Botana, Francisco; Kovács, Zoltán; Recio, Tomás; Vélez, M. Pilar  
Towards an automatic geometer. (Spanish)  [Zbl 1456.68227]  

The article, which is in Spanish language, describes the history of the authors’ work group in the last three decades and the systems they developed for automated reasoning in the field of geometry; it furthermore gives an overview of the general development of the field and how the authors’ systems relate to other systems. The systems conjecture, prove, refute and discover theorems and construct geometric objects. For example the authors’ system GDI rediscovered a theorem of MacLane. The article gives an overview by decades and explains the systems and the geometric operations which they performed and results they proved or discovered in detail, including screen shots of the corresponding computer programs. The article is for an audience of Spanish-speaking people in Latin America and Spain. It appeared in a column on computational mathematics of a general-audience mathematical journal.

Reviewer: Frank Stephan (Singapore)

MSC:
68V15 Theorem proving (automated and interactive theorem provers, deduction, resolution, etc.)
01A73 History of mathematics at specific universities
51-03 History of geometry
51-04 Software, source code, etc. for problems pertaining to geometry

Keywords:
graph theory; automated theorem proving; automated theorem discovery; historic overview