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PAEPEDE: Pathways to Excellence in Power Electronics and Electrical Drives Education

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Wrocław University
of Science and Technology



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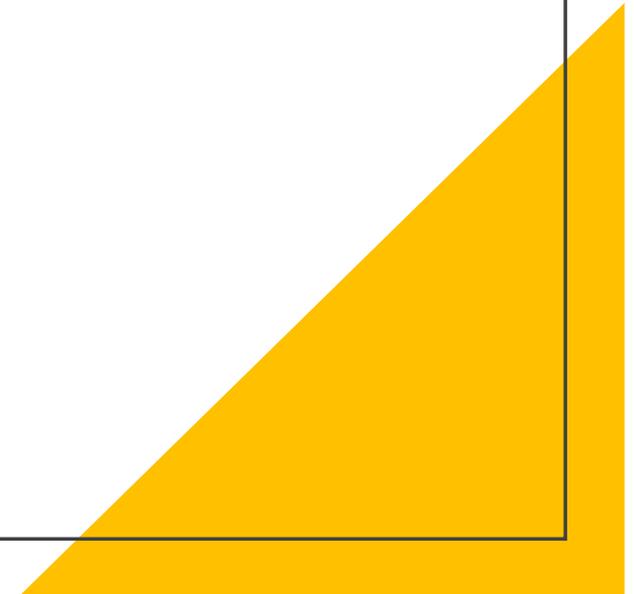
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Ideal PhD. Supervisor

Roundtable, May 14, 2025



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Key question:

What makes the ideal PhD supervisor ?



Motivation

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- Universities should pay close attention to the work of supervisors as it is crucial for improving education at the PhD. level

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What has survey in Slovakia revealed?

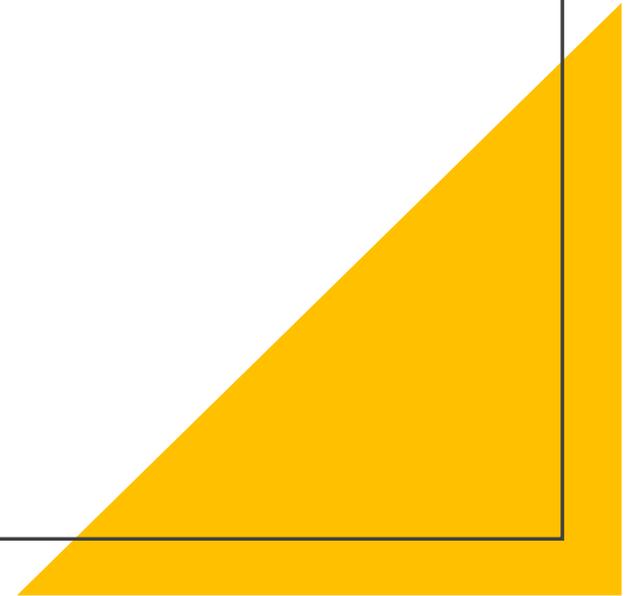
(answers of 1500 PhD students across all disciplines)

- Only 25% of PhD. students participated in an international internship
- A direct correlation exists between between the frequency of supervision and student satisfaction
- The most commonly identified issue is the inadequate approach of supervisors, which requires improvement."

*Slovak Accreditation Agency for Higher Education (SAAHE). Press Release, Bratislava, april 2024:
What do doctoral students think about the quality of education? Initial results of a national survey.*

Top 7 Key Findings on the Role of PhD Supervisors

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1. Alignment of Expectations

Supervisory success depends heavily on **early and clear alignment** between PhD student and supervisor regarding:

- Project goals, milestones, and deadlines
- Expectations for independence and initiative
- Publishing targets and career development

Misalignment of expectations leads to frustration, stalled progress, and dissatisfaction—across both general and technical fields.

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2. Effective, Ongoing Communication is Essential

Students highly value supervisors who:

- Are accessible and responsive
- Provide timely, constructive feedback
- Meet regularly (even briefly) to track progress

Inconsistent communication is one of the top predictors of supervision problems. This is especially acute in technical fields with high research uncertainty.

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3. Supervisory Relationship Quality Impacts Well-being

The interpersonal dynamic—respect, trust, empathy—is critical:

- Positive relationships improve motivation, mental health, and timely completion
- Toxic or overly hierarchical relationships are a major risk factor for drop-out or disengagement

This is especially important for international students.

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4. Supervisor has multiple roles

- **Content expert** in the field - provides subject-specific knowledge
- **Project manager** - sets goals, and manages milestones.
- **Mentor** - offers emotional support and advice about career development, stress
- **Institutional guide** - Assists with navigating university procedures, funding applications and administrative systems.

Most supervisors are not formally trained to handle all these roles.

As a result, students often experience inconsistency in supervision quality,

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5. Structured Supervision Enhances Outcomes

Use of tools, frameworks, and regular documentation helps:

- Agile methods, checklists, milestone planning, and research logs improve clarity and accountability
- Particularly helpful in engineering, computer science, and interdisciplinary collaborations

Structured supervision reduces anxiety and increases perceived fairness.

6. Disciplinary and Institutional Contexts Shape Practices

Supervisory styles and norms vary widely:

- Technical and natural sciences tend to emphasize productivity, publications, and output
- Social sciences emphasize critical thinking and independence
- Cultural expectations (e.g. directness, authority distance) influence student-supervisor interaction

Supervisors must adapt and develop intercultural competence in globalized academic settings.

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7. Supporting Supervisor Development is an Institutional Responsibility

Many supervisors:

- Lack formal training or mentoring in supervision
- Struggle with time management due to competing academic duties
- Feel isolated in managing difficult supervisory cases

Universities should provide structured support: peer networks, workload protection, and access to best practices.

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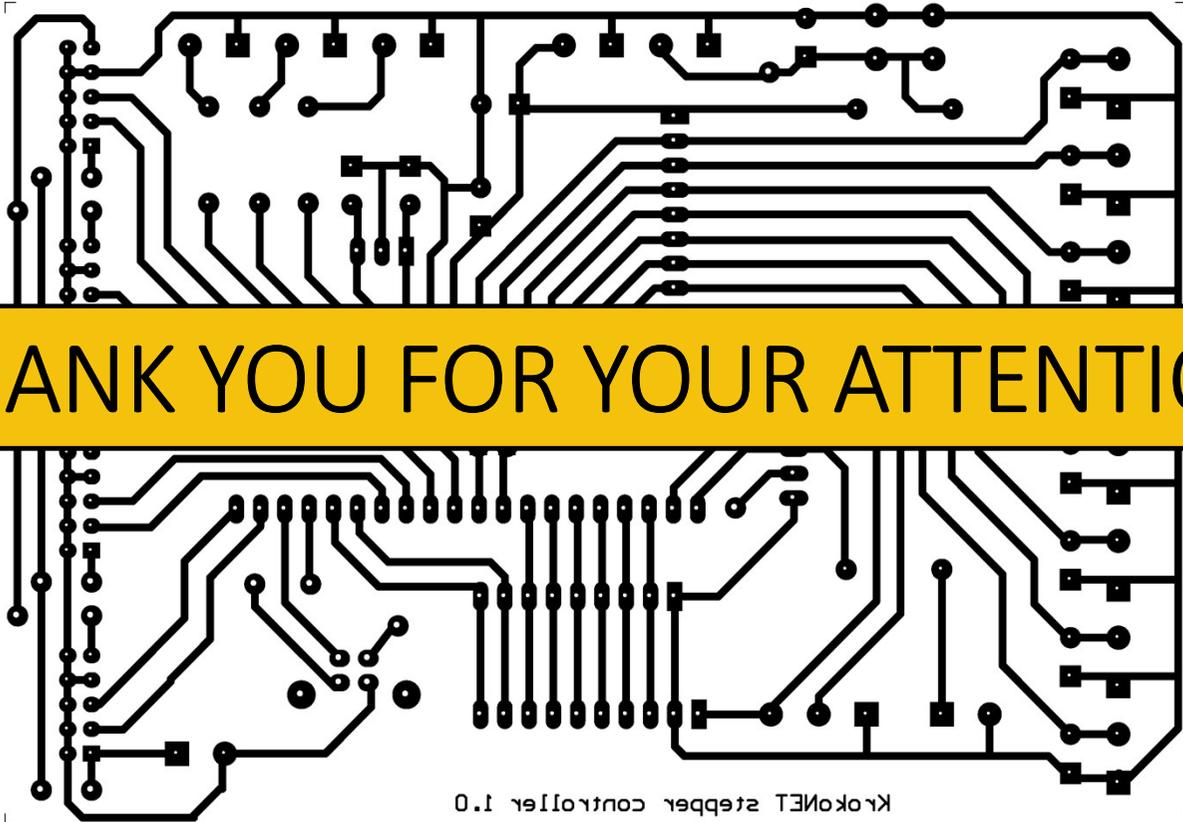


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Findings from recent literature surveys
about Supervisors

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- Supervisor supportiveness is the most significant predictor of PhD student satisfaction, while academic qualities of supervisors have much less significant effect.
- The single most important predictor of personal and professional satisfaction with supervision is how frequently the student meets the supervisor.
- Optimal frequency of supervising is at least one-time per week



THANK YOU FOR YOUR ATTENTION

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