The benefits of engaging in international collaboration

**Fulbright and Erasmus+**

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Paul Allen College of Engineering and Computing
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Outline

• What/Why, Why, Why?

• Fulbright overview
  – Fulbright Specialist
  – Fulbright Scholar
  – Outcomes

• Erasmus+ overview
  – The Erasmus framework
  – EU International Collaborations
  – Outcomes

• Benefits Direct/Indirect

• Challenges
What/Why is Professional Development Important?

- Ensures your capabilities keep pace with the current standards of others in the same field
- Ensures that you maintain and **enhance** the knowledge/skills you need to deliver state-of-art knowledge to students.
- Ensures that you and your knowledge stay relevant and up to date
- Helps you continue to make a meaningful contribution to your department, become more effective in the workplace
- Advance in your career, coach and mentor others
- Helps you to stay interested and interesting
- Deliver a deeper understanding of what it means to be a professional, along with a greater appreciation of the implications and impacts of your work.
- Helps advance the body of knowledge and technology within your profession
- Contributes to improved protection and quality of life, the environment, sustainability, property and the economy
What is in for the Institution?

It is ALL for the Institution but to be specific:

1. Improved efficiency
2. Increase retention
3. Build confidence and credibility
4. Make succession planning easier
5. Reenergize staff
Fulbright Overview

• The Fulbright program
  – founded by United States Senator J. William Fulbright in 1946.
  – US Department of State’s Bureau of Educational and Cultural Affairs
  – Highly competitive, merit-based grants for international educational exchange
  – Managed by the Institute of International Education.

• Quick facts about Fulbright:
  – It operates in over 155 countries around the world.
  – provides grants to undertake Advanced Research and University Lecturing
  – 53 Fulbright alumni have won Nobel Prizes; 78 have won Pulitzer Prizes
Fulbright Overview

• Fulbright grantees' fields of study span:
  – the fine arts, humanities, social sciences,
  – mathematics, natural and physical sciences,
  – professional and applied sciences.

• Fulbright eligibility:
  – US Citizenship
  – Degree as required by award:
  – Ph.D. or other terminal degree may be required
  – Teaching experience as required by award
  – New policies on Fulbright Scholar grants and waiting periods between grants
Fulbright Grant Categories

• Fulbright grant categories
  – Scholar grants
    • Fulbright US Scholar - sends American faculty members, scholars and professionals abroad to conduct research and/or lecture for up to 1 year.
    • Fulbright Specialist - sends U.S. faculty and professionals to serve as expert consultants on curriculum, faculty development, institutional planning, and related subjects at overseas academic institutions for a period of 2 to 6 weeks.
  – Teacher grants
  – Grants for professionals
  – Student grants
Fulbright Timeline

- Expertise: match your expertise and proposal to the award description
- Relevance: Why will the host country benefit from your project?
- Experience: Regional experience and language ability
- Discipline: Discipline references are listed in the award
- Proposal: includes Project Plans and Timeline
Application Components

- Application Form
  (for Fulbright Specialist 3 external reviewers will evaluate your work =>
  inclusion/exclusion from the Specialist Roster) – approx. 6 months time frame
- Project Statement
- CV
- Reference letters
- Course Outline/ Syllabi (for Teaching Awards)
- Research Proposal (for Research Awards)
- Additional components
  - Language proficiency report
  - Letter of invitation
  - Supplemental materials
  - Medical Evaluation (mental/physical)
<table>
<thead>
<tr>
<th>Month</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUG.</td>
<td>Program staff conduct technical reviews for completeness</td>
</tr>
<tr>
<td>SEPT.</td>
<td>Discipline-specific committees review applications</td>
</tr>
<tr>
<td>SEPT. – EARLY NOV.</td>
<td>U.S. peer review committees discuss applications for a single geographical region</td>
</tr>
<tr>
<td>NOV. – JAN.</td>
<td>Applicants notified of status - Recommended applications are sent to host countries and to the J. William Fulbright Foreign Scholarship Board</td>
</tr>
<tr>
<td>FEB. – MAY</td>
<td>Grantees notified of final approvals</td>
</tr>
<tr>
<td>MAY – JUNE</td>
<td>Grant packets sent to grantees</td>
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</table>
My service for Fulbright

• Fulbright Specialist:
  – October-December 2013 (6 weeks)
  – Center of Research in Optoelectronics, Communications and Control Systems Bangkok University, Thailand
  – Project: 3D Display/Graphics Research

• Fulbright US Scholar
  – August 2015 – January 2016 (6 months)
  – Multimedia Intelligent Technology (MIT-Lab), School of Science and Technology, Bangkok University, Thailand.
  – Research in Human Computer Interaction: Haptic and Web3D Technology
  – Teaching: Web-based 3D Visual and Haptic User Interfaces
Teaching: **Web-based 3D Visual and Haptic User Interfaces**

- Course focused on 3D Web programming and tactile interaction (haptics)
- Enabling students understanding of the theoretical paradigms and their applications
Fulbright Outcomes
Fulbright Lectures and International Collaborations

Presentations about Armstrong, Research:
• Chiang Mai University, Thailand
• University of Yangon, Myanmar
• Tongji University, Shanghai, China
• University of Intl. Business, Beijing, China
• National Dong Hwa University, Taiwan
• National Yilan University, Taiwan
Expanding cultural horizons

Amazing architecture and technology
Novel ideas (e.g. Research Project Thermal Maps)
Remote destinations

Amazing history and cultural diversity that can’t be described in words

Novel ideas (e.g. Research Project : Earth Echoes)
Outline

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• Erasmus+ overview
  – The Erasmus framework
  – EU International Collaborations
  – Outcomes

• Benefits Direct/Indirect

• Challenges
Overview

• The Erasmus program:
  – European Community Action Scheme for the Mobility of University Students
  – Desiderius Erasmus Roterodamus (1466 – 1536), Dutch Humanist, greatest scholar of the northern Renaissance.
  – **opportunities for people of all ages**: develop and share knowledge and experience at institutions and organizations in different countries.
  – **opportunities for a wide range of organizations**: universities, education and training providers, think-tanks, research organizations, and private businesses.
  – budget of €14.7 billion (approx. $17 Billion)
Budget and Mobility Exchanges

- **Mobility Exchanges:**
  - 135,000 Students/Professors can come to EU or go outside EU
  - Master Students can apply for Erasmus backed loans to study abroad
  - Erasmus Mundus – Joined Master Degree by 2+ institutions in different countries

**€14.7 BN BUDGET**

- **2/3 of budget:** learning opportunities abroad for individuals
- **1/3 of budget:** partnerships + reforms of the education and youth sectors
Cooperation Projects

• Working across disciplines - interdisciplinary

• New Teaching Practices and Curricula

• Allow students to study real-life cases in Business and Industry

• Erasmus students can go abroad for 3 to 12 months in 3 cycles:
  – During the first study cycle (Bachelor or equivalent)
  – During the second study cycle (Master or equivalent) and
  – During the third cycle as doctoral candidate (Doctoral level)
Our work in the Erasmus+

• Erasmus+ timeline:
  – Nov. 2016
    ➢ 5 year+ grant proposal submission, with Computer Science and Electrical Engineering Department at Transilvania University of Brasov, Romania.
  – Jan. 2017
    ➢ Research project “Thermal Modeling using X3D and Wireless” and “BLE Autonomous Sensor Networks” in collaboration with Prof. Paul Borza.
  – July 2017 – Funding approved
  – Nov. 2017
    ➢ Prof. Paul Borza presentation at GSU – Armstrong Campus, US
    ➢ 2017 Presentations:
      • Nov. 2 – Prof. Paul Borza, presented “Dracula’s Myth and Transilvania University of Brasov” at the Georgia Southern University, Armstrong campus, Savannah, US.
      • Nov. 3 – Prof. Paul Borza, presented “Renewable Energy Sources and Applications” at the Georgia Southern University, Armstrong campus, Savannah, US
      • Nov. 6 – Prof. Felix Hamza-Lup, presented “X3D Thermal Maps for Energy Efficiency Assessment in Commercial and Residential Buildings” at the Georgia Southern University, Armstrong campus, Savannah, US.
Our work in the Erasmus+

- Mar. 2018
  - Prof. Felix Hamza-Lup presentation at Transilvania Univ. of Brasov, RO
- May-July 2018
  - Prof. Felix Hamza-Lup research collaboration at Transilvania Univ. of Brasov, RO (co-sponsored by Transilvania Research Fellowship)
- Nov. 2018
  - Prof. Paul Borza presentation at GSU – Armstrong Campus, US
- 2018 Presentations
  - Mar. 19 – Prof. Felix Hamza-Lup, presented “Georgia Southern University – Master Programs in CS and IT and the Engineering Programs” at the Transilvania University in Brasov, Romania.
  - Mar. 21 – Prof. Felix Hamza-Lup, presented “Introduction to X3D – Paradigms, Static and Dynamic Scenes” at the Transilvania University in Brasov, Romania.
  - Mar. 22 – Prof. Felix Hamza-Lup, presented “Web-based 3D User Interfaces”, at the Transilvania University in Brasov, Romania.
  - Nov. 5 and 7 – Prof. Paul Borza, will present “Electric Energy Storage Systems – Super Capacitors” at Georgia Southern Statesboro Campus, Statesboro, respectively Armstrong Campus, Savannah, Georgia, US.
Upcoming:

Nov. 5 - Statesboro &
Nov. 7 - Armstrong

ELECTRIC ENERGY
STORAGE SYSTEMS AND
APPLICATIONS

Electric energy storage systems play an increasingly important role in energy optimization and management in various domains. Under the Erasmus+ framework for international collaboration, coordinated by Prof. Felix G. Hamza-Lup, Computer Science, we would like to invite you to a lecture on electric energy storage technologies and their applications with a special emphasis on supercapacitors.

PAUL N. BORZA, PH.D

PROF. OF ELECTRICAL ENGINEERING
TRANSILVANIA UNIVERSITY OF BRASOV

MONDAY, NOVEMBER 5TH
STATESBORO
NESSMITH-LANE
CONFERENCE CENTER
ROOM 1909
12:00 PM - 2:00 PM

WEDNESDAY, NOVEMBER 7TH
ARMSTRONG
STUDENT UNION
BALLROOM C
12:00 PM - 2:00 PM

For more information, visit https://academics.georgiasouthern.edu/international/programs-services/upcoming-events/
Students and Faculty Participation (March 2018)
Wireless Sensors Setup

Diagram showing the flow of components:
- Battery
- Current Sensor Hall
- ADC
- Microcontroller
- UART
- SPI
- BT/BLE Transceiver
- D2C
- D2C
- ADC
- Current Sensor Hall
- RFM Transceiver
Sensors in: Thermal Modeling and Vehicular Ad Hoc Networks

IR Thermal Camera

VANETs
## Benefits Direct/Indirect

<table>
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<th>Direct Benefits</th>
<th>Indirect Benefits</th>
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<tr>
<td><strong>Micro Level</strong></td>
<td></td>
</tr>
<tr>
<td>1. Facilities and Equipment Access: Foreign or Joint</td>
<td>1. Personal Inspiration, Ambition and Reputation</td>
</tr>
<tr>
<td>2. Share/Access Techniques and Skills</td>
<td>2. Encourage Additional Links and Enhance Future Funding Opportunities</td>
</tr>
<tr>
<td>3. Increase the Knowledge Capacity</td>
<td>3. Cultural/Personal Experience/Enjoyment</td>
</tr>
<tr>
<td>4. Access Larger Sites/Population/Grants</td>
<td></td>
</tr>
<tr>
<td><strong>Macro Level</strong></td>
<td></td>
</tr>
<tr>
<td>1. Share Risks and Costs</td>
<td>1. Increase Economic Performance by Employing Science and Technology</td>
</tr>
<tr>
<td>2. Share/Access Techniques and Skills</td>
<td>2. Stimulate Goodwill and Understanding as a Foreign Policy Tool</td>
</tr>
<tr>
<td>3. Strengthen Weakness Areas</td>
<td>3. Increase Inward Investment</td>
</tr>
</tbody>
</table>
References

• Fulbright References
  ➢ Fulbright Scholar Program: http://www.cies.org/
  ➢ State’s Bureau of Educational and Cultural Affairs: https://eca.state.gov/about-bureau
  ➢ Fulbright US Student Program: http://us.fulbrightonline.org/
  ➢ Institute for International Education: http://www.iie.org/fulbright
  ➢ Felix’s Fulbright Course: http://felixlup.net/international/fulbright/index.html

• Erasmus References
  ➢ Fact Sheet: https://ec.europa.eu/programmes/erasmus-plus/about/factsheets_en
  ➢ Erasmus Mundus - Joint Master’s Degree: https://ec.europa.eu/programmes/erasmus-plus/opportunities/individuals/students/erasmus-mundus-joint-master-degrees_en

• Georgia Southern, International:
  ➢ https://academics.georgiasouthern.edu/international/international-initiatives/erasmus/

• Transilvania University of Brasov:
Special Thanks!

To Dorothee Mertz-Weigel Ph.D.,
Director of International Programs and Services for her invaluable support and commitment to all International initiatives.
Thank you

Prof. Felix Hamza-Lup
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http://felixlup.net

“What I enjoy is a collaboration. Working with other like-minded people. People who have brilliant minds and big hearts.”