



The **Educational Software Development Laboratory (ESDLab)** has been established at the [Department of Mathematics](#)

at the

[University of Patras](#)

in 1992, aiming at the promotion of research and development in the field of Educational Software tools, methods and practices with the incorporation of new technologies.

The main **objectives** of ESDLab evolve around three axis:

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Basic Research and knowledge dissemination in disciplines and interdisciplinary areas that relate to educational software.

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Targeted research and development of products in these areas.

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Promotion and contribution to the training of University students.

To achieve these objectives, the ESDLab participates in National and EU-funded Research and Development projects, thus promoting applied research and development. In addition, exchange of ideas is supported, by establishing or participating in international scientific networks and student exchange programs.

Current **research interests** and involvement of the ESDLab Staff and Co-operating Researchers include:

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Incorporation of Artificial Intelligence principles in Tutoring Systems and Authoring Systems

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Development of Computer Assisted Instructional (CAI) systems as well as Computer Based Training (CBT) systems for vocational training

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Distance Learning

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Multimedia Systems and tools for educational and training applications

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Development of Presentation material

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Virtual Reality technology in the development of CAI, CBT and ITS

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Agent Technology in the development of Intelligent Agents for the Internet

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Formal methods and tools for interaction specification and agent- based user interface development

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Artificial Neural Nets (ANNs) for student modelling in Tutoring Systems

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Genetic algorithms

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Machine Learning and Data mining

To promote research and development in these areas, the staff of ESDLab involves itself in National and International projects, organises regular seminars on specific topics in these areas and promotes co-operation with scientists in other Institutions at home and abroad, having at the same time long established links with industrial partners.

The staff of the ESDLab is highly qualified, with numerous publications, which resulted from long-time involvement in the field. A satisfying level of latest information technology is provided to researchers (such as multimedia machines and peripherals in different platforms, authoring systems and similar software, expert system shells. VR hardware devices, Software tools etc.), and efforts are made to keep up with all the related technological advance.