Dr. Palash Sarkar Kamalapur, Matia,

 North 24 Parganas,

West Bengal, India- 743437

+91 8250451172

+91 8116373339

[palash.pma15@iitp.ac.in](mailto:palash.pma15@iitp.ac.in) [palash1991official@gmail.com](mailto:palash1991official@gmail.com)

Skype: palasheklabbya

**CAREER OBJECTIVE:**

To obtain a challenging and rewarding position in Academic Institutions which recognize my true potential and provide me sufficient support for professional growth through nurturing my skills.

**PROFESSIONAL WORK HISTORY:**

* Presently, I am working as a Postdoctoral Fellow with the department of Informatics, University of Bergen, Norway.
* From Feb. 2021 - Aug. 2021, I have worked as a Post-Doctoral Research Fellow in the Department of EE, Indian Institute of Technology Patna, Bihar, India.
* From Aug. 2020 - Feb. 2021, I have worked as a Research Associate (RA) in the Department of EE, Indian Institute of Technology Patna, Bihar, India.

**ACADEMIC QUALIFICATION:**

* Ph.D. in Mathematics during july, 2015 - June, 2020, from the Department of Mathematics, Indian Institute of Technology Patna, Bihar, India.
* M.Sc. in Mathematics and Computing during 2013 - 2015 with 7.09/10 CPI from the Department of Mathematics, Indian Institute of Technology Guwahati, Assam, India.
* B.Sc. in Mathematics (honours) during 2009 - 2013 with 70% marks from West Bengal State University, West Bengal, India.

**EXPERIENCES:**

* Review Editor in Frontiers in Communications and Networks Journal.
* Reviewer in IEEE Communications Letters:
  + - Number of articles reviewed 6.
* Reviewer in IEEE Transactions on Communications.
  + - Number of articles reviewed 1.
* Teaching Assistant: Mathematics-I MA101, Real Analysis and Calculus.

- Course instructor: Dr. Debashree Guha Adhya, Autumn 2016.

* Teaching Assistant: Mathematics-I MA101, Real Analysis and Calculus.

- Course instructor: Dr. Amit Kumar Verma and Dr. Sudhan Majhi, Autumn 2017.

* Teaching Assistant: Mathematics-II MA102, Linear Algebra and Ordinary Differential Equation, Spring 2019.

- Course instructor: Dr. Om Prakash and Dr. Nutan Kumar Tomar.

**RESEARCH INTEREST:**

I am generally interested in the designing and analysis of sequences with good correlation properties using Boolean functions and graphs. Also, I have a keen interest to implement those sequences to solve real life problems in Wireless communications.

**PROJECTS:**

* Sequence Design for Wireless Communication (YFRF, 454), IIT Patna.
* Symmetric and Hermitian Matrices (MA-699), IIT Guwahati.

**JOURNAL PUBLICATIONS:**

* R. Kumar, **P. Sarkar**, P. K. Srivastava and S. Majhi, "A Direct Construction of Asymptotically Optimal Type-II ZCP for Every Possible Even Length," in ***IEEE Signal Processing Letters***, vol. 28, pp. 1799-1802, 2021, doi: 10.1109/LSP.2021.3105927.
* **P. Sarkar**, S. Majhi and Z. Liu, "Pseudo-Boolean Functions for Optimal Z-Complementary Code Sets With Flexible Lengths," in ***IEEE Signal Processing Letters***, vol. 28, pp. 1350-1354, 2021, doi: 10.1109/LSP.2021.3091886.
* A. Roy, **P. Sarkar** and S. Majhi, "A Direct Construction of q-Ary 2-D Z-Complementary Array Pair Based on Generalized Boolean Functions," in ***IEEE Communications Letters***, vol. 25, no. 3, pp. 706-710, March 2021, doi: 10.1109/LCOMM.2020.3038726.
* **Palash Sarkar** and Sudhan Majhi, “A Direct Construction of Optimal ZCCS with Maximum Column Sequence PMEPR Two for MC-CDMA System,” ***IEEE Communications Letters***, 2020, doi:10.1109/LCOMM.2020.3029204.
* **Palash Sarkar**, Sudhan Majhi, and Zilong Liu, “A Direct and Generalized Construction of Polyphase Complementary Sets with Low PMEPR and High Code-Rate for OFDM System,” ***IEEE Transactions on Communications***, vol. 68, no. 10, pp. 6245-6262, 2020.
* **Palash Sarkar**, Abhishek Roy, and Sudhan Majhi, “Construction of Z-Complementary Code Sets with Non-Power-of-Two Lengths Based on Generalized Boolean Functions,”***IEEE Communications Letters***, vol. 24, no. 8, pp. 1607-1611, 2020.
* Avik Ranjan Adhikary, **Palash Sarkar**, and Sudhan Majhi, “A Direct Construction of q-ary Even Length Z-complementary Pairs Using Generalized Boolean Functions,” ***IEEE Signal Processing Letters***, vol. 27, pp. 146-150, 2020.
* **Palash Sarkar**, Sudhan Majhi, and Zilong Liu, “Optimal Z-Complementary Code Set From Generalized Reed-Muller Codes,” ***IEEE Transactions on Communications***, vol. 67, no. 3, pp. 1783-1796, Mar. 2019.
* **Palash Sarkar**, Sudhan Majhi, Hamsakutty Vettikalladi, and Syed Mahajumi, “A Direct Construction of Inter-Group Complementary Code Set,” ***IEEE Access***, vol. 6, pp. 42047-42056, 2018.

**CONFERENCE PUBLICATIONS/PRESENTATIONS:**

* **Palash Sarkar**, Sudhan Majhi, and Zilong Liu, “A Direct and Generalized Construction of Polyphase Complementary Set with Low PMEPR,” ***2019 IEEE International Symposium on Information Theory***, pp. 2279-2283, Paris, July, 7-12 , 2019.
* Shibsankar Das, Sudhan Majhi, and **Palash Sarkar**, “An Improved Multiplier-Free Generator for Polyphase Complete Complementary Codes,” ***10th International Conference on Sequences and Their Applications****,* Hong Kong, October, 1-6, 2018.

**AWARDS/ACHIEVEMENTS:**

* Best poster award for poster presentation (title: *Construction of Z-Complementary Code set of Non-power-of-two Lenghth Based on Boolean Functions* ) in RSD 2020 from the Department of Mathematics, IIT Patna.
* JAM-2013 qualified in Mathematics.
* CSIR-NET June-2016 qualified in Mathematical Science.
* GATE-2015 qualified in Mathematical Science.

**SEMINAR OR WORKSHOP:**

* Attended in the GIAN course “*Mathematical Framework of Sequence Design for Wireless Communication Systems,*” during period January 13, 2018 - January 19, 2018.
* Attended in the GIAN course “*Number Systems for Digital Signal Processing,*” during October 17, 2016 - October 23, 2016.
* Attended in the GIAN course “*Advanced Wireless Networks: Joint Design of Technology and Business Model,*” during period April 2, 2016 - April 10, 2016.

**SKILLS:**

**Languages:** Bengali, English, Hindi.

**Software Packages:** MS Office, Latex, MATLAB.

**Programming Languages:** C, MATLAB, C++.

**PERSONAL INFORMATION:**

**D.O.B:**  August 2, 1991

**Father’s Name:** Purna Chandra Sarkar

**Nationality:** Indian

**Passport No:** P7863424

**Marital Status:** Unmarried

**REFERENCES:**

Dr. Sudhan Majhi

Associate Professor

Department of Electrical Engineering

Indian Institute of Technology Patna, Patna - 801106

E-Mail: smajhi@iitp.ac.in

Dr. Zilong Liu

Assistant Professor

Communications and Networks in the School of CSEE

University of Essex, UK

E-mail: zilong.liu@essex.ac.uk