



ARISTOTLE
UNIVERSITY
OF THESSALONIKI

UniBonn Workshop

2026 UniBonn International Fellowship
Framework

AUTH Electronics Lab Industry Collaboration - experience sharing

Thomas Noulis

Contact:

✉ tnoul@physics.auth.gr,

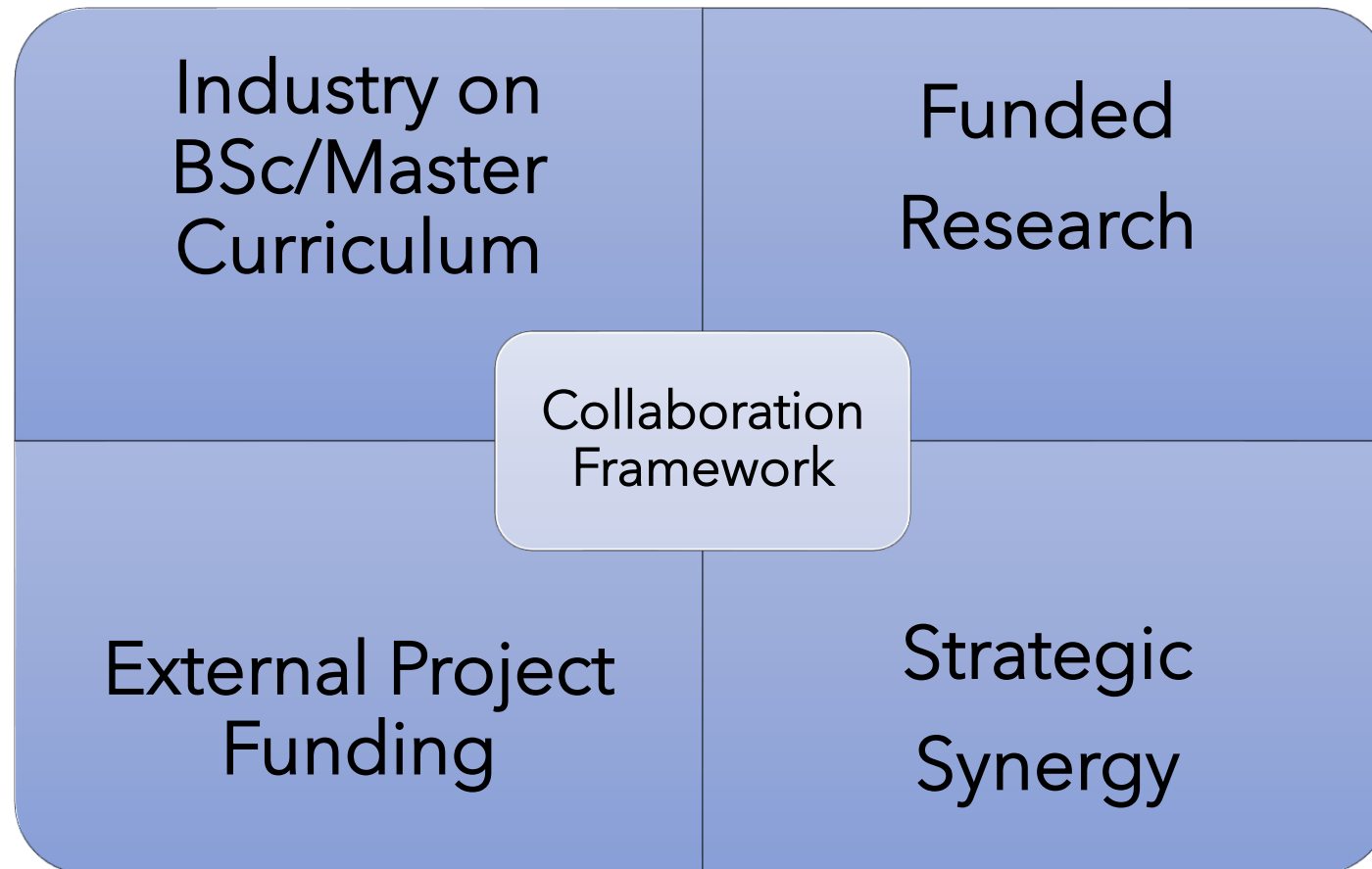
Presenter Profile Background

- 2021 – Today Associate Professor @ AUTH, Greece
- 2008 – 2021 DS PJM/ Architect @ INFINEON AG, Munich
RFMS Senior Staff @ INTEL Inc, Munich
R&D Engineer @ HELIC (ANSYS/SYNOPSIS)



Industrial Network and Collaboration Trust existed in professional, scientific and personal level

Formal Collaboration Schemes



Industry on BSc/Master Curriculum

CASE STUDY – Curriculum

- Funded prj
- Content
 - Develop teaching material for EDA tools
 - 3D EM simulation for Inductors, Transformers, PCB traces impedances
 - Passives synthesis & simulation for LNA, PA, duplexer, VCO/DCO RF/mmWave design

Industry on BSc/Master Curriculum

Lessons Learned – Collaboration Schemes

- “Curriculum” related activities are “Win-Win” cases
- “Educational thesis” works always better due to normal expectations
- “Product Level thesis” high expectations with risk on the results and on final outcome

Impact – Students Employment

- ✓ Direct contract offer w/o interview
- ✓ Typical Interview and contract offer
- × Bad performance – no job offer

Funded Research

INDICATIVE CASE STUDIES

- AI Custom Design Enablement
- Silicon Interposers Signal Integrity Analysis and Simulation
- Digital blocks Development
- Analog blocks Development
- Feasibility studies on new architectures
- Logic Simulator tools assessment
- Others..

Projects Form : 12MM to 24MM with possible extensions/ budget varies vs project complexity.

Funded Research

FORMALITIES

- **Contract/Frame Agreement Signature Loop via Research office and Research Vice Dean**
 - SoW in place
 - NDA in place
 - Legal review vs all topics (IP, licenses, prior knowledge, patents, publications, student names defined, etc)
 - Publications allowed after a related approval loop

Funded Research

Lessons Learned

- Assignment - academic/research or product level depending on the company form

Impact– Students Employment

- √ Learning is huge in startups and usually is followed by employment
- √ Large Corp. have long term targets and are focusing on sustainable collaboration
- × Effort sometimes is way large

External Project Funding

- Collaboration Trust available via the previous collaborations results to
 - Participation in National/EU projects they are interested about
 - Smooth formalities since NDA/Frame agreements are in place
 - “Letter of Intent” for any project regardless budget
 - Project collaboration is smooth due to personal relations and direct communication (easy to make a call)

Impact

- ✓ Existence of an industrial network to collaborate in proposals
- ✓ Work is fun with people you already know

Strategic Collaboration

- Case study
 - Funded PhD Frame agreement
 - Team setup and targets to expand
 - Collaboration with other Universities among research network with bilateral student exchange
 - No blocking points for publication – smooth approval loop

Impact– Students Employment

√ “Win – Win” since students are getting directly job offers before ending their studies

Sum Up on Students Employment Opps

- √ Students involved in “Industrial” Theses/projects got employment offers directly or worst case in 4-5 months after graduating
- √ Good references from the University Side is a key point – e.g. just a call is enough to be the student “on board”
- √ Trust is bilateral between students/Academia and Company – they know where they will work and with whom – no bilateral risks
- × Cases with **high expectations**, minor funding and a bad atmosphere – usually though they can be foreseen
- × **Publications delays** due to internal approval loops by the companies (company affiliation can only be placed in a paper after approval)
- × **Limited specs / inputs due to confidentiality** constraints – scientific collaboration obstacles

Sum Up

**Collaboration with the Industry
is a “win” - “win” case in every aspect !**