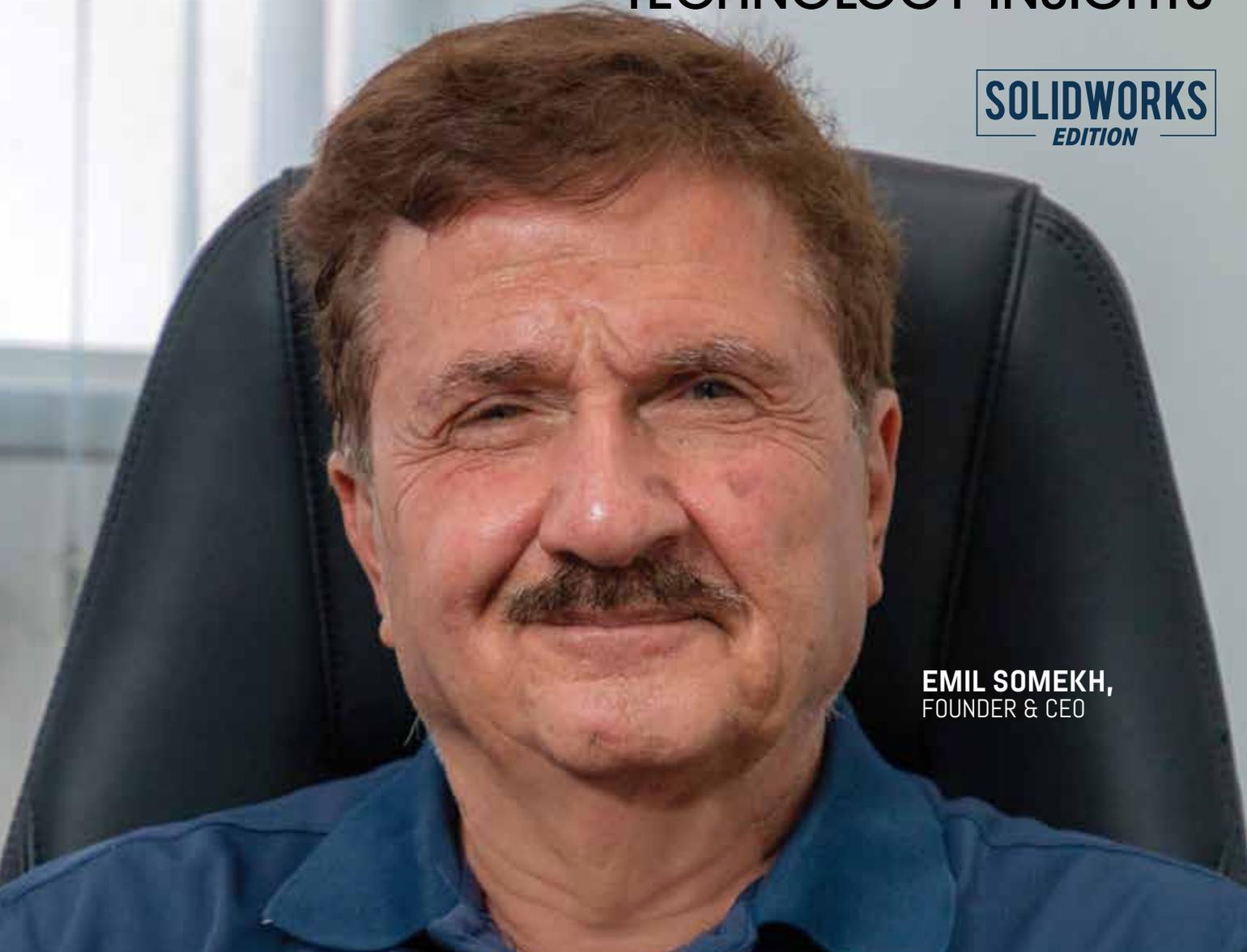
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SOLIDWORKS
EDITION



EMIL SOMEKH,
FOUNDER & CEO

SOLIDCAM

*INTEGRATED CAM FOR HIGH
PRODUCTIVITY CNC MACHINING*

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SOLIDCAM

INTEGRATED CAM FOR HIGH PRODUCTIVITY CNC MACHINING



WE SUPPORT A DIVERSE RANGE OF TECHNOLOGIES IN MACHINING, WITH THE MOST ADVANCED CAPABILITIES IN SIMULTANEOUS 5-AXIS MILLING, ADVANCED MILL-TURN AND SWISS MACHINING

By Laura Davis

Since the advent of Computer-Numerical-Control (CNC), CNC machines continued to evolve in complexity, in order to provide maximum productivity in machining. But without the right Computer-Aided-Manufacturing (CAM) software to program these complex CNC machines, a user cannot unleash their full potential. As the leading Integrated CAM software in SOLIDWORKS, SolidCAM is the key to unlocking this capacity.

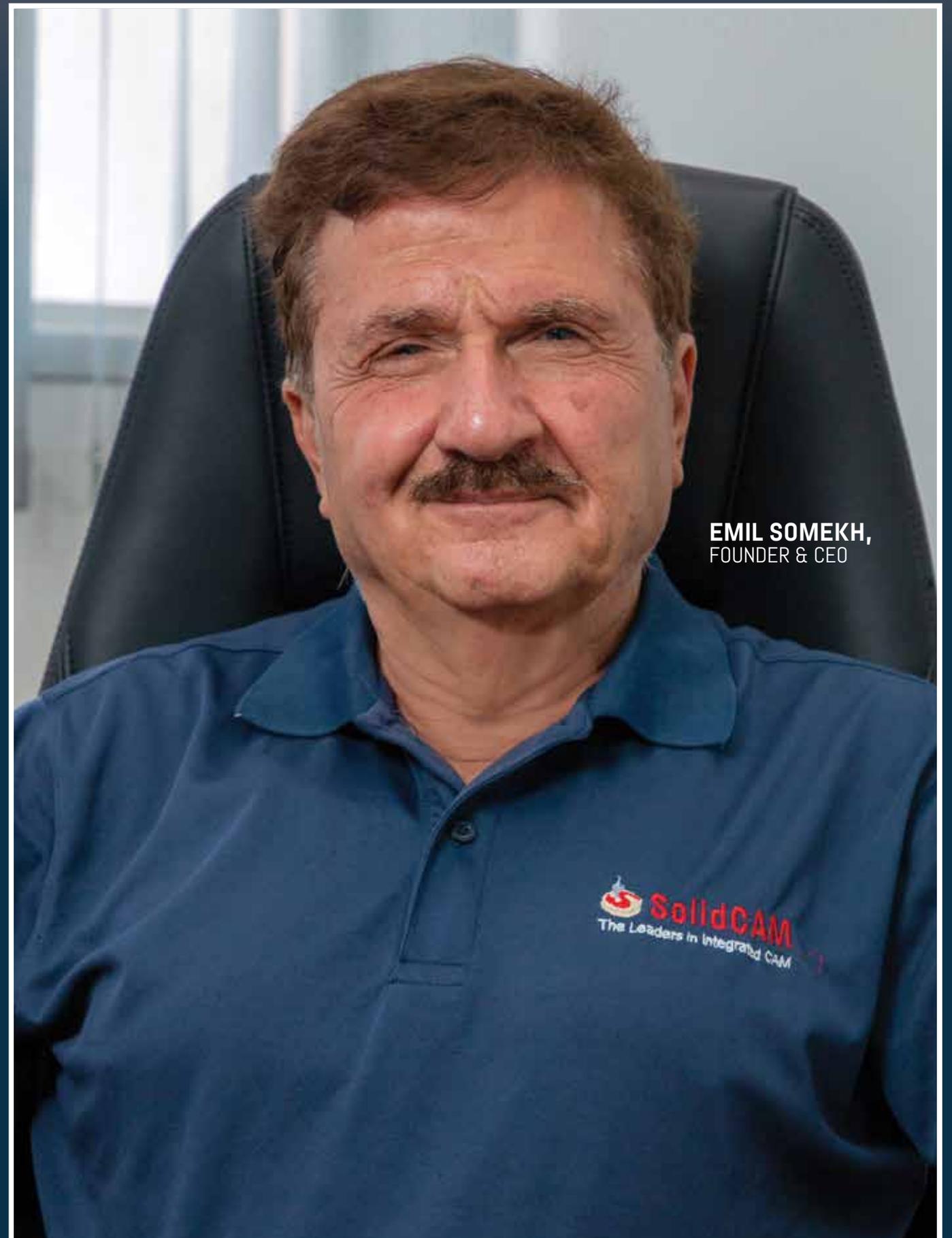
Being a premier SOLIDWORKS Gold Partner since 2003, SolidCAM seamlessly integrates in SOLIDWORKS, with full tool path associativity to the SOLIDWORKS model, offering the familiar SOLIDWORKS user interface, while providing extensive manufacturing capabilities. SolidCAM provides extensive machining capabilities, including automatic feature recognition and machining, high-speed surface machining, 3D high-speed milling,

indexial multi-sided machining, simultaneous 5-axis machining, turning, mill-turn, Swiss machining and solid probing.

“We support a diverse range of technologies in machining, with the most advanced capabilities in simultaneous 5-axis milling, advanced mill-turn and Swiss machining,” says Emil Somekh, Founder & CEO of SolidCAM. “Our flagship machining solution is the revolutionary iMachining 2D/3D module, which enables CNC machines to operate much more profitably and competitively than ever before.”

The Next Generation Solution for Superlative CNC Performance

Modern-day Mill-Turn CNC machines are designed to combine as many milling and turning operations as possible, to manufacture workpieces in one setup, with optimum



EMIL SOMEKH,
FOUNDER & CEO



efficiency. However, manual CNC programming of sophisticated parts on such complex machines, directly at the machine controller, is an exercise that is unproductive, error-prone, and expensive. To this end, easy to learn and use, SolidCAM offers an intuitive user interface, seamlessly integrated in SOLIDWORKS, providing advanced control over all aspects of tool path generation, collision checking and machine simulation.

The most advanced mill-turn and Swiss CNC machines in the market are multi-channel machines, that can cut in several channels simultaneously. SolidCAM provides advanced multi-channel synchronization and full machine simulation, for high-precision applications such as small medical devices or watch parts. The SolidCAM solution is also ideally suited to support customers in all areas of component manufacturing, including aerospace, automotive, electronics, medical, optical, consumer, military, energy, die & mold, and prototyping.

The Collective Knowledge of CAM/CNC Masters in the Palm of your Hand—iMachining

SolidCAM's revolutionary CNC milling tool path technology, iMachining, enables extremely faster and deeper machining, resulting in increased productivity, with much shorter cycle times, dramatically increased tool life,

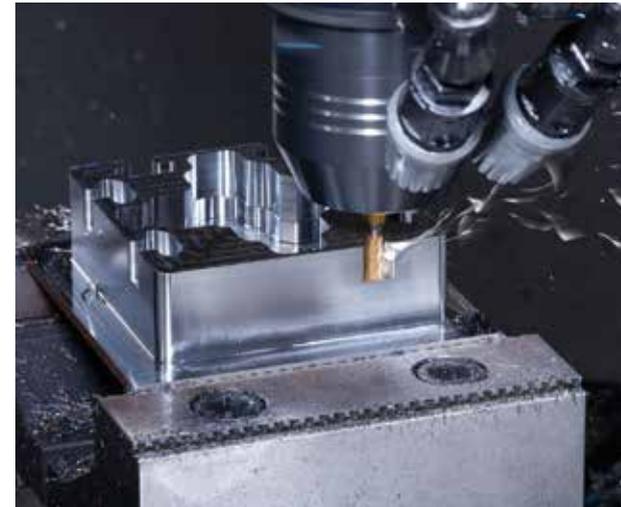
unmatched hard material machining, and outstanding small tool performance. iMachining generates an advanced, patented morphing spiral toolpath, that gradually conforms to the feature's geometry being machined.

iMachining guarantees a constant force on the cutting tool, by constantly varying the cutting angle and the feed, to ensure that the feed is reduced if the cutting angle is bigger and vice versa. The technology is highly efficient at handling large areas of material removal, as well as smaller stand-alone islands of excess metal. iMachining subdivides the work piece into smaller sections, using its patented Moating technology, and maximizes continuous morphed spiral cutting.

The software further optimizes the CNC machining, such that it only cuts the stock that needs to be removed, eliminating "air cuts." From the initial approach, where the tool meets the workpiece, right to the last cut, rest material tracking ensures that every tool path is always cutting, minimizing wasted movement. Any customer using iMachining saves money because of decreased cutting cycle time and reduced tool wear.

These capabilities are supported optimally by the iMachining's exclusive, patented iMachining Technology Wizard, the industry's first and only wizard that automatically calculates optimal sets of cutting conditions

for the iMachining tool path. As Somekh puts it, "Our iMachining Wizard provides synchronized values of feed rate, spindle speed, axial depth of cut, and cutting angles. No other CAM software can provide this. We can guarantee constant cutting force on the tool, and we can automatically calculate optimal feeds and speeds for every point of the tool path, taking into account the stock material properties, cutting tool properties, the cutting depth and the CNC machine parameters."



iMachining is a great tool for every machinist, since it takes the guesswork out of choosing speeds and feeds for different types of stock material, creating excellent value, with over 70 percent in cycle time savings and 5 times and more increases in cutting tool life.

Demonstrated Excellence and Revolutionary Applicability

Several manufacturers have experienced considerable improvement in their process efficiency, due to the value brought in by SolidCAM. One of these is the case of Boston Scientific, a SolidCAM client and manufacturer of medical devices used in interventional medical specialties. They were one of the first users of SolidCAM in the United States. Before engaging with SolidCAM, Boston Scientific used SOLIDWORKS for design and another CAM software, that was not integrated inside SOLIDWORKS. The manufacturer came to a SolidWorks World exhibition and saw SolidCAM in action, seamlessly integrated inside SOLIDWORKS, and purchased it instantly.

In another instance, a company called Bioline, specializing in medical, dental implants, was using another CAM software to program their Swiss CNC machines. SolidCAM showed the client how much easier is

SolidCAM's CAM programming, more advanced multi-channel synchronization, complete machine simulation and seamless integration in SOLIDWORKS, providing a much better CAM solution. The client now uses SolidCAM regularly, to program at least five new different parts every week, for their Swiss CNC machines.

Blazing a Trail in CNC Machining—Milling Out a New Future

In its long history, SolidCAM has served myriad manufacturers, from a big number of different verticals. The company is active worldwide, with branches, affiliates, and resellers in at least 50 countries globally, providing the software, technical and postprocessor support, for all CNC machines brands. SolidCAM software supports 15 different languages.

As Somekh puts it, "Not only are we considered one of the best CAM products, but we are famous for being one of the best technically supported CAM products in the market, with postprocessor support for the largest number of CNC brands." His statement echoes the point that a successful CAM solution provider must possess both, an excellent software product and the best technical support capabilities. Since CNC machine shops have spent a big sum of money for their CNC machines, stock materials, cutting tools, employers' salaries, they require adequate CAM software support, from a supplier they can count on.



OUR IMACHINING WIZARD PROVIDES SYNCHRONIZED VALUES OF FEED RATE, SPINDLE SPEED, AXIAL DEPTH OF CUT, AND CUTTING ANGLES. NO OTHER CAM SOFTWARE CAN PROVIDE THIS

Somekh notes that CNC machines are continuing to be more and more complex, as time passes. Therefore, SolidCAM is always continuing its software development, to best support all advances in CNC machine technology. Finally, since 3D printing technology has now reached past plastic polymers to the world of metal, SolidCAM is on a quest to provide an additive manufacturing solution, that can complement CNC machining, to assist its customers in their future manufacturing needs. 