



INSTITUTE OF INFORMATION AND
COMMUNICATION TECHNOLOGIES
BULGARIAN ACADEMY OF SCIENCE

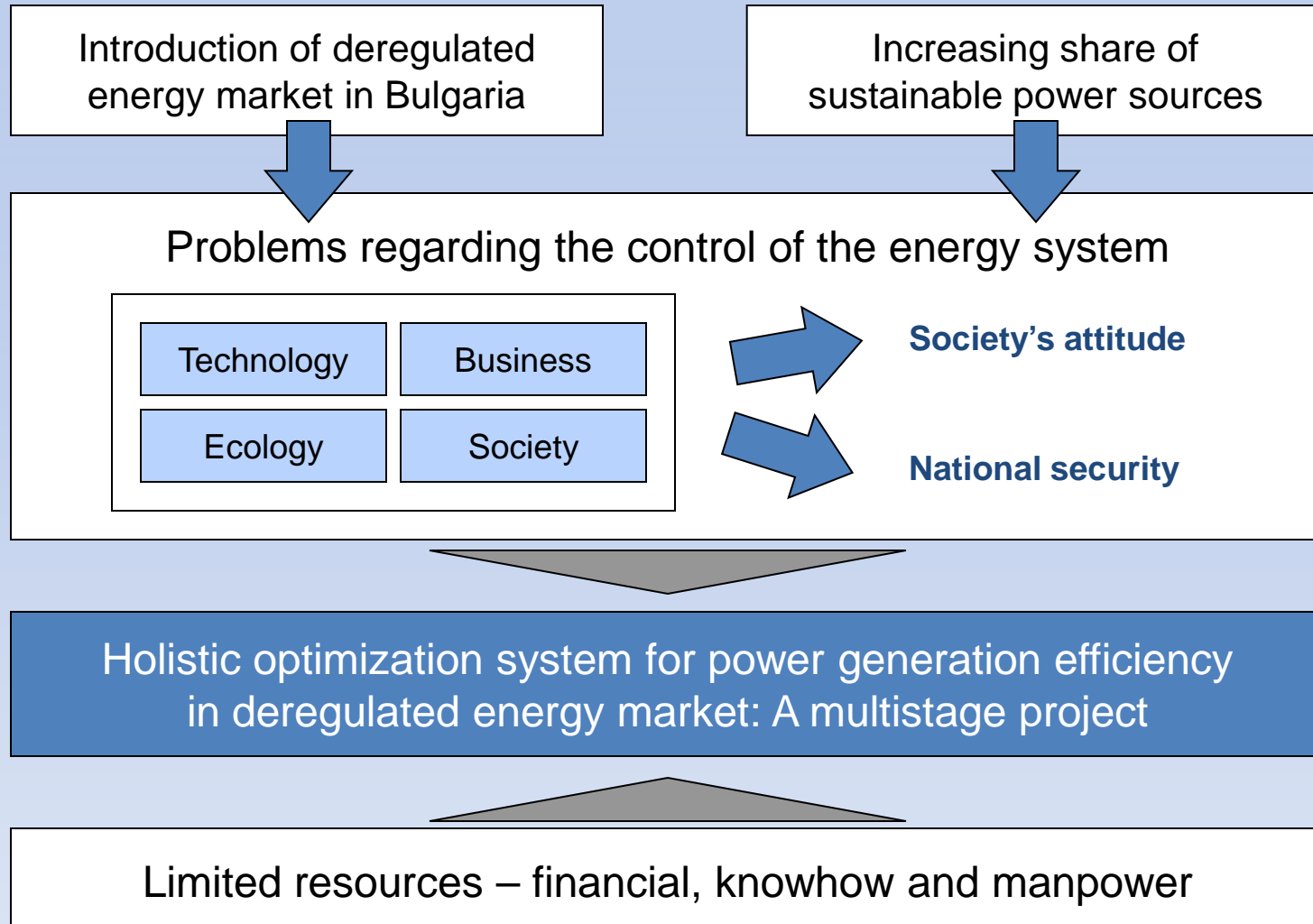


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Towards building a User Community in “ICT for Energy Efficiency”

Assoc. Prof. PhD Lyubka Doukowska

- **European energy policy:**
 - Sustainable,
 - Competitive and
 - Secure supply of energy.
- **Deregulated energy markets in EU**
- **Increased share of sustainable power sources**



Requirements:

- impartial economical analysis of each stage
- effective management during the realisation



Holistic optimization system for power generation efficiency
in deregulated energy market: A multistage project



Prerequisites for success:

- implementation of the most recent and advanced IT achievements
- collaboration of experts and academic organisations

EU-20-20-20: EU perspectives for sustainable development until 2020

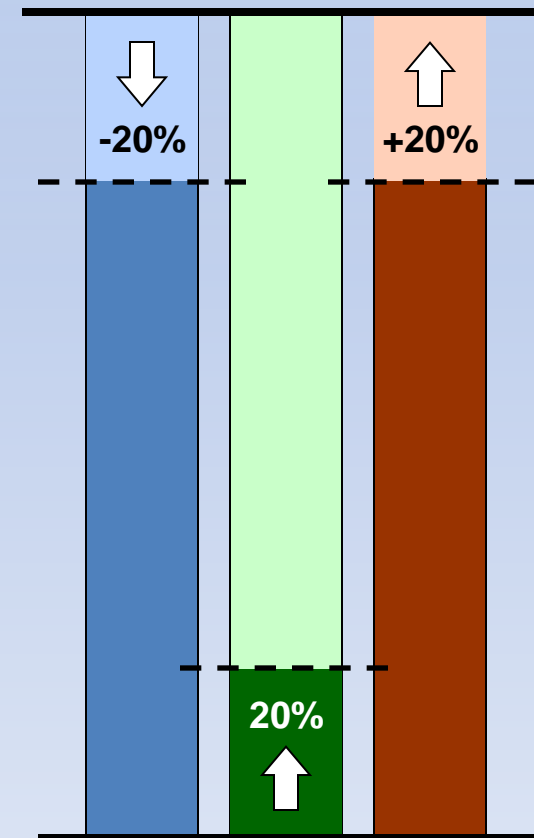
- Reduce greenhouse gas emissions by at least 20% from 1990 levels
- Increase the share of renewable energy sources in energy consumption to 20%
- Increase in energy efficiency by 20%

Bulgaria:

- Lowest energy effectiveness in EU
- Low share of renewable energy sources
- High energy dependence

Reaching the goals of EU 20-20-20 requires:

- Significant expenses
- Changes in legislation and infrastructure
- Administrative changes



Consumers: Tailored energy services and information technologies

Status



- Considerable saving potential unused in the residential and services sectors



- Slow uptake of market for energy efficiency services
- Lack of awareness and access to appropriate information on energy efficiency benefits



- Tech developments not sufficiently reflecting household interests

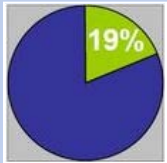
EED proposals

- **National energy efficiency obligation** scheme for utilities
- **Obligation for individual energy meters**, reflecting actual energy consumption and information on actual time of use
- Ensure **accuracy & frequency of billing** based on **actual consumption**
- Appropriate information with the bill providing comprehensive account of current energy costs

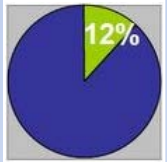
Source: <http://geospatial.blogs.com/geospatial/2012/07/new-eu-energy-efficiency-directive-to-address-20-20-20-shortfall.html>

Public Sector

Status



Public sector consumption makes important share of EU's GDP



Share of public buildings in building stock



Low average energy performance of existing buildings stock (public incl.)

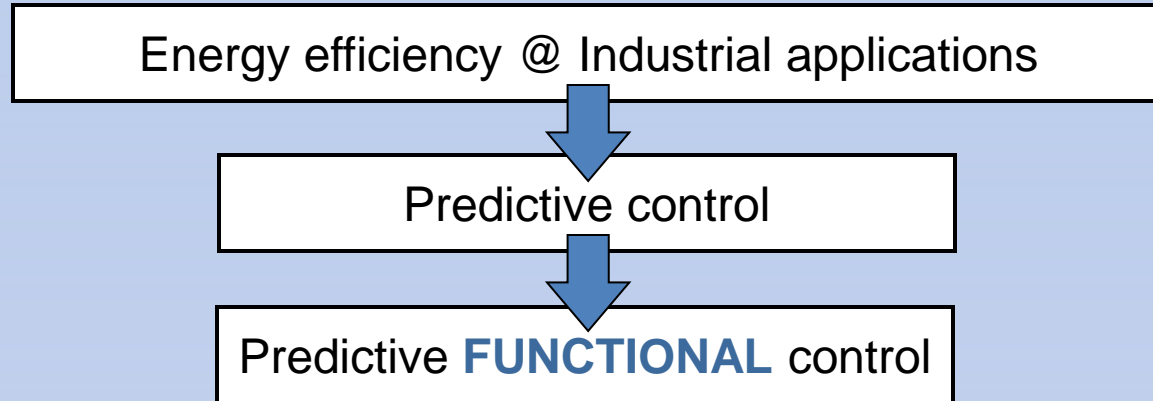


Cost optimal renovation can bring up to 60% energy savings

EED proposals

- Purchase of products, services and buildings with **high energy efficiency performance**
- Annual **renovation target of 3% for public buildings above 250m²**
- **Local energy efficiency plans** and introduction of **energy management systems**
- More **systematic use of Energy Performance Contracting**

Source: <http://geospatial.blogs.com/geospatial/2012/07/new-eu-energy-efficiency-directive-to-address-20-20-20-shortfall.html>



**01/01/2012 > 300 processes
in several plants in different countries**

- Reproducibility increased
- Less energy consumption
- Implemented in all types of PLCs



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ИНСТИТУТ ПО ИНФОРМАЦИОННИ И КОМУНИКАЦИОННИ ТЕХНОЛОГИИ,
БЪЛГАРСКА АКАДЕМИЯ НА НАУКИТЕ, В РАМКИТЕ НА ПРОЕКТ AComIn -
"ADVANCED COMPUTING FOR INOVATIONS",
СЪВМЕСТНО С ТЕХНИЧЕСКИ УНИВЕРСИТЕТ – СОФИЯ, ФИЛИАЛ ПЛОВДИВ



AComIn

ВИ КАНЯТ НА СЕМИНАР НА ТЕМА:

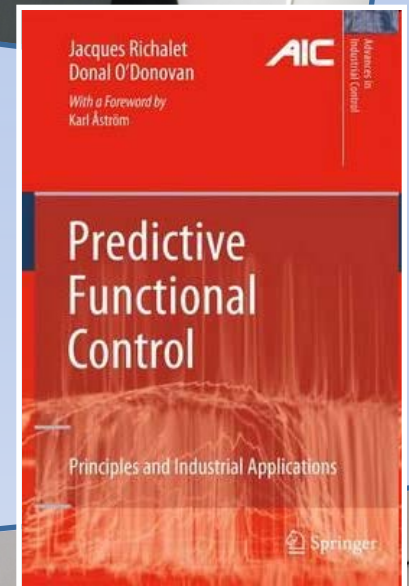
„INDUSTRIAL APPLICATIONS OF PREDICTIVE FUNCTIONAL CONTROL“

С ЛЕКТОР JACQUES RICHAIET, PH.D.

**8^{МИ} октомври 2013 г.
от 10.30 ч. в зала 4328**

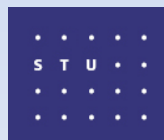
Семинарът ще се проведе на 8ми, Октомври 2013г., от 10.30ч. в зала 4328 на 4ти корпус на Технически Университет-София, филиал Пловдив. Входът е свободен за всички заинтересовани, професионалисти в областта и фирми с насоченост към съвременните автоматични системи за управление.

Д-р Ришале е защитил докторска степен в университета в гр. Беркли, САЩ под ръководството на проф. Лофти Заде, работейки в областта на моделно предсказващо управление. В края на 60те години на миналият век, той основава инженерингово-консултантската си компания ADRESA, чието основно достижение е разработката и внедряването на първата система за предсказващо управление на бинарни дестилационни колони. Предложените идеи от д-р Ришале, дават тласък за появата на ново научно направление, което успешно продължава своето развитие и днес, като намира широко приложение в петролно-химическите и хранителните производства.



Network of academic institutions in the field of PFC in EU:

- Cologne University of Applied Science, DE
- Slovak University of Technology, Bratislava, SK
- University of Oulu, Oulu, FI
- Institute of Information and Communication Technologies, Sofia, BG
- Technical University, Plovdiv, BG





Thank You!