Episode #9 – Commercializing the first robotic touch sensing that uses light, with Ákos Dömötör, OptoForce, Hungary

KEY TAKEAWAY*

- Product: force-torque sensors for robots (hardware, software) based on optics for lightweight robots
- Field of robotics undergoing huge changes:
  - Earlier → big industrial robots vs today's shift to lightweight or collaborative
  - Problem so far: many tasks required human sensing (tactile sensing)
  - Solution so far: camera systems, vision systems (detect object's location)
  - New trend as solution: augmenting visual info with tactile sensors → their startup
- Two main tactile sensing technologies so far (based on deformation sensing)
  - Strain gauges
    - Pros: precise
    - Cons: Rigid (breaking easily);manual labor intensive → difficult scaling
  - Capacitive
    - Pros: not so precise
    - Cons: cost-effective to build
- Prototypes / early steps:
  - Founders did not talk to customers enough
  - Starting a design organisation → NO as it's not scalable
  - Instead focus on universities; do custom-dev to gain market understanding
  - Next step: product for industrial segment
- Biggest challenges they had:
  - Finding the right type of customers and how to serve them
  - How to fulfil orders for larger volumes, production strategy
  - Stable production (quality management system, order management)
- Production
  - Outsourced: manufacturing the metal flanges, the PCB productions, PCBA
  - Suppliers close-by: faster reaction time; organisations roughly the same size as theirs → better bargaining power
  - Sourcing from China: later when producing in higher quantities
- Costs now:
  - Biggest contributors: development, operations (wage)

* excludes the "ultrafast round"