SOHAM KAR

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Raipur, Chhattisgarh-492001

Profile

Profoundly focused and reliable fresher with a research frame of mind. Aiming to reduce global warming through sustainable technologies. Motivated with a thirst to gain experience related to sustainability and environmental discipline.

Interests

Sustainability | Climate change | Bio-fuels | Environmental Engineering | Renewables | Metamaterials | Waste-management | Urban environment & design | Fuel-cells | Urban resilience | Urban mobility | Wastewater treatment

Softwares

- STAAD.Pro 2019 **(Autodesk certified)**
- AutoCAD 2018 **(Autodesk certified)**
- Solidworks 2021
- Abobe Illustrator CC
- QGIS/GRASS GIS
- COMSOL multiphysics

Awards & scholarships

- **INSDAG** Civil Award Competition: 2019-2020 for the best innovative structural design of a Steel-Intensive Quarantine Center for COVID-19 **(2021)**.
- **Mitacs** Globalink Research Internship Scholarship 2020, Montreal-CA **(2020)**.

Responsibilitites

- **Head of Logistics,** ICE KIIT Student Chapter: 2020-2021.
- **Events Coordinator,** KSCE KIIT Student Chapter: 2019-2021.
- **Vice-Captain,** KIIT Senior Men's Football team: 2019-2021.
- **Lead Reporter,** ICE KIIT Student Chapter: 2019-2020.

Languages

- **Hindi**
  Native/Bilingual Proficiency
- **English**
  Full working proficiency
- **Bengali**
  Native/Bilingual Proficiency
- **French**
  Elementary Proficiency

EDUCATION

Kalinga Institute of Industrial Technology, **2017-2021**
School of Civil Engineering, Patia, Bhubaneswar.

- B.Tech. in Civil Engineering, **CGPA: 8.61/10.00**

HIGHLIGHTED EXPERIENCE

Design of a Qurantine Center for COVID-19. **Sep 2020 - Feb 2021**

- Assembled & managed a team of four members to participate in the National Award Scheme for Civil Engineering Students, NACS (C) 2019-2020.
- Drafted & modeled an economic quarantine center, including elevation plans, foundation plans, floor plans, and design loads calculations employing CAD & STAAD.Pro.
- The design was recognized for the cheapest construction cost(~Rs. 42 lacs) in the final round of the competition.

Wastewater Treatment and Current Generation using an MFC integrated with a CFW. **Dec 2019 - Apr 2020**

- Designed & constructed a Microbial-Fuel-Cell integrated with an Ecological Floating Wetland of 'pistia stratiotes' to simultaneously treat wastewater and produce electricity.
- Fabricated a synthetic domestic wastewater solution to examine the water treatment capacity of the system.
- The system was able to produce a small amount of electricty and treated the domestic wastewater efficiently.

Ecological Floating Beds(EFBs) and study of VCR's impact on the performance of the system. **Aug 2019 - Dec 2020**

- Constructed five wetland systems of the macrophyte 'pistia stratiotes' to study the impact of vegetation coverage ratio(VCR) on the maximum treatment efficiency of wastewater.
- Measured the COD, NH_4^+-N, NO_3^--N, and PO_4^{3-}-P removal efficiency of the floating wetland systems.
- VCR was observed to be a very important factor in CFW's nutrients uptake capacity.

PUBLICATION(S)

Samal, K., ***Kar, S.***, *Trivedi, S. et al.* ***Assessing the impact of vegetation coverage ratio in a floating water treatment bed of Pistia stratiotes.*** **2021**
SN Applied Science 3, 120.

- ***Doi:*** *https://doi.org/10.1007/s42452-020-04139-2*

Kundan Samal, ***Soham Kar,*** *Shivanshi Trivedi.* ***Ecological floating bed (EFB) for decontamination of polluted water bodies: Design, mechanism and performance.*** **2019**
Journal of Environmental Management, Volume 251.

- ***Doi:*** *https://doi.org/10.1016/j.jenvman.2019.109550*