



УНИВЕРЗИТЕТ  
У НОВОМ САДУ



ФАКУЛТЕТ  
ТЕХНИЧКИХ НАУКА

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ИНТЕГРИСАНИ  
СИСТЕМ  
МЕНАџМЕНТА  
СЕРТИФИКОВАН ОД:



175. Sastanak IEEE u Novom Sadu / 175<sup>th</sup> IEEE Meeting  
in Novi Sad  
**Obaveštenje / Announcement**

**Prof. Dr. Krishna Shenai**  
**IEEE PELS Distinguished lecturer**  
**University of Chicago, IL, USA**



u **sredu, 23. 10. 2019.** u Svečanoj sali  
Fakulteta tehničkih nauka u Novom  
Sadu, sa početkom u **10:00 h**, održaće

On **Wednesday, October 23, 2019**, in the  
**Ceremony Hall** of the Faculty of  
Technical Sciences Novi Sad at **10:00 am**  
will deliver

## P R E D A V A N J E L E C T U R E

### RELIABILITY OF COMPACT POWER SYSTEMS

#### Pouzdanost kompaktnih elektroenergetskih sistema

**Abstract:** The field-reliability of a power electronics switching converter is among the least understood topics today. There are no established guidelines available for the design and manufacture of high-performance low-cost power converters in order to guarantee prescribed mean-time-between-failure (MTBF) in a given end application. This is particularly important when developing next-generation compact power systems based on advanced silicon and emerging wide bandgap (WBG) power devices. This talk will discuss the current approach followed in industry for assessing the field-reliability of power converters, present extensive experimental results of compact high-end computer power supplies with MTBF of 1 million hours, and outline a novel power converter design and manufacturing approach that emphasizes on “physics-based” component failure mechanisms.



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