Electrical drives are characterized by their natural non- linearity owing to their proper design and their time-varying mathematical models. When used to drive industrial systems, e.g. variable speed or variable position drives, conventional control methods are usually applied to design speed and position controllers. However, at certain performance level, these methods are not satisfied. The present paper combines fuzzy logic, mostly used to control system characterized by non-linearity and uncertainty, with new control structures to overcome difficulties listed earlier. The obtained results have proved the good foundation of the suggested method