

JeetinderKaurMakkar
MD, DNB, MNAMS, FRCA

(FELLOWSHIP INTERVENTIONAL PAIN, MANITOBA, CANADA)



A. DATE CURRICULUM VITAE IS PREPARED: 17/5/2018

B. CURRENT POSITION- Professor

C. BIOGRAPHICAL INFORMATION

Primary Office: Department of Anesthesia
Post Graduate institute of Medical Education and research
PGIMER, Chandigarh, India

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1. EDUCATION

DEGREE

1/08/ 1993–31/12/1998 MBBS
Government Medical College, Amritsar, India

1/7/2000– 30/6/2003: MD (Anesthesiology),

Post Graduate Institute of Medical Education & Research,
Chandigarh-160012, India

POSTGRADUATE TRAINING

1/7/ 2003- 31/10/ 2006:	Senior Residency, Post Graduate Institute of Medical Education & Research, Chandigarh-160012, India
10/3/2016- 9/3/2017	Fellow Chronic interventional pain, University of Manitoba, Winnipeg, Canada

2. QUALIFICATIONS & LICENSURES

- 1999** : Unrestricted License to practice Medicine in India
- 2003** : Doctorate of Medicine
- 2004** : Diplomate, Anesthesia, National Board of Examinations, India (DNB)
- 2004** : USMLE Step I, December 14
- 2005** : USMLE Step II CK, October 22
- 2006** : February 22, USMLE CS, ECFMG certification 0-667-4311
- 2016** : Member, National Academy of Medical Sciences
- 2017** : Fellow, chronic pain, University of Manitoba, Winnipeg, Canada

3. PROFESSIONAL EXPERIENCE

- 1/08/ 1993-31/12/1997** : MBBS Government Medical College, Amritsar, India
- 1/1/1998- 31/12/1998** : Compulsory rotatory one year internship.
- 1/7/ 2000- 30/6/2003** : MD in Anesthesiology, Post Graduate Institute of Medical Education & Research, Chandigarh, India

- 1/7/2003- 31/10/2006 : **Senior Resident**, Post Graduate Institute of Medical Education & Research, Chandigarh India
- 1/11/ 2006- 8/1/ 2008 : **Junior consultant**, Cardiac Anaesthesia, Max Devki Devi Heart and Vascular Institute, New Delhi, India.
- 11/1/ 2008- 30/1/ 2011 : **Assistant Professor**, Post Graduate Institute of Medical Education & Research, Chandigarh, India.
- 1/7/2011- 30/6/ 2014 : **Associate Professor**, Post Graduate Institute of Medical Education & Research, Chandigarh, India.
- 1/7/2014 – 30/6/2018 : **Additional Professor**, Post Graduate Institute of Medical Education & Research, Chandigarh, India.
- 1/7/2018- till date **Professor**, Post Graduate Institute of Medical Education & Research, Chandigarh, India
- 10-03-2016 –09-03-2017 **Fellow, chronic pain, University of Manitoba, Winnipeg, Canada**

4. MEMBERSHIP OF SOCIETIES

National

1. Life member of Indian Society of Anaesthesiologists
2. Life member of Indian Society for Study of Pain
3. Life member of Research Society of Anaesthesiology & Clinical Pharmacology
4. Life member Indian association of Pediatric Anaesthesiologist

International

1. Associate member International association for study of pain
2. Member, Spine intervention society, USA

5. AWARDS/FELLOWSHIPS/ORATIONS ETC.

Research

- The paper titled “Comparison Of Analgesic Efficacy Of Paracetamol And Tramadol For Pain Relief In Early Labor”, judged 2nd Best Oral Paper at 6th National Conference Of Association Of Obstetric Anesthesiologists at Mangalore 3rd-5th October, 2013

- Study titled “Comparison of two different doses of spinal anesthetics in severely preeclamptic women undergoing elective cesarean delivery” awarded best poster at the 4th National conference of Association of obstetric anesthesiologists at Hyderabad 16th Sept-18th Sept 2011.
- Awarded certificate of appreciation for performing high quality research work for study titled “ED50 of desflurane for laryngeal mask airway removal in anaesthetised adults” presented at 2nd Annual Research day of the Institute in October 2013.
- Awarded certificate of appreciation for performing high quality research work for study titled “Particulate vs Non-Particulate Steroids for Transforaminal Epidural Steroid Injections: Systematic Review and Meta-analysis of the Current Literature. **Pain Physician**. 2016 Jul;19 (6):327-40” presented at 5nd Annual Research day of the Institute in October 2017.

Financial Awards

- Awarded financial aid by IASP Financial Aid Working Group to present research paper titled “Comparison of analgesic efficacy of paracetamol and tramadol for pain relief in active labor” at 16th World Congress on Pain, 6th-11th October 2014, Buenos Aires, Argentina.
- Provided financial assistance by Department of science & Technology to present research paper titled “Comparison of analgesic efficacy of paracetamol and tramadol for pain relief in active labor” at 16th World Congress on Pain, 6th-11th October 2014, Buenos Aires Argentina
- Awarded financial aid by IASP Financial Aid Working Group to present research paper titled “**Median effective dose of spinal bupivacaine alone or with fentanyl for brachytherapy of Ca cervix**” at World Congress on Pain, Montreal, Canada
- Awarded financial aid by IASP Financial Aid Working Group to present research paper titled “Selectivity Of Contrast Flow During Selective Nerve Root” at 14th World Congress on Pain, Milan, Italy

6. PUBLICATIONS: NUMBER AND DETAIL OF PAPERS.

	Published		Accepted for publication (with proof)
	Indexed	Non-Indexed	
National	04	1	2
International	70	3	1

Total **64** **4** **3**

LIST OF PUBLICATIONS

1. Singh NP, Makkar JK, Wourms V, Cappellani RB. Under pressure: another clinical scenario. *Can J Anaesth*. 2018 Oct 22.
2. Singh NP, Makkar JK, Wourms V, Singh PM. Topical benzydamine for preventing postoperative sore throat. *Anaesthesia*. 2018 Oct;73(10):1297.
3. Makkar JK, Jain D, Jain K, Pareek A. Vasovagal mediated cardiac arrest during epidural catheter insertion in a patient with previous uneventful surgeries under regional anesthesia. *J Anaesthesiol Clin Pharmacol*. 2018 Apr-Jun;34(2):268-269.
4. Sudhakaran R, Makkar JK, Jain D, Wig J, Chabra R. Comparison of bispectral index and end-tidal anaesthetic concentration monitoring on recovery profile of desflurane in patients undergoing lumbar spine surgery. *Indian J Anaesth*. 2018 Jul;62(7):516-523.
5. Makkar JK, Dwivedi D, Kuberan A, Kumar B, Bala I. Minimum Alveolar Concentration of Desflurane for Maintaining BIS Below 50 in Children and Effect of Caudal Analgesia on it. *Anesth Essays Res*. 2018 Apr-Jun;12(2):512-516.
6. Makkar JK, Kumar B, Jain K, Dhutt SS, Batra YK, Singh PM. Effect of Different Volumes on Pain Relief in Patient Receiving Fluoroscopic Guided Interlaminar Lumbar Epidural Steroid Injection. *Pain Physician*. 2018 May;21(3):243-250
7. Singh PM, Borle A, **Makkar JK**, Trisha A, Sinha A. Evaluation of transversus abdominis plane block for renal transplant recipients - A meta-analysis and trial sequential analysis of published studies. *Saudi J Anaesth*. 2018 Apr-Jun;12(2):261-271.
8. Kuberan A, Jain K, Bagga R, **Makkar JK**. The effect of spinal hyperbaric bupivacaine-fentanyl or hyperbaric bupivacaine on uterine tone and fetal heart rate in labouring women: a randomised controlled study. *Anaesthesia*. 2018 Mar 26.
9. Singh PM, Borle A, **Makkar JK**, Trikha A, Fish D, Sinha A. Haloperidol Versus 5-HT(3) Receptor Antagonists for Postoperative Vomiting and QTc Prolongation: A Noninferiority Meta-Analysis and Trial Sequential Analysis of Randomized Controlled Trials. *J Clin Pharmacol*. 2017 Sep 15.

10. **Makkar JK**, Singh NP, Singh PM. Prolongation of Apnea Time in Obese Patients-Concerns With Rate of Rise of CO₂. **AnesthAnalg**. 2017 Aug 8.
11. Zorrilla-Vaca A, **Makkar JK**. Effectiveness of Lateral Decubitus Position for Preventing Post-Dural Puncture Headache: A Meta-Analysis. **Pain Physician**. 2017 May;20(4):E521-E529
12. Singh PM, Borle A, Gouda D, **Makkar JK**, Arora MK, Trikha A, Sinha A, Goudra B. Efficacy of palonosetron in postoperative nausea and vomiting (PONV)-a meta-analysis. **J ClinAnesth**. 2016 Nov;34:459-82.
13. Jain K, **Makkar JK**, SubramaniVp S, Gander S, Kumar P. A randomized trial comparing prophylactic phenylephrine and ephedrine infusion during spinal anesthesia for emergency cesarean delivery in cases of acute fetal compromise. **J ClinAnesth**. 2016 Nov;34:208-15.
14. **Makkar JK**, Singh PM, Jain D, Goudra B. Particulate vs Non-Particulate Steroidsfor Transforaminal Epidural Steroid Injections: Systematic Review andMeta-analysis of the Current Literature. **Pain Physician**. 2016 ;19 :327-40
15. Singh PM, Borle A, Shah D, Sinha A, **Makkar JK**, Trikha A, Goudra BG. OptimizingProphylactic CPAP in Patients Without Obstructive Sleep Apnoea for High-RiskAbdominal Surgeries: A Meta-regression Analysis. **Lung**. 2016;194(2):201-17.
16. Singh PM, Borle A, Rewari V, **Makkar JK**, Trikha A, Sinha AC, Goudra B. Aprepitant for postoperative nausea and vomiting: a systematic review andmeta-analysis. **Postgrad Med J**. 2016 ;92(1084):87-98.
17. **Makkar JK**, Bhatia N, Bala I, Dwivedi D, Singh PM. A comparison of single dose dexmedetomidine with propofol for the prevention of emergence delirium after desflurane anaesthesia in children. **Anaesthesia**. 2016 ;71:50-7
18. **Makkar JK**, Jain K, Jain D, Jafra A. Dexmedetomidine and emergence agitation. **Anaesthesia2015**, 70, 878-891
19. **Makkar JK**, Gaudi B, Jain K, Jain D, Batra YK. Comparison of erythromycinversus metoclopramide for gastric feeding intolerance in patients with traumatic brain injury: A randomized double-blind study. **Saudi J Anaesth**. 2016Jul-Sep;10(3):308-13.
20. **Makkar JK**, Jain D, Jain K, Subramanyam R. Extravasation of fluid in necksecondary to perforation of vein by venous catheter. **J AnaesthesiolClinPharmacol**. 2016 Jan-Mar;32(1):124-5.
21. **Makkar JK**, Jain K, Jain A. Circuit leak with D-vapor. **J AnaesthesiolClinPharmacol**. 2015; 31:260-1.

22. **Makkar JK**, Jain D, Jain K. Asystole during epidural catheter insertion in a patient with previous uneventful surgeries under regional anaesthesia. **J AnaesthesiolClinPharmacol**. 2015.
23. **Makkar JK**, Singh NP, Rastogi V. Volume of contrast and selectivity for lumbar transforaminal epidural steroid injection. **Pain Physician**.2015; 18:101-5.
24. **Makkar JK**, Jain K, Bhatia N. Comparison of analgesic efficacy of paracetamol and tramadol for pain relief in active labor. **J ClinAnesth. J** 2015 Mar; 27(2):159-63.
25. Swini KA, Jain K, **Makkar JK**, Bagga R. Intrathecal opioids and fetal heart rate abnormalities. **Anaesthesia**. 2014;69: 1290-1.
26. **Makkar JK**, Singh NP. The starting time: is the choice right? **PaediatrAnaesth**. 2014; 24:1015.
27. **Makkar JK**, Ghai B, Wig J. Minimum alveolar concentration of desflurane with caudal analgesia for laryngeal mask airway removal in anesthetized children. **PaediatrAnaesth**. 2013 Nov;23(11):1010-4
28. Jain K, **Makkar JK**, Anbarasan I, Yadanappudi S, Gander S. A Randomized Double-Blind Comparison Of Low-Dose And High-Dose Bupivacaine For Caesarean Section In Severely Preeclamptic Women Using Invasive Blood Pressure Monitoring. **J ObstetAnaesthCrit Care** 2013;3:84-90
29. Jain A, Ghai B, Jain K, **Makkar JK**, Mangal K, Sampley S. Severe autonomic dysreflexia induced cardiac arrest under isoflurane anesthesia in a patient with lower thoracic spine injury. **J AnaesthesiolClinPharmacol**. 2013; 29: 241-3.
30. **Makkar JK**, Singh NP. ED50 of sevoflurane for Laryngeal Mask Airway Supreme insertion: reliability! **Eur J Anaesthesiol**. 2013 Jul 19
31. **Makkar JK**, Jain K, Singh NP. The starting dose. **RegAnesth Pain Med**. 2012;37:461-2.
32. Jain A, **Makkar JK**, Sahni N, Solanki SL. An unusual defect in the nitrous oxide pipeline. **J AnaesthesiolClinPharmacol**. 2012; 28: 267-8.
33. **Makkar JK**, Singh NP. Absence of perioperative analgesia in children with cerebral palsy: how justified is it? **PaediatrAnaesth**. 2012; 22: 178
34. Jain K, **Makkar JK**, Yadanappudi S, Anbarasan I, Gander S. Two doses of spinalbupivacaine for caesarean delivery in severe preeclampsia: a pilot study. **Int J ObstetAnesth**. 2012; 21: 195-6.
35. Jain A, Bala I, **Makkar JK**. Anesthetic management of Prader-Willi syndrome: what if neuromuscular relaxants could not be avoided? **J Anesth**. 2012; 26: 304-5

36. **Makkar JK**, Ghai B, Bhardwaj N, Wig J. Minimum alveolar concentration of desflurane with fentanyl for laryngeal mask airway removal in anesthetized children. **PaediatrAnaesth.** 2012; 22: 335-40.
37. **Makkar JK**, Wig J, Singh NP. ED50 of desflurane for LMA removal: is the estimate reliable? **Anaesthesia.** 2011; 66: 954
38. **Makkar JK**, Arora S, Jain K, Wig J. ED50 of desflurane for laryngeal mask airway removal in anaesthetised adults. **Anaesthesia.** 2011; 66: 808-11.
39. **Makkar JK**, Wig J. ED50 of levobupivacaine with clonidine: is the starting dose right? **PaediatrAnaesth.** 2011; 21: 908-9.
40. Jain A, **Makkar JK**, Batra YK. Easy way of improving seal with Rendell-Baker-Soucek mask: Old equipment revisited. **Saudi J Anaesth.** 2011; 5: 237-8.
41. Jain A, Bhagat H, **Makkar JK**, Mangal K. Continuous thoracic epidural analgesia for pain management in achondroplastic patient undergoing unilateral nephrectomy. **Saudi J Anaesth.** 2011; 52: 234-5.
42. Ghai B, Ram J, **Makkar JK**, Wig J. Fiber-optic assessment of LMA position in children: a randomized crossover comparison of two techniques. **PaediatrAnaesth.** 2011; 21: 1142-7.
43. **Makkar JK**, Jain K, Wig J. Emergence delirium: can pain be totally ruled out as a cause after giving block? **Eur J Anaesthesiol.** 2012 Jan;29(1):52-3.
44. **Makkar JK**, Wig J. Minimum local analgesic concentration of ropivacaine for intra-operative caudal analgesia in pre-school and school age children – analysis using the Dixon method. **Anaesthesia.** 2011; 66: 227.
45. Solanki SL, Jain A, **Makkar JK**, Nikhar SA. Severe stridor and marked respiratory difficulty after right-sided supraclavicular brachial plexus block. **J Anesth.** 2011 Jan 7.
46. Jain A, **Makkar JK**, Mangal K. Electrocautery-induced artifactual ST-segment depression in a patient with coronary artery disease. **J Electrocardiol.** 2010; 43: 336-7.
47. **Makkar JK**, Jindal S, Jain A, Wig J. Anaesthetic management of a parturient with severe pulmonary stenosis undergoing Caesarean section. **SAAJA** vol16, No.5 (2010), 28-30.
48. Jain A, Jain K, **Makkar JK**, Mangal K. Anaesthetic management of an achondroplastic dwarf undergoing radical nephrectomy- A case report. **SAAJA** vol16, No.2 (2010), 77-79
49. Ghai B, Ram J, **Makkar JK**, Wig J, Kaushik S. Re-Blind enough? Sham subtenon block in pediatric patients. **AnesthAnalg.** 2009 Oct;109(4):1349-50
50. **Makkar JK**, Wig J. Up-down study--is the analysis adequate? **Anaesth Intensive Care.** 2010 Jan;38(1):208-9;

51. Makkar JK, Singh NP, Rastogi V. Herpes zoster: are selective nerve root injections the treatment or the cause? **Pain Physician**. 2010; 13:196-8.
52. Ghai B, Makkar JK, Bala I, Wig J. Effect of parecoxib pretreatment and venous occlusion on propofol injection pain: a prospective, randomized, double-blinded, placebo-controlled study. **J Clin Anesth**. 2010 Mar;22(2):88-92.
53. Ghai B, Makkar JK, Chari P, Rao KL. Addition of midazolam to continuous postoperative epidural bupivacaine infusion reduces requirement for rescue analgesia in children undergoing upper abdominal and flank surgery. **J ClinAnesth**. 2009 Mar;21(2):113-9.
54. Ghai B, Ram J, Makkar JK, Wig J, Kaushik S. Subtenon block compared to intravenous fentanyl for perioperative analgesia in pediatric cataract surgery. **AnesthAnalg**. 2009 Apr;108(4):1132-8.
55. Makkar JK, Singh NP. Postoperative oxygen therapy in children, a more comfortable way. **PaediatrAnaesth**. 2008 Nov;18(11):1102-3.
56. Ghai B, Makkar JK, Wig J. Postoperative pain assessment in preverbal children and children with cognitive impairment. **PaediatrAnaesth**. 2008 Jun;18(6):462-77.
57. Ghai B, Makkar JK, Bhardwaj N, Wig J. Laryngeal mask airway insertion in children: comparison between rotational, lateral and standard technique. **PaediatrAnaesth**. 2008 Apr; 18(4): 308-12.
58. Ghai B, Makkar JK, Malhotra S, Wig J, Manjunath V. Postoperative cardiovascular instability caused by malfunctioning ventilatory dual knob. **PaediatrAnaesth**. 2008 Jan;18(1):85-6.
59. Wig J, Ghai B, Makkar JK. Emergency anaesthesia for unprepared patients: A Review. **Indian J Anaesth**. 2008; 52: 676-88.
60. Makkar JK, Singh NP. Damage to high-pressure tubing by continuous propofol infusion. **PaediatrAnaesth**. 2007 Jul;17(7):709-10.
61. Sen I, Makkar JK, Singh NP. Preventing kinking of suction tubing of transposable electrical suction device and wall mounted vacuum units. **PaediatrAnaesth**. 2007 Jun;17(6):599-600.
62. Ghai B, Makkar JK, Bakshi J, Rana S, Singh RS, Bhagat S. Survival of a child without sequelae after tracheoarterial fistula. **PaediatrAnaesth**. 2007 Jun;17(6):588-91
63. Ghai B, Makkar JK, Behra BK, Rao KP. Is a fall in baseline heart rate a reliable predictor of a successful single shot caudal epidural in children? **PaediatrAnaesth**. 2007 Jun;17(6):552-6.
64. Ghai B, Saxena AK, Makkar JK. A guide to reducing citation errors in bibliographies. **Emerg Med J**. 2007 Mar;24(3):232-3.

65. **Makkar JK**, Ghai B, Kumar M, Kumar S. Infection of a congenital epiduraldermoid cyst secondary to lumbar puncture. **AnesthAnalg**. 2007 Jan;104(1):227-8.
66. Ghai B, Panda N, **Makkar JK**, Saxena AK. Pediatric computed tomographic scanwith anesthesia: what the anesthesiologist should know. **AnesthAnalg**. 2006Dec;103(6):1623.
67. Arora S, Nagdeve NG, **Makkar JK**, Sharma RK. Fixation of an oral tracheal tubeto the maxilla in maxillofacial surgery. **AnesthAnalg**. 2006;103:1620.
68. Ghai B, **Makkar JK**, Arora S. Intraoperative cardiac arrest because ofoculocardiac reflex and subsequent pulmonary edema in a patient with extraocularcysticercosis. **PaediatrAnaesth**. 2006 Nov;16(11):1194-5.
69. Saxena AK, Ghai B, **Makkar JK**. Patient's consent for publication of casereport: need for developing a universal consent form. **Arch Dis Child**. 2006;91(8):717.
70. Ghai B, **Makkar JK**, Bhatia A. Hypercarbia and arrhythmias resulting fromfaulty Bain circuit: a report of two cases. **AnesthAnalg**. 2006 Jun;102(6):1903-4.
71. Ghai B, **Makkar JK**. Preventing the kinking of sampling tube of capnographyapparatus. **PaediatrAnaesth**. 2005 Dec;15(12):1146-7.
72. Ghai B, **Makkar JK**. An unusual cause of faulty Tec 7 vaporizer. **Anesth Analg**.2005 Dec;101(6):1890-1.
73. Ghai B, **Makkar JK**, Wig J. Neuromuscular Monitoring- A Review.**J AnaesthClinPharmacol** 2006; 22(4) : 347-356
74. Jain K, **Makkar JK**. Dexmedetomidine: perioperative applications and limitations. **Year book of Anesthesiology** 6, page 93-103

Invited teaching presentations

1. Faculty for **FLUROSCOPIC GUIDED CHRONIC PAIN PROCEDURES** Workshop
06th April 2018, RSACPCON Jaipur
2. Panelist for Panel Discussion on Topic - **Trauma anaesthesia practice: Problem and management**” at RSACPCON Jaipur, 7th-8th April.

3. Delivered a talk on “Central Vs Lateral Canal Stenosis: Dx& Management” At ICPM-Goa, September 6th to 10th 2017
4. Delivered a talk on “ Newer agents for neuropathic pain” at ICRA Pune 2017, 11-12th August 2017.
5. Delivered a talk on “ Interventions in chronic pain” at GOSICON, Chandigarh, 14-16th September 2017
6. Delivered a talk on “Diagnostic blocks, are they really needed” AT ISSPCON 2015, February 5-7, 2016, Indore
7. Delivered a talk on “Stellate Ganglion block” at AIIMS Pain Practice and Regional Anaesthesia Conference" to be held at the All India Institute of Medical Sciences, New Delhi from 8-10th January 2016
8. Panelist in Panel Discussion on “Anesthetics Considerations in Live and Cadaveric Organ Transplant” at 63rd annual National Conference of Indian Society of Anesthesiologist, 25th to 29th December 2015 , Jaipur
9. Delivered a talk on “Is Chronic pancreatitis pain a neuropathic pain” at Global update of pain held from 19th to 22nd February at Mumbai
10. Video presentation of facet joint injection at 25th National conference of Research society of Anesthesiologist and clinical pharmacology from 2nd to 4th October 2015 at Amritsar
“Painful polyneuropathies” AT ISSPCON 2015, February 5-7, 2015, Chennai
11. Delivered a talk on “Role of ultrasound in neuraxial blocks” Annual national meeting of Indian society of Anesthesiologist, Madurai.
12. Debated Pro Spinal Anesthesia for surgeries in prone position GA vs SA’ at NZ-ISACON 2014, Jammu.

13. Faculty for workshop on ultrasound guided chronic pain procedures at NZ-ISACON 2014
14. Panelist in Panel Discussion: ‘Fluid management in neurosurgical patients’ at RSACPCON October 2014, Dehradun
15. Faculty for Workshop on “Ultrasound in chronic pain” Demonstrated SIJ and stellate ganglion on volunteers at RSACPCON 2014, Dehradun.
16. Delivered a talk on “**Chronic non cardiac chest pain- neuralgic or myalgic**” at ISSPCON 2014, Mumbai
17. Delivered a talk on “**Challenges in management of Chronic pain**” at ISACON 2013, Guwahati
18. Delivered a talk on ‘**Perioperative fluid management in Children**’ at RSACPCON 2013, Srinagar
19. 1st world symposium of the World institute of Pain management and 3rd international conference of interventional pain management held at Kolkatta from 14-17th November
20. **Panelist in Panel Discussion: What Is New In Labor Analgesia** held at. Association of Obstetric Anaesthesiologist (AOA), Manglore 2013, **Faculty for workshop on labor analgesia**
21. Delivered a talk on “**Lumbar epidural steroid injections**” in pain at North Zone ISACON, 2012.
22. **Faculty for cadaveric workshop on chronic pain** at North Zone ISACON, 2012.
23. Delivered a talk on “**Trauma and pain control**” at Global update on pain 2012, Mumbai.

24. **Debated Con (Regional)** during pro-con debate session of- GA V/S Regional Anesthesia for recipient In renal transplant” at ISACON 2012, Indore, Chaired a session “ palliative care”
25. Debated - **Facet Joint injection** v/s Median branch block atISSPCON 2013, Nagpur.
Chaired a session on “cervical Pain”
26. **Association of Obstetric Anaesthesiologist (AOA), Hyderabad** Sep 16- Sep 18th. 2011.
Invited faculty for workshop on labor analgesia. Demonstrated techniques on CNB, drugs and infusion pumps involved. Demonstrated tunnelling of epidural catheter during labour analgesia workshop at Association of Obstretic Anesthesiologist Conference, **AOA 2009**
27. Delivered a talk on Role of CSE in labour analgesia in **Chandigarh Chapter ISA** meet held in March 2008