

# Siddarth Asokan

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<b>ACADEMIC BACKGROUND</b>	<i>Doctor of Philosophy (Ph.D.)</i> ( <b>Thesis Submitted:</b> May 10th, 2023) <a href="#">Robert Bosch Center for Cyber-Physical Systems (RBCCPS)</a> <a href="#">Indian Institute of Science (IISc.)</a> , Bengaluru ⊙ <b>Supervisor:</b> <a href="#">Prof. Chandra Sekhar Seelamantula</a> ⊙ <b>Area of research:</b> Theory and practice of generative adversarial networks ⊙ <b>Selected coursework:</b> Linear and Non-linear Optimization, Image Processing, Pattern Recognition, Reinforcement Learning, Autonomous Navigation, Stochastic Approximation Algorithms GPA: 9.80/10	2017 – present
	<i>Bachelor of Engineering (B.E.)</i> ( <i>Electronics and Communication Engineering</i> ) <a href="#">M. S. Ramaiah Institute of Technology (MSRIT)</a> , Bengaluru, ⊙ <b>Thesis:</b> Smart Parking and Surveillance ⊙ <b>Rank:</b> University 1st Rank, Gold Medal GPA: 9.98/10	2013 – 2017
<b>EMPLOYMENT HISTORY</b>	<i>B.E. Project Intern</i> <a href="#">Robert Bosch Center for Cyber-Physical Systems</a> , IISc. Bangalore ⊙ <b>Project title:</b> Image Processing and Networking for Smart City Applications ⊙ <b>Supervisors:</b> <a href="#">Prof. Bharadwaj Amrutur</a> and <a href="#">Dr. Abhay Sharma</a>	2016 – 2017
<b>ACCOLADES</b>	<i>Fellowships</i> ⊙ Winner – Qualcomm Innovation Fellowship ⊙ Winner – RBCCPS Ph.D. Fellowship ⊙ Winner – Qualcomm Innovation Fellowship ⊙ Winner – RBCCPS Ph.D. Fellowship ⊙ Finalist – Qualcomm Innovation Fellowship ⊙ Winner – Qualcomm Innovation Fellowship ⊙ Winner – Microsoft Research (MSR) Ph.D. Fellowship  <i>Awards</i> ⊙ Best Presenter – 14th IISc EECS Symposium – AI/ML Track ⊙ Gold Medal – B.E. (Highest Cumulative GPA - MSRIT, Class of 2017) ⊙ Runners up – Best Project ( MSRIT, Class of 2017) ⊙ Runners up – Ideathon (IISc – MSRIT Symposium on Smart Cities)	2022 2021 2021 2020 2020 2019 2018  2023 2017 2017 2017
<b>TEACHING</b>	<i>Teaching Assistant at IISc.</i> ⊙ E9-241 – Digital Image Processing ⊙ E9-241(O) – Digital Image Processing (Online)	August-December 2019 August-December 2022

## SKILLS

- ⊙ *Programming Languages and Libraries* – Python: *NumPy*, *SciPy*, *PyTorch*, *TensorFlow*, *Keras* – Others: C, C++, MATLAB
- ⊙ *Documentation* – L<sup>A</sup>T<sub>E</sub>X – Markdown

## PUBLICATIONS *Journal Publications*

[GOOGLE SCHOLAR](#)

1. **S. Asokan** and C. S. Seelamantula, “Euler-Lagrange Analysis of Generative Adversarial Networks”, *Journal of Machine Learning Research (JMLR)*, 1–100, 2023

### *Conference Articles*

5. **S. Asokan** and C. S. Seelamantula, “Spider GAN: Leveraging Friendly Neighbors to Accelerate GAN Training”, *In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2023*, Vancouver, Canada ([Link](#))
4. **S. Asokan**, F. S. Mohammed and C. S. Seelamantula, “A Game of Snakes and GANs”, *In Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) 2023*, Rhodes Island, Greece (**Oral Presentation**) ([Link](#))
3. **S. Asokan** and C. S. Seelamantula, “LSGANs with gradient regularizers are smooth high-dimensional interpolators”, *In Proceedings on “INTERPOLATE: First Workshop on Interpolation and Beyond” at NeurIPS Workshops 2022*, New Orleans, United States of America ([Link](#))
2. **S. Asokan** and C. S. Seelamantula, “Bridging the Gap Between Coulomb GAN and Gradient-regularized WGAN”, *In Proceedings on “The Symbiosis of Deep Learning and Differential Equations (DLDE) - II” at NeurIPS Workshops 2022*, New Orleans, United States of America (**Spotlight Presentation**) ([Link](#))
1. **S. Asokan** and C. S. Seelamantula, “Teaching a GAN What Not to Learn”, *In Advances in Neural Information Processing Systems (NeurIPS) 2020*, Vancouver, Canada ([Link](#))

## PROFESSIONAL *Invited Talks*

### ACTIVITIES

1. **S. Asokan** and C. S. Seelamantula, “Teaching a GAN What Not to Learn”, *The ACM India Joint International Conference on Data Science and Management of Data (CODS-COMAD)*, Premier Paper Track, 2021

### *Refereed Publications*

- ⊙ International Conference on Machine Learning (ICML) 2021 – present
- ⊙ Adv. in Neural Information Processing Systems (NeurIPS) 2021 – present
- ⊙ Intl. Conf. on Acoustics, Speech, Signal Processing (ICASSP) 2021 – present
- ⊙ International Conference on Image Processing. (ICIP) 2019, 2020

## REFEREES

- ⊙ *Prof. Chandra Sekhar Seelamantula*  
Professor, Department of Electrical Engineering, IISc.  
[css@iisc.ac.in](mailto:css@iisc.ac.in)
- ⊙ *Prof. Bharadwaj Amrutur*  
Chair, Robert Bosch Center for Cyber-Physical Systems, IISc.  
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