

V R Supradeepa

Associate Professor, Center for Nano Science and Engineering,
Indian Institute of Science, Bangalore - 560012

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DOB: 21 September 1984

Research Interests

Fiber lasers and Amplifiers, Optical communications, Nonlinear optics, Integrated and Silicon Photonics, Optical signal processing, Ultrafast Optics, RF Photonics

Education

Purdue University

Ph.D in Electrical and Computer Engineering (2011)

GPA: 4.0/4.0

(Finalist, Chorafas outstanding doctoral dissertation award, college of engineering)

Indian Institute of Technology, Madras

B.Tech in Engineering Physics (2006)

GPA: 9.11/10.0

(Institute Silver Medal for the best academic record in the graduating class of the department)

Experience

Indian Institute of Science (Centre for Nano Science and Engineering)

Associate Professor (2020 -)

Assistant Professor (2014 – 2020)

MEITY Visvesvaraya Faculty Fellow (2018 - 2023)

DST Inspire Faculty Fellow (2014 – 2019)

Indian Institute of Technology, Madras

Adjunct Faculty, Department of Electrical Engineering (2017-2020)

National Tsing Hua University, Taiwan

Honorary Research Fellow, Institute of Photonics Technologies (2017)

OFS Laboratories

Member of Technical Staff (2011 - 2014)

Purdue University

Graduate Research Assistant (2006 - 2011)

Texas Instruments

Summer Intern (2005)

Honors and Awards

- Awarded the Satish Dhawan Engineers award by the Government of Karnataka (2023)
- Awarded the Gallieno Denardo Award by the International Commission of Optics (ICO) (2023)
- Elected Chair of the Fiber Lasers XX conference, SPIE Photonics West (2023)
- Co-Chair of the Fiber Lasers XIX conference, SPIE Photonics West (2022)

- Recipient of the SERB Technology Translation Award (TETRA) (2021)
- Recipient of the Indian National Academy of Engineering (INAE) Young Engineer Award (2019)
- Recipient of the Indian National Science Academy (INSA) Medal for Young Scientists (2019)
- Elected as a member of the international steering committee for the International Advanced Fiber Laser conference (AFL 2019), Changsha, China (2019)
- Elected as a Senior member of OSA (2019)
- Elected as a Senior member of SPIE (2019)
- Elected as a Technical committee member for the leading annual international fiber lasers conference, SPIE Photonics West (2019-)
- Elected as a Technical committee member for the leading annual international lasers conference, Advanced Solid State Lasers (ASSL) (2019-)
- Elected as an Associate of the Indian Academy of Sciences (IAS) (2018)
- Journal Paper (J20) named by IOP Journal of Optics as one of its highlights of 2017.
- Visvesvaraya Faculty Fellowship, Ministry of Electronics and Information Technology (2018)
- Journal Paper (J9) named by Optics Letters as one of the highest cited papers of the decade (2010 onwards) appearing in the journal.
- Adjunct Faculty, Department of Electrical Engineering, Indian Institute of Technology Madras (2017)
- Honorary Fellow, National Tsinghua University, Taiwan (2017).
- Election as Associate Editor of Optics Express, premier journal in Photonics and Lasers published by Optical Society of America (OSA) (2015-2018), 2nd Term (2018-2021)
- INSPIRE faculty award, Department of Science and Technology, India (2014-2019).

(Select accomplishments from earlier)

- Recipient of the IEEE Photonics Society graduate student fellowship for demonstrated excellence in research as a graduate student (2010)
- Institute Silver Medal, Indian Institute of Technology, Madras for the best academic record in the graduating class of the department (2006)

Professional Activities

- **Chair** - Fiber Lasers XX conference, SPIE Photonics West (2023)
- **Associate Editor** – Optics Express (2015-2021) (Two terms)
- **Technical Committee Member** – Advanced Solid State Lasers (ASSL) conference (2019-2022), SPIE Photonics West (2019-), Advanced Fiber Laser conference (AFL) (2019-), ICEE (2022), Photonics 2023, Photonics 2024
- **Reviewer** – Nature, Science, Optics Letters, Optics Express, Nature Photonics, Nature Communications, Nature Scientific Reports, Photonics Technology Letters, Journal of Lightwave Technology, Applied Optics, APL Photonics, IEEE Journal of selected topics in quantum electronics, Optics communications, Journal of Optics and Laser Technology, Cambridge university press
- **Project and Proposal Review Committees** – DRDO, BEL, DST
- **Conferences** – Organization committee for ICEE 2014, WRAP 2015, ICEE 2018
- **Thesis Examiner** – for IIT Madras, IIT Delhi, IIT Kanpur, IIT Bombay, University of Southampton, VIT Vellore, CUSAT Kochi, SASTRA Tanjore
- **Events** – General Co-coordinator for Think Nano 2016, Think Nano 2017 (Annual undergraduate symposium in Nanoscience and Engineering)

Research Funding

The following agencies and departments have supported research in my group through funded projects and consultancy grants

- Department of Science and Technology (DST) – through SERB EMR, IMPRINT, TETRA and INSPIRE Schemes
- Ministry of Electronics and Information Technology (MEITY) – through the Centre for Excellence in Nanoelectronics (CEN), NNetra and Visvesvaraya PhD Scheme
- Office of the Principle Scientific Advisor, Government of India (OPSA) – through EMR scheme
- Defense Research and Development Organization (DRDO) – through the ER-IPR scheme
- Indian Space Research Organization (ISRO) – through ISRO MOU, space technology cell (STC)
- Bharat Electronics limited – through Consultancy Projects, technology licensing
- LAM Research, Technomed Electronics, SFO Technologies – Industry Projects, Technology Licensing
- Indian Institute of Science – through faculty research start-up grant

Students and Mentoring

Current

PhD

- Shilpi Arora, PhD Student (August 2017 -)
- Lakshmi CG, PhD Student (August 2017 -)
- Abhigyan Goswami, PhD Student (August 2020 -)
- Soubhik Pal, PhD Student (January 2022 -)
- Mohammed Sabir Hossain, PhD Student (August 2024 -)
- Niladri Das, PhD Student (January 2025 -)

Alumni (Next position)(Current Position)

Post-Doctoral Researchers

- Dr Than Singh Saini (2019-2021) (ORC, Southampton, UK)(Dept of Physics, NIT Kurukshetra)

PhD

- V Balaswamy, PhD (2019) (Boston University, USA)(Dept of ECE, IISc)
- S Arun, PhD (2019) (Tampere Institute of Technology, Finland)(Dept of EE, IITB)
- K P Nagarjun, PhD (2020) (Ghent University/IMEC, Belgium)
- Siva Vikram Bhagavatula, PhD (2020) (TU Eindhoven)(SMART Photonics, Netherlands)
- Santosh Aparanji, PhD (2020) (New York University, USA)
- Roopa Prakash, PhD (2021) (CNRS, France)
- Vishal Choudhury, PhD (2021) (Max Planck Institute, Germany)
- Rashmitha Deheri, PhD (2024) (BVB Autonomous Science College, Bhubaneswar)
- Sarthak Dash, PhD (2024)

Masters

- Great Chayran, MTech (2016) (Unilumen Photonics, Chennai)(HiLASE, Czech Republic)
- Monalisa Mallick, MTech (2018) (Friedrich Schiller University, Jena, Germany)
- Piyush Raj, MTech (2019) (Johns Hopkins University, USA)(Broad Institute, Harvard, USA)

- Binod Bihari Panda, MTech (Research) (2020) (TU Dortmund, Germany)
- Balaram G Pillai, MTech (2021) (Astrome Technologies, India)(North Carolina State Univ, USA)

Other students

- Upendra Hatiya (PhD Student, 2015-2016) (Bharat Electronics Limited, India)(DRDO, India)
- Ajay Singh (PhD Student, 2016-2017) (TU Munich, Germany)(Dept of Energy, IIT Guwahati)
- Shreya Gupta (PhD Student, 2022-2023) (University of Ljubljana, Slovenia)
- Mufeeduzaman C, PhD Student (2023-2024)(University of Bordeaux, France)
- Raj Kumar Hudda, PhD Student (2022-2024)(DRDO, India)

Temporary visitors

- **Undergraduate thesis students**
 - Vatsal Gehlot, BS (2020) (IIM Bangalore)
- 6 project assistants working on specific funded projects.
- 13 summer intern students (undergraduate level)

Selected Invited talks (2014 Onwards)

International

- Conference on Lasers and Electro-optics Pacific-Rim, Incheon, South Korea (2024)
- Winter School on Optics, ICTP, Trieste, Italy (2023)
- Advanced Fiber Laser Conference, Changsha, China (2022)
- Abbe School of Photonics, Friedrich Schiller University, Jena, Germany (2019)
- Photonics Seminar, Boston University, Boston (2018)
- 11th India-Singapore Joint Physics Symposium, Nanyang Technological University, Singapore (2018)
- International PhD Program, National Tsing Hua University, Hsinchu, Taiwan (2016)

National

- 33st DAE National Laser Symposium, RRCAT, Indore (2025)
- Workshop on Directed Energy and Engineering for Photonics, IIT Delhi (2025)
- International Conference on Fiber Optics and Photonics, PHOTONICS–2024, IIT Kharagpur (2024)
- Seminar on the occasion of 10th Anniversary Celebrations of BEL PDIC, Bengaluru (2024)
- Induction Training Program, Central Research Laboratory, BEL, Bengaluru (2023)
- Student conference in Optics and Photonics (SCOP) 2023, Physical Research Laboratory Ahmedabad (2023)
- Indo-UK Workshop on Photonics for Health, Atmosphere, Safety and Education, IIT Gandhinagar, Gandhinagar (2023)
- Indo-French Workshop on Microwave and Photonic Technologies, IIT Madras, Chennai (2023)
- 31st DAE National Laser Symposium, IIT Kharagpur, Kharagpur (2022)
- Induction Training Program, Central Research Laboratory, BEL, Bengaluru (2022)
- High Power Fiber Lasers (HPFL) 2020, Central Glass and Ceramics Research Institute, Kolkata (2020)
- Symposium of Intense Laser Application and Innovation (SILAI) 2020, Tata Institute of Fundamental Research Hyderabad (2020)
- EE Faculty Seminar, Indian Institute of Technology Bombay (2020)
- National Symposium on Light Matter Interactions (NSLIMI) 2019, Indian Institute of Technology Madras (2019)

- Student conference in Optics and Photonics (SCOP) 2019, Physical Research Laboratory Ahmedabad (2019)
- Summer School in Optics and Photonics (SOAP-2018), IISc, Bangalore (2019)
- IEEE Conference on Emerging Electronics, Bangalore (2018)
- Brain storming meeting on pulsed fiber lasers, LASTEC (DRDO), New Delhi (2018)
- Summer School in Optics and Photonics (SOAP-2017), IISc, Bangalore (2018)
- IEEE Nanotech Summer School 2018, IISc, Bangalore (2018)
- Summer School in Optics and Photonics (SOAP-2017), IISc, Bangalore (2017)
- National Photonics Symposium (NPS-2017), CUSAT, Kochi (2017)
- Brain storming session on Quantum Computing, SETS, Chennai (2017)
- 25th DAE National Laser Symposium (NLS 25), Bhubaneswar (2016)
- Continuing Education Program (CEP), LASTEC (DRDO), New Delhi (2016)
- Centre for High Energy Systems (CHESS), Hyderabad (2016)
- Defense Electronics Research Laboratory (DLRL), Hyderabad (2016)
- Fiber Lasers Brainstorming meeting, LASTEC (DRDO), New Delhi (2015)
- International conference on emerging electronics (ICEE) (Tutorial), Bengaluru (2014)
- National Knowledge Network (NKN) Annual Meeting, Guwahati (2014)

Publications

Metrics

58 Journal papers, 1 book chapter

4 Granted Patents, 1 Current Application

117 papers in international peer reviewed conference proceedings including several Post Deadline Papers

Google Scholar Page: <https://scholar.google.co.in/citations?user=dbWhOzsAAAAJ&hl=en>

Citation count: 3329, h-index: 23, i-10 index: 47 (from google scholar, May 2025)

Peer Reviewed Journals

58. Abhigyan Goswami, Sarthak Dash, Sushobhan Avasthi, and **V. R. Supradeepa**, "Contactless temperature measurement of an in-process silicon wafer using a spectrally shaped supercontinuum source," **Opt. Express** **33**, 19677-19688 (2025)

57. S. Arora, S. Pal, C. G. Lakshmi, S. Dash and **V. R. Supradeepa**, "Frequency Comb-Based Seed Laser Architecture with Improved Brillouin Performance for Spectral Beam Combining of Narrow-Linewidth Lasers," **IEEE Photonics Journal**. **17**, no. **3**, pp. 1-6, June (2025)

56. Abhigyan Goswami, Swathi Padmanabhan, Sarthak Dash, Jaya Prakash, and **V. R. Supradeepa**, "Pulsed cascaded Raman fiber laser widely tunable in the second near-infrared and visible window for hyperspectral photoacoustic imaging," **Opt. Lett.** **50**, 2223-2226 (2025) (**Spotlight in Optics, Optica**)

55. C. G. Lakshmi and **V. R. Supradeepa**, "Remote characterization of nonlinear distortions in ultrashort pulses transmitted through dynamic fiber optic links," **Opt. Express** **33**, 2158-2168 (2025)

54. C. G. Lakshmi and **V. R. Supradeepa**, "Remote Characterization and Dissemination of Dispersion Compensated Ultrashort Pulses Through Dynamic Fiber Optic Links," **IEEE Photonics Journal**. **17**, no. **1**, pp. 1-5, Feb. (2025)

53. Sarthak Dash, Rashmita Deheri, Vishal Choudhury, and **V. R. Supradeepa**, "Fourier spectral shaper assisted feedback for wavelength and linewidth control of cascaded Raman fiber lasers," **Opt. Lett.** **50**, 201-204 (2025)

- 52.** Sarthak Dash, Rashmita Deheri and **V. R. Supradeepa**, "Linewidth reduced cascaded Raman fiber lasers and their harmonic conversion for visible laser sources" **Opt. Express** **32**, 20629-20637 (2024)
- 51.** Vishal Choudhury, Chinmay Khandekar, Ashwin K. Boddeti, Ali Jishi, Mustafa Erkovan, Tyler Sentz, Farid Kalhor, Susana Cardoso Freitas, **V. R. Supradeepa***, Zubin Jacob*, "Computational Kerr-Ellipsometry: Quantifying Broadband Optical Nonreciprocity of Magneto-Optic Materials," **Phys. Rev. B** **109**, 054433 (2024) (* Corresponding Authors)
- 50.** Rashmita Deheri, Sarthak Dash, **V. R. Supradeepa***, and V. Balaswamy*, "Cascaded Raman fiber lasers with ultrahigh spectral purity," **Opt. Lett.** **47**, 3499-3502 (2022) (* Corresponding Author)
- 49.** V. Balaswamy and **V. R. Supradeepa**, "Versatility of Stimulated Raman Scattering Based Power Combining of Multiple Fiber Lasers," in **IEEE Photonics Technology Letters** **34**, 823-826 (2022)
- 48.** Roopa Prakash, B. S. Vikram and **V. R. Supradeepa**, "Enhancing the Efficacy of Noise Modulation for SBS Suppression in High Power, Narrow Linewidth Fiber Lasers by the Incorporation of Sinusoidal Modulation," **IEEE Photonics Journal** **13** (5), 1-6 (2021)
- 47.** Vishal Choudhury, Santosh Aparanji, Roopa Prakash, Balaswamy Velpula and **V. R. Supradeepa**, "Visible light flashes induced by pulsed Stimulated Brillouin Scattering in narrow linewidth, high power, near-IR fiber lasers," **J. Opt.** **23** 075501 (2021)
- 46.** Than Singh Saini, Shilpi Arora, and **V. R. Supradeepa**, "Far-detuned mid-IR wavelength conversion at 4.05 μm in a tellurium oxide rib waveguide pumped at 1550 nm: Design and analysis", **AIP Advances** **11**, 055110 (2021)
- 45.** B. S. Vikram, R. Prakash, V. Balaswamy and **V. R. Supradeepa**, "Determination and Analysis of LineShape Induced Enhancement of Stimulated Brillouin Scattering in Noise Broadened, Narrow Linewidth, High Power Fiber Lasers," **IEEE Photonics Journal** **13** (2), 1-12 (2021)
- 44.** B. S Vikram, Roopa Prakash and **V. R. Supradeepa**, "Widely linewidth tunable lasers through cascaded Four-wave mixing based phase modulation amplification," **J. Opt.** **23** 025502 (2021)
- 43.** Than Singh Saini and **V. R. Supradeepa**, "Tellurium-oxide coated silicon-nitride hybrid waveguide for near-to-mid-IR supercontinuum generation: design and analysis," **Journal of Modern Optics** **68** (1), 29-36 (2021)
- 42.** R. Prakash, V. Choudhury, S. Arun and **V. R. Supradeepa**, "Pump Wavelength Flexible, ContinuousWave Fiber Supercontinuum Using Two-Stage Spectral Broadening," **IEEE Photonics Technology Letters** **33**, 31-34 (2021)
- 41.** Roopa Prakash, B. S. Vikram, K. P. Nagarjun, and **V. R. Supradeepa**, "Tailored optical feedback for bandwidth scaling and spectral equalization of high repetition rate electro-optic frequency combs," **OSA Continuum** **3**, 3280-3288 (2020)
- 40.** B. S. Vikram, Roopa Prakash, K. P. Nagarjun, Ajay Singh, Shankar Kumar Selvaraja, and **V. R. Supradeepa**, "Generation of a multi-wavelength source spanning the entire C-band by nonlinear spectral broadening of dual-carrier electro-optic frequency combs," **OSA Continuum** **3**, 2185-2194 (2020)
- 39.** K. P. Nagarjun, Piyush Raj, Vadivukkarasi Jeyaselvan, Shankar Kumar Selvaraja, and **V. R. Supradeepa**, "Microwave power induced resonance shifting of silicon ring modulators for continuously tunable, bandwidth scaled frequency combs," **Opt. Express** **28**, 13032-13042 (2020)

- 38.** K. P. Nagarjun, Roopa Prakash, B. S. Vikram, Shilpi Arora, Vadivukkarasi Jeyaselvan, Shankar Kumar Selvaraja, and **V. R. Supradeepa**, "Bandwidth scaling of silicon modulator-based combs using multi-carriers and frequency offset locking," **OSA Continuum** **3**, 921-928 (2020)
- 37.** B. S. Vikram, Roopa Prakash, Shankar Kumar Selvaraja, and **V. R. Supradeepa**, "Enhanced nonlinear spectral broadening and sub-picosecond pulse generation by adaptive spectral phase optimization of electro-optic frequency combs," **Opt. Express** **28**, 11215-11226 (2020)
- 36.** S. Arun, Vishal Choudhury, V. Balaswamy, and **V. R. Supradeepa**, "Octave-spanning, continuous-wave supercontinuum generation with record power using standard telecom fibers pumped with power-combined fiber lasers," **Opt. Lett.** **45**, 1172-1175 (2020)
- 35.** K. P. Nagarjun, B. S. Vikram, Roopa Prakash, Ajay Singh, Shankar Kumar Selvaraja, and **V. R. Supradeepa**, "Optical frequency comb based on nonlinear spectral broadening of a phase modulated comb source driven by dual offset locked carriers," **Opt. Lett.** **45**, 893-896 (2020)
- 34.** Santosh Aparanji, S Arun, V Balaswamy, and **V R Supradeepa**, "Visible light generation in cladding of optical fibers carrying near-infrared continuous-wave lasers due to Cherenkov-phase matched harmonic conversion" **Opt. Lett.** **45**, 993-996 (2020)
- 33.** V. Balaswamy, Santosh Aparanji, G. Chayran and **V. R. Supradeepa**, "High power, independently wavelength, power and linewidth tunable Ytterbium fiber laser" **IEEE Photonics Technology Letters** **31**, 583-586 (2019)
- 32.** V Balaswamy, Siddharth Ramachandran, and **V. R. Supradeepa**, " High-power, cascaded random Raman fiber laser with near complete conversion over wide wavelength and power tuning," **Opt. Express** **27**, 9725-9732 (2019)
- 31.** V Balaswamy., Santosh Aparanji, S. Arun, Siddharth Ramachandran, and **V. R. Supradeepa**, "High-power, widely wavelength tunable, grating-free Raman fiber laser based on filtered feedback," **Opt. Lett.** **44**, 279-282 (2019)
- 30.** S. Arun, Vishal Choudhury, V. Balaswamy, and **V. R. Supradeepa**, "Stability analysis of high power, octave spanning, continuous-wave supercontinuum sources based on cascaded Raman scattering in standard telecom fibers," **OSA Continuum** **1**, 1267-1276 (2018)
- 29.** S. Arun, V. Balaswamy, G. Chayran and **V. R. Supradeepa**, "Resonant Pumping of High Power Fiber Lasers with Conventional Laser Diodes" **OSA Continuum** **1**, 651-657 (2018)
- 28.** S. Arun, Vishal Choudhury, Roopa Prakash and **V. R. Supradeepa**, "High Power, Tunable, Continuous-Wave Fiber Lasers in the L-band using Cascaded Raman Amplifiers." **IEEE Photonics Technology Letters** **30**, 1412-1415 (2018)
- 27.** Vishal Choudhury, S. Arun, Roopa Prakash, and **V. R. Supradeepa**, "High-power continuous-wave supercontinuum generation in highly nonlinear fibers pumped with high-order cascaded Raman fiber amplifiers," **Appl. Opt.** **57**, 5978-5982 (2018)
- 26.** K. P. Nagarjun, Vadivukarasi Jeyaselvan, Shankar Kumar Selvaraja, and **V. R. Supradeepa**, "Generation of tunable, high repetition rate optical frequency combs using on-chip silicon modulators," **Opt. Express** **26**, 10744-10753 (2018)
- 25.** V. Balaswamy, S. Arun, Santosh Aparanji, Vishal Choudhury, and **V. R. Supradeepa**, "High-power, fixed, and tunable wavelength, grating-free cascaded Raman fiber lasers," **Opt. Lett.** **43**, 1574-1577 (2018)

24. S. Arun, Vishal Choudhury, V. Balaswamy, Roopa Prakash, and **V. R. Supradeepa**, "High power, high efficiency, continuous-wave supercontinuum generation using standard telecom fibers," **Opt. Express** **26**, 7979-7984 (2018)
23. B S Vikram, Shankar Kumar Selvaraja and **V. R. Supradeepa**, "Optical Frequency Comb Synthesis for Super channel based High-Bandwidth Optical Communication," **(Invited) CSI Transactions on ICT** **6(1)**, 33-38, (2018) (Special issue for Visvesvaraya Fellows)
22. Santosh Aparanji, V. Balaswamy, S. Arun, and **V. R. Supradeepa**, "Simultaneous Raman based power combining and wavelength conversion of high-power fiber lasers," **Opt. Express** **26**, 4954-4960 (2018)
21. V. Balaswamy, S. Arun, G. Chayran, and **V. R. Supradeepa**, "All passive architecture for high efficiency cascaded Raman conversion," **Opt. Express** **26**, 3046-3053 (2018)
20. S Arun and **V. R. Supradeepa**, "High power lasers in the SWIR band using Raman Lasers," **(Invited) CSI Transactions on ICT** **5(2)**, 143-148, (2017) (Special issue for Visvesvaraya Fellows)
19. **V. R. Supradeepa**, Yan Feng and Jeffrey W Nicholson, "Raman Fiber Lasers," **(Invited) Journal of Optics**, Vol 19, No 2 (2017) **(Highlight of 2017)**
18. K. S. Abedin, J. M. Fini, T. F. Taunay, **V.R. Supradeepa**, M. F. Yan, B. Zhu, L. K. Bansal, E. M. Monberg and D. J. DiGiovanni, "Multicore Erbium Doped Fiber Amplifiers for Space Division Multiplexing Systems," **(Invited) IEEE/OSA Journal of Lightwave Technology** **32**, 2800-2808 (2014)
17. **V. R. Supradeepa** and J. W. Nicholson "Power scaling of high efficiency 1.5micron cascaded Raman fiber lasers," **Opt. Lett.** **38**, 2538-2541 (2013)
16. **V. R. Supradeepa**, J. W. Nicholson, C. E. Headley, M. F. Yan, B. Palsdottir and D Jakobsen, "A high efficiency architecture for cascaded Raman fiber lasers," **Opt. Express** **21**, 7148-7155 (2013)
15. **V. R. Supradeepa**, "Stimulated Brillouin scattering thresholds in optical fibers for lasers linewidth broadened with noise." **Opt. Express** **21**, 4677-4687 (2013)
14. A. J. Metcalf, V. Torres-company, **V. R. Supradeepa**, D. E. Leaird, A. M. Weiner, "Fully programmable two-dimensional pulse shaper for broadband line-by-line amplitude and phase control" **Opt. Express** **21**, 28029-28039 (2013)
13. J. W. Nicholson, J. M. Fini, A. M. DeSantolo, X. Liu, K. Feder, P. S. Westbrook, **V. R. Supradeepa**, E. Monberg, F. DiMarcello, R. Ortiz, C. Headley, and D. J. DiGiovanni, "Scaling the effective area of higher-order-mode erbium-doped fiber amplifiers," **Opt. Express** **20**, 24575-24584 (2012)
12. K. S. Abedin, T. F. Taunay, M. Fishteyn, D. J. DiGiovanni, **V.R. Supradeepa**, J. M. Fini, M. F. Yan, B. Zhu, E. M. Monberg, and F.V. Dimarcello, "Cladding-pumped erbium-doped multicore fiber amplifier," **Opt. Express** **20**, 20191-20200 (2012)
11. **V. R. Supradeepa** and Andrew M. Weiner, "Bandwidth scaling and spectral flatness enhancement of optical frequency combs from phase modulated continuous-wave lasers using cascaded four-wave mixing." **Opt. Lett.** **37**, 3066-3068 (2012)
10. **V. R. Supradeepa**, Christopher M. Long , Rui Wu, Fahmida Ferdous, Ehsan Hamidi, Daniel E. Leaird, and Andrew. M. Weiner, "Comb based radio-frequency photonic filters with rapid tunability and high selectivity" **Nature Photonics** **6**, 186-194 (2012)
9. Rui Wu, **V. R. Supradeepa***, Christopher M. Long, Daniel E. Leaird, and Andrew M. Weiner, "Generation of very flat optical frequency combs from continuous wave lasers using cascaded

intensity and phase modulators driven by tailored radio frequency waveforms" **Opt. Lett.** **35**, 3234-3236 (2010) (* Corresponding author) *(Recognized by Optics Letters as one of highest cited papers of the decade in the journal (2010 -))*

8. V. R. Supradeepa, Ehsan Hamidi, Daniel E. Leaird, and Andrew M. Weiner, "New aspects of temporal dispersion in high resolution pulse shaping: A quantitative description with VIPA pulse shapers." **J. Opt. Soc. Am. B** **27**, 1833-1844 (2010)

7. V. R. Supradeepa, Christopher M. Long, Daniel E. Leaird, and Andrew M. Weiner, "Self-referenced characterization of optical frequency combs and arbitrary waveforms using a simple, linear, zero-delay implementation of spectral shearing interferometry," **Opt. Express** **18**, 18171-18179 (2010)

6. Gladys Mínguez-Vega, V. R. Supradeepa, Omel Mendoza-Yero, and Andrew M. Weiner, "Reconfigurable all-diffractive optical filters using phase-only spatial light modulators," **Opt. Lett.** **35**, 2406-2408 (2010)

5. Dong-Sun Seo and V. R. Supradeepa, "Spectrally Phase Coded Waveform Discrimination at 10 GHz for Narrow Band Optical CDMA within 100 GHz Spectral Window." **J. Opt. Soc. Korea** **14**, 28-32 (2010)

4. V. R. Supradeepa, Christopher M. Long, Daniel E. Leaird, and Andrew M. Weiner, "Fast characterization of dispersion and dispersion slope of optical fiber links using spectral interferometry with frequency combs." **IEEE Photonics Technology Letters** **22**, 155-157 (2010)

3. V. R. Supradeepa, Daniel E. Leaird, and Andrew M. Weiner, "Single shot amplitude and phase characterization of optical arbitrary waveforms." **Opt. Express** **17**, 14434-14443 (2009)

2. V. R. Supradeepa, Daniel E. Leaird, and Andrew M. Weiner, "Optical arbitrary waveform characterization via dual-quadrature spectral interferometry," **Opt. Express** **17**, 25-33 (2009)

1. V. R. Supradeepa, Chen-Bin Huang, Daniel E. Leaird, and Andrew M. Weiner, "Femtosecond pulse shaping in two dimensions: Towards higher complexity optical waveforms," **Opt. Express** **16**, 11878-11887 (2008)

Book Chapters

- 1. Supradeepa V.R.**, Nicholson J.W. (2017) Cascaded Raman Fiber Lasers. In: Feng Y. (eds) Raman Fiber Lasers. **Springer Series in Optical Sciences**, vol 207. **Springer, Cham**

Patents

5. V. R. Supradeepa, Roopa Prakash, Shiva Vikram Bhagavatula, "Method and System for Suppressing Stimulated Brillouin Scattering," **Indian Patent No 555435 (2021)**

4. Balaji Srinivasan, Deepa Venkitesh, Awakash Dixit, V. R. Supradeepa, "Hybrid Coherent, Polarization and Spectral Beam Combining System" **Indian Patent No 507846 (2020)**

3. V. R. Supradeepa, V. Balaswamy, Santosh Aparanji, S. Arun, "Device for Tuning Laser Output," **Indian Patent Application No 201841016649 (2018)**

2. V. R. Supradeepa, John M. Fini, "Systems and Techniques for compensation for the thermo-optic effect in active optical fibers," **US Patent No US 9,325,151 B1 (2016)**

1. V. R. Supradeepa, Jeffrey W. Nicholson, "Cascaded raman lasing system," **US Patent No US 9,166,362 B2 (2015)**

Peer Reviewed International Conference Proceedings

117. Abhigyan Goswami, Swathi Padmanabhan, Sarthak Dash, Jaya Prakash, and **V. R. Supradeepa** "Passively Q-switched Raman fiber laser source widely tunable in near infrared and visible window", **Proc. SPIE 13347, Nonlinear Frequency Generation and Conversion: Materials and Devices XXIV, 133470T (2025)**

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