

# Sanjit Kumar Roy

## PERSONAL DATA

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CURRENT POSITION: Research Scholar, Dept. of CSE, IIT Guwahati.  
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West Bengal, Pin - 743422, India.  
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## EDUCATION

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- **(Current Affiliation:)**  
**Indian Institute of Technology Guwahati**, Guwahati, India JUL. 2013 -TILL DATE  
*Doctor of Philosophy (Tentative Thesis submission by January, 2021).*  
**Thesis Title:** New Approaches to Computation-Communication Co-scheduling in Real-time Cyber-Physical Systems.  
**Supervisor:** Dr. Arnab Sarkar and Dr. Chandan Karfa (Administrative Supervisor).
- **National Institute of Technology Durgapur**, Durgapur, India JUN. 2013  
*Master of Technology in Information Technology*  
**Thesis Title:** Application of Distributed Key Generation in Secured Sealed-Bid Auction Mechanism.  
**Supervisor:** Dr. Jaydeep Howlader.  
CGPA: 8.96/10
- **West Bengal University of Technology**, Kolkata, India AUG. 2008  
*Bachelor of Technology in Information Technology*  
DGPA: 7.26/10

## RESEARCH INTEREST

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Real-time Systems, Cyber-Physical Systems, Embedded Systems, Mixed-critical Systems, Scheduling

## PUBLICATIONS

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### Journal Papers

#### Published/Submitted

1. **Sanjit Kumar Roy**, Rajesh Devaraj, Arnab Sarkar, Sayani Sinha and Kankana Maji. "Contention-aware optimal scheduling of real-time precedence-constrained task graphs on heterogeneous distributed systems." *Elsevier Journal of Systems Architecture (JSA)*. Volume 105, May 2020, 101706.
2. **Sanjit Kumar Roy**, Arnab Sarkar and Rahul Gangopadhyay. "Processor and Bus Co-scheduling Strategies for Real-time Tasks with Multiple Service-levels." *Springer Journal of Scheduling (JOSH)*, (Second round major revision received).
3. **Sanjit Kumar Roy**, Rajesh Devaraj and Arnab Sarkar. "SAQA: Quality-level Aware Scheduling of Task Graphs on Heterogeneous Distributed Systems." *ACM Transactions on Embedded Computing Systems (ACM TECS)*, (First round review response submitted).
4. **Sanjit Kumar Roy**, Rajesh Devaraj and Arnab Sarkar. "Contention Cognizant Scheduling of Task Graphs on Shared Bus based Heterogeneous Platforms." *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (IEEE TCAD)*, (First round review response submitted).

### Working

1. **Sanjit Kumar Roy**, Rajesh Devaraj and Arnab Sarkar. "Energy-aware Co-scheduling of Multiple Task Graphs on Shared Bus based Heterogeneous Platforms." (Manuscript under preparation).

## Conference Papers

1. **Sanjit Kumar Roy**, Rajesh Devaraj, Arnab Sarkar, Sayani Sinha and Kankana Maji. "Optimal scheduling of precedence-constrained task graphs on heterogeneous distributed systems with shared buses." *IEEE 22nd International Symposium on Real-Time Distributed Computing (ISORC)*. Pages 185-192, 2019.
2. **Sanjit Kumar Roy**, Rajesh Devaraj and Arnab Sarkar. "Optimal scheduling of PTGs with multiple service levels on heterogeneous distributed systems." *American Control Conference (ACC)*. Pages 157-162, 2019.
3. Jaydeep Howlader, **Sanjit Kumar Roy**, Ashis Kumar Mal. "Practical Receipt-Free Sealed-Bid Auction in the Coercive Environment". *Information Security and Cryptology, 16th International Conference*, Seoul, Korea, Nov. 2013.

## TECHNICAL SKILLS

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C, Python, Matlab, Java, CPLEX.

## SCHOLARSHIPS & AWARDS

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- Received **MHRD Scholarship, Govt. of India** for pursuing Ph.D. at IIT Guwahati, India. JUL. 2013
- Received **MHRD Scholarship, Govt. of India** for pursuing M.Tech at NIT Durgapur, India. AUG. 2011

## REFERENCES

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- **Dr. Arnab Sarkar**  
Professor, Advanced Technology Development Centre, IIT Kharagpur,  
Kharagpur - 721302, West Bengal, India  
Phone: +91-3222-2-81954 (Off), +91-3222-2-81955 (Res)  
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Website: <http://www.facweb.iitkgp.ac.in/~arnab/>
- **Dr. Hemangee K. Kapoor**  
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- **Dr. Chandan Karfa**  
Professor, Dept. of Computer Science & Engineering, IIT Guwahati,  
Guwahati - 781039, Assam, India  
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