

Tompel, Bike with Automatic Transmission

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Engineering students of Universitas Gadjah Mada have made a technology innovation on transmission in bicycles using mechanical system, called as *automatic pit onthel* or Tompel.

Chairman of development team, Dhiva Prima Adi, said automatic transmission system has been used in electric bikes, but auto shifting gear technology in e-bike very much depends on electrical supplies. "Different from e-bike, Tompel does not depend on electrical energy to move the automatic transmission," she said on Friday (5/8) at UGM. Along with fellow students Khoirunisa Ulya N.U, Dyah Nur Suci, and Ilham Adityarsena F., the Tompel bike innovation was made for the Student Creativity Programme of UGM.

Dhiva explained that the transmission system of Tompel bike would automatically work adjusting to the area it passes through. If the area is upward, the gear will automatically shift to the lighter gear. If going downward, the tool will shift it to the heavy gear.

It works this way. Cables from the sprocket to shift the gear and one of its ends is connected to the handle bar is connected to a pendulum. If the bike tilts to one side when going upwards, the cable will be pulled by the pendulum, thus changing the gear.



Dyah added that the idea came up for concerns over the low interest among people to use a bike. "The poor contours of roads in Indonesia and the limited facilities for cyclists have made people to opt for motorbikes instead," she said.

Hence, these students tried to present an innovation in technology that is suitable to the need. Hopefully, the bike can withdraw the attention from the society to use bikes as a mode of transportation.

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