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Dr.Dhar. joined this institute as Officer-in-Charge on 10/06/2014. He is the administrative head of this institute. He is alumnus of Midnapur College, Ramkrishna Mission Vidyamandira, Belurmath and Jadavpur University. Formerly he was faculty member of several institutes like Haldia Institute of Technology (2002-2004), Prabhat Kumar College Contai (2004-2009), Jhargram Raj College (2009-2014). He got his doctorate degree from Vidyasagar University, working under Professor Sourangshu Mukhopadhyay. His research interest is on Optical parallel processing. His special teaching interest is on Quantum Mechanics, Solid State Physics and Electronics. He supervised several project works at UG and PG level. He also supervised one Ph.D. student who got the degree on the thesis entitled “**Studies on Digital All Optical Processing Using Non-linear Material Based System**”. He is also reviewer of several international and national journals like “Optical Engineering, a SPIE journal published from American Institute of Physics”. He is also visiting faculty of several institutes. He is also members of governing body of several colleges.

### **List of several publications of Dr. Dhar**

## **Journal Papers**

1. Samir Sahu and Shantanu Dhar, ‘Ultra-Fast All-Optical Logic Circuit With The Massive Use of Non-Linear Material’ International Journal of Advanced Engineering Research and Applications (IJAERA) ISSN: 2454-2377 Vol. – 1, Issue – 4, August – 2015
2. Samir Sahu, Shantanu Dhar, ‘**All - Optical Implementation of Arithmetic Operation Scheme using Optical Nonlinear Material Based Switching Technique**’ Photonics and Optoelectronics (P&O) Volume 3, 2014 doi: 10.14355/jpo.2014.03.005
3. D. De, S. Dhar, B. R. De, “Ab-initio Study of the Ground State Structure and Properties of Fe<sup>+2</sup> (Adenine)<sub>2</sub> (H<sub>2</sub>O)<sub>2</sub> Complex” American Journal of Chemistry 2012, 2(2): 27-29 DOI: 10.5923/j.chemistry.20120202.06
4. S. Sahu, R. R. Pal and S. Dhar: *Ultra-High Speed All-Optical T Flip-Flop Without Preset and Clear Using Non-Linear Material: a Theoretical Study*, **Vidyasagar University Journal of Physical Sciences. 15, 241-250, 2011. (India).**

5. S. Sahu, R. R. Pal and S. Dhar: *Implementation of 1-Bit random Access Memory Cell in All-Optical Domain with Non-linear material*, **International J. of Optics and Application**. **1(1)**, 8-12, 2011. (USA).
6. S. Sahu, R. R. Pal and S. Dhar: *Nonlinear Material Based All-Optical Parallel Subtraction Scheme: an Implementation*, **International J. of Optoelectronics Engineering**. **1(1)**, 7-11, 2011. (USA).
7. S. Sahu, R. R. Pal and S. Dhar: *All-Optical Binary Counter by using T flip-flop: An Implementation*, **International Journal of Engineering, Science and Technology**. **3(10)**, 7799-7807 (2011). (India).
8. S. Sahu, R. R. Pal and S. Dhar: *TeraHertz All-Optical Binary Register using D flip-flop with Non-linear Material: A Proposal*, **J. of Electron Devices**. **11**, 588-595 (2011). (France).
9. S. Sahu, R. R. Pal and S. Dhar: *A Novel Method of Implementing Nonlinear Material Based All-Optical Binary Half Subtractor and Full Subtractor System*, **J. of Electron Devices**. **10**, 293-298 (2011). (France).
10. Samir Sahu, Shantanu Dhar: *Implementation of clocked J-K, T and J-K Master Slave flip-flops with non-linear material in All Optical Domain*, **Optical Engineering**. **48(7)**, 075401-1-7 (2009). (USA).
11. Shantanu Dhar, Samir Sahu: *All Optical implementation of S-R, clocked S-R and D flip-flops using non-linear material*, **Optical Engineering**. **47(6)**, 065401-1-6 (2008). (USA).
12. S. Dhar, S. Mukhopadhyay All-optical decoding method for ASCII-coded data using nonlinear-material-based switching *Optical Engineering* 45(11), 115201 (November 2006) (USA).
13. S. Dhar, S. Mukhopadhyay, "All-optical implementation of ASCII by use of nonlinear material for optical encoding of necessary symbols", *Opt. Eng.* **44(6)**, 065201 (2005).
14. S. Dhar, S. Mukhopadhyay, "New method of obtaining image edges by optical nonlinear material-based switching operation", *Proc. SPIE* **4907**, 245-249 (2002).

## Presentations/ Conference Papers

1. S. Sahu, R. R. Pal and S. Dhar: Terahertz All-optical D Flip Flop with Preset and Clear using nonlinear material, **National Seminar on 50 Years of LASER:**

**Promises & Challenges at Prabhat Kumar College, Contai, India, January 08 - 09, 2012.**

2. **S. Sahu, R. R. Pal and S. Dhar: Ultra-fast all-optical memory cell by nonlinear material, National Seminar on Photonics and Nano Sciences at Garhbeta College, Garhbeta, India, December 20 - 21, 2011.**
3. **S. Sahu, R. R. Pal and S. Dhar: *All-Optical Toggle flip-flop Implementation with non-linear material*, International Conference on Laser, Materials Science and Communication (ICLMSC-2011) at Burdwan University, Burdwan, India, December 7 - 9, 2011.**
4. **S. Sahu, R. R. Pal and S. Dhar: Ultra-fast all-optical memory cell by nonlinear material, National Seminar on Recent Trends on Novel Materials (RTNM-11) at Vidyasagar University, Midnapore, India, November 29 - 30, 2011.**
5. **S. Sahu, R. R. Pal and S. Dhar: All-Optical implementation of Binary Subtraction Scheme using nonlinear material based system, National Workshop on Quantum Perspective of Advanced Materials (QPAM-11) at Vidyasagar University, Midnapore, India, March 23 - 25, 2011.**