The Project:
The ARGO Project started in 1996 at the University of Parma, Italy, after the experience in the PROMETHEUS European Project, whose main goal was the investigation of innovative technological solutions to enhance road safety. Within this project the first vision algorithms and computer architectures were developed and tested on MOB-LAB, the MOBILE LABoratory available to all the Italian Research Units involved in the Project.

The original target of the ARGO project was the development of a system able to improve road safety by controlling and supervising the driver activity. Further developments, however, allowed to extend the functionality to automatic driving.

The specifications that characterize the system developed within our research project are that:
- its cost must be kept small;
- it must not rely on specific road infrastructures;
- it must not use active sensors.

Fundings:
The ARGO prototype vehicle was developed at the Dipartimento di Ingegneria dell’Informazione of the University of Parma, under the framework of the Progetto Finalizzato Trasporti 2 of the Italian National Research Council (CNR). Later also the Dipartimento di Informatica e Sistemistica of the University of Pavia got involved in the research, and received fundings from the CNR.

The Research Group:
The research group consist of staff people from the Engineering Faculty of both Parma and Pavia Universities. The worldwide relevance of the research group in the Intelligent Transportation Systems (ITS) field is witnessed by the number of invited talks, tutorials, and journal special issues that they have been invited to organize.

Among others, the Project Coordinator also acted as Program Chair of the most important scientific event worldwide in the field of intelligent vehicles—the IEEE Intelligent Vehicles Symposium 2000 (Detroit, Oct 3-5, 2000)—and as Associate Editor of the IEEE Transactions on Intelligent Transportation Systems. He is also the Editor of a department on ITS published regularly on IEEE Intelligent Systems Magazine, and is the Editor of the IEEE ITS Council Newsletter.

The "MilleMiglia in Automatico" Test:
In order to extensively test the prototype vehicle under different traffic situations, road environments, and weather conditions, a 2000 km journey was carried out from June 1 to June 6, 1998 along the Italian highway network.

During this test—called “MilleMiglia in Automatico”—ARGO drove itself autonomously, passing through flat areas and hilly regions including viaducts and tunnels. The Italian road network is particularly suited for such an extensive test since it is characterized by quickly varying road scenarios including different weather conditions and a generic, i.e., large amount of traffic.

The tour demonstrated that using only visual information and low-cost general purpose hardware it is possible to drive automatically and safely a vehicle under different road and environmental conditions.

The Future of the Project:
Currently the project is continuing thanks to a financial support that the two Universities of Parma and Pavia are receiving from the Italian National Research Council (CNR). Although limited, it allows the two research teams to remain in the leading edge of worldwide research.

Many different contacts—including industrial, academic, and military—are currently under evaluation in order to improve the effectiveness of the prototype, to build a new prototype, and to extend the research field and transfer the technology to new application domains.