

**Research Title:**

**Autonomous Robotic Charging System for Electric vehicles**

**Primary Investigator:**

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Academic Institute: **Ben-Gurion University of the Negev**

Faculty: **Mechanical Engineering Department**

This research focuses on developing an automated robotic charging system for electric vehicles. Nowadays, the world is moving towards fully autonomous vehicles, while more and more car companies are developing electric ones. To achieve autonomy of these vehicles while allowing a long-range of driving and longtime automated transport missions, a technology of automatic charging must also be provided. Our research focuses on creating the interface between the charging station and the vehicle in a way that allows charging without any human involvement. The research is based on previous research performed in our lab, in which a novel hyper redundant articulated robotic system is being developed. In this research, our team is designing an adaptation of that robotic system for the purpose of the charging process and planning the motion and control algorithms for this process, using AI models and image processing.