

Report from Rome by Liliana Celani

Italian scientific tradition revived

"From Leonardo da Vinci to hypersonic flight: Italy's contribution to economics and defense" was the theme.

Hotel Universo in Rome was on April 29 the site of a historic event. Meeting again, after almost 40 years, were many members of the military and scientific network which first experimented with supersonic flight and did original experiments on vortices in water and in the air, at the Guidonia aerodynamic center near Rome.

This work led first to Antonio Ferri's discoveries on supersonic flight, and later to his project for a hypersonic airplane in the United States.

Many of the 100 participants in the conference, organized by the Schiller Institute and the Fusion Energy Foundation, were generals, colonels, or admirals who had either studied at Guidonia or came indirectly from that tradition. Other participants, including aeronautical engineers, spokesmen for the space and military industries, researchers, and representatives of the general staffs, came because they agreed with the Schiller Institute that Italy's participation in the U.S. Strategic Defense Initiative will only be fruitful if this scientific tradition is revived.

Particularly impressive to everybody, since Ferri and his projects are much more known in the United States than in Italy, was the moment when Prof. Bernardino Lattanzi, one of the first researchers at the Guidonia school in the 1930s, gave his "eyewitness report" on the scientific breakthroughs in Guidonia. He explained that when it was inaugurated by Gen. Gaetano Arturo Crocco in 1936, Guidonia included "one building for the radio, one

for chemistry, one for hydrodynamics with the second-longest tank in the world, one for aerodynamics, which contained four normal wind tunnels as well as a vertical one, and a building for the supersonic wind tunnel, the fastest in the world."

"I saw all this," Lattanzi continued, "when I arrived there in 1938 for a period which was supposed to last three months, and instead lasted until Oct. 8, 1943." Lattanzi, who himself experimented with aircraft, reported on how Guidonia's publications were translated by the American NACA, the predecessor of NASA, and how Lieutenant Ferri, "later on a professor and dean at Brooklyn Technical College, managed to prove that all American experiments on supersonic flight were wrong, because the model airplanes reflected shock waves coming from the wind tunnel" and solved the problem for the first time.

How the Guidonia school was not at all built by fascism, but was the outcome of a long tradition of scientific breakthroughs going back to Leonardo da Vinci's hydrodynamic studies in the Renaissance, and particularly the Italian collaborators of the German 19th-century scientist Bernhard Riemann, was made clear by Giuseppe Filipponi, director of the Fusion Energy Foundation in Italy, and by Dino de Paoli, who spoke on Leonardo da Vinci and Riemann's networks in Italy. The Guidonia breakthroughs resulted from Leonardo da Vinci's superior method, which allowed experimentation on the propa-

gation of air shock waves in water or the other way around, since these phenomena appear in all fluids, including gas and plasma.

The patriotic pride evoked by the first three speeches peaked when two messages to the conference were read: the first from the world-famous German aerodynamicist Adolf Busemann, who recalled his year in Rome in 1935 as the "best in my life," and the second from American presidential candidate Lyndon LaRouche, who wrote that "through the influence of the circle of [Riemann's Italian students] Betti and Beltrami, Italy returned to the foundations laid by Cusa and Leonardo, to emerge as a world leader in application of hydrodynamic principles to electrodynamics and aerodynamics."

The second part of the conference dealt with the SDI project in the United States, outlined by Fusion Energy Foundation executive director Paul Gallagher, and in Europe, discussed by Heinz Horeis of the German FEF. Horeis had just returned from the first-ever conference on the SDI in Japan, also sponsored by the Schiller Institute. Fiorella Operto, president of the Schiller Institute in Italy, concluded the conference by saying, "I think I speak for everybody in this room when I say that what we discussed must now become government policy. Cooperation between Italy and the United States on the SDI must be based on this scientific foundation. We should not look at it as an attempt to sell the Colosseum to the Americans, and we should not misinterpret the economic spin-offs as money coming into the industrialists' pockets from U.S. contracts. Only through a university reform, and building scientific laboratories like Betti's, Brioschi's, or the ones in Guidonia, will we be able to really contribute to the SDI research."