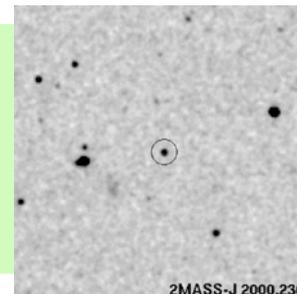
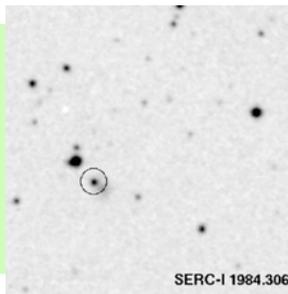


Sébastien Lépine

Ph.D. Physicist, Astronomy & Astrophysics Research Scientist



Current address:

American Museum of Natural History
Central Park West at 79th street
New York, NY 10024
USA

Tel: 212-496-3312

Fax: 212-769-5007

email: lepine@amnh.org

On the web:

<http://research.amnh.org/astrophysics/staff/lepine>

Astrophysicist with expertise and interests in :

Data Mining

All-sky surveys (astrometric, photometric)

Large Astronomical Databases

White dwarfs

Extra-solar planets

Low-mass stars and brown dwarfs

Galactic structure and evolution

Double/multiple stars

Stellar Spectroscopy

Science Education

Education :

1998: Ph.D. in Physics, University of Montreal, Montreal, Qc, Canada

1993: B.Sc. in Physics, University of Montreal, Montreal, Qc, Canada

Career Experience and Appointments :

Adjunct Professor, City University of New York (CUNY)— 2011-current :

Adjunct position with the CUNY graduate school. Supervision and mentoring of graduate students. Supervision and mentoring of undergraduate students in research projects.

Senior Research Scientist, American Mus. of Natural History — 2000-current :

New York, NY. - Externally funded research programs in stellar and Galactic astronomy. Supervision of undergraduate interns, graduate students, and post-doctoral fellows. Mentoring activities with high school students. Consultant on the Hayden Planetarium space shows. Administration of grant-funded research and education programs.

Online Professor, National Center for Science Literacy — 2008-current :

New York, NY. - Online professor for a course on the Solar System. Course specifically addressed to science educators (elementary / middle-school / high-school teachers). Emphasis on understanding basic concepts in physics and astronomy, guidance in developing K-12 science curriculum, familiarization with on-line resources.

Postdoctoral research fellow, Space Telescope Science Institute — 1998-2000

Baltimore, MD. - Development of a code to identify variable and moving objects in multiple epoch scans from the STScI Digitized Sky Surveys. Design and initial work on an all-sky proper motion survey (the SUPERBLINK survey).

Assistant professor, Saint-Laurent College — 1998

Montreal, QC. - Professor with the Physics Department. Development and teaching of a second year Physics college course on electrostatics and electromagnetism. Lectures and labs. (Saint-Laurent College is in the Quebec CEGEP network, equivalent to a U.S. community college).

Career Experience (continued):

Teaching assistant, University of Montreal – 1994-1997

Montreal, QC. - Responsible for 2-hour/week lectures and blackboard problem solving, plus correction of weekly homeworks. Classes taught: quantum mechanics, special relativity, classical mechanics, general astronomy for science majors.

Scholarships and awards:

1999: Academic Gold Medal of the Governor General of Canada

Annually awarded to the one student with the most distinguished record in every major Canadian University. Awarded for most outstanding student at University of Montreal (26,000 full-time students).

1998: First prize for best student presentation, CASCA general meeting

Awarded at the annual general meeting of the Canadian Astronomical Society.

1997-1998: Quebec-FCAR graduate student scholarship

Elite scholarship awarded by the government of Quebec for pursuing and completing doctoral studies in the natural or applied sciences.

1994-1997: Canada-NSERC graduate student scholarship

Elite scholarship awarded by the government of Canada for pursuing graduate studies in the natural sciences (equivalent to an NSF graduate scholarship in the US).

Research Grants Awarded:

\$160,000 - National Aeronautics and Space Administration (NASA), Hubble Space Telescope Grant (2011-2013):

(P.I.) - Hubble Space Telescope cycle 18 AR program. "The Multiplicity Fraction and Period Distribution of Nearby Disk and Halo Stars" (Archival Research program).

\$905,328 - National Aeronautics and Space Administration (NASA), Education Grant (2009-2013):

(Co-P.I.) - Science Research Mentoring Program (SRMP), development of an after-school program in astrophysics and space sciences, combined with research internships. For children from under-represented minorities / low-income families, grades 9-12.

\$564,000 - National Science Foundation (NSF), Astrophysics Grant (2009-2014):

(P.I.) - Astrophysics grant AST-0908406 : "Collaborative Research: Nearby M Stars as High-Priority Targets for Exoplanet Searches."

\$16,000 - National Aeronautics and Space Administration (NASA), JPL grant (2009):

(P.I.) - NASA-Keck program: "A search for stellar/substellar companions to low-mass, halo stars."

Research Grants Awarded (continued):

\$45,000- National Aeronautics and Space Administration (NASA), GALEX grant (2009-2011)
(P.I.) - GALEX cycle 5 GI project. "A systematic search for nearby white dwarfs in the GALEX archive: positions and motions of 100,000 disk and halo white dwarfs".

\$90,000- National Aeronautics and Space Administration (NASA), Hubble Space Telescope grant (2009-2011 / Cycle 17)
(P.I.) - Hubble Space Telescope cycle 17 GO program. "A search for astrometric companions to very low-mass, Population II stars" (70 HST orbits).

\$325,000 - National Science Foundation (NSF), Astrophysics grant (2007-2009)
(P.I.) - Astrophysics grant AST-0607757 : "Positions and motions of 250,000 stars in the Solar Vicinity: stellar contents and dynamical structure of the Galaxy"

\$100,000 - Kalbfleish Research Fellowship (2002-2004)
(P.I.) - For carrying out a research program in the natural sciences at the American Museum of Natural History: "An all-sky survey of stars within 30 parsecs of the Sun"

\$188,000 - National Science Foundation (NSF), Astrophysics grant (2000-2002)
(Co-P.I.) - Astrophysics grant AST-0087313 : "NSTARS: Completing the Inventory of Nearby Stars: An automated all-sky search for high proper-motion stars using the Digitized Sky Survey."

\$70,000 - Canada-NSERC post-doctoral fellowship (1998-2000)
(P.I.) - Science research fellowship from the Government of Canada (highly competitive, equivalent to a U.S. National Science Foundation postdoctoral fellowship.)

Astronomical Observation expertise:

Over 400 nights awarded on a wide variety of telescopes, including:

- William M. Keck 10.0-meter Telescope
- Cerro-Tololo Inter-american Observatory (CTIO) 4.0-meter Blanco
- Kitt Peak National Observatory (KPNO) 3.8-meter Mayall Telescope
- Canada-France-Hawaii 3.6-meter Telescope (CFHT)
- Lick Observatory 3.0-meter Shane Telescope
- MDM Observatory 2.4-meter Hiltner Telescope
- Steward Observatory 2.3-meter Bok Telescope
- Kitt Peak National Observatory (KPNO) 2.1-meter Telescope
- Mont Megantic Observatory 1.6-meter Telescope
- MDM Observatory 1.3-meter McGraw-Hill
- Kitt Peak National Observatory (KPNO) 0.9-meter Telescope

Complete lists of awarded programs available on request.



Expertise in large-scale astronomical survey programs, including:

- *Low- and medium-resolution spectroscopy in the optical.*
- *High-resolution spectroscopy, including “echelle” spectroscopy.*
- *Astrometric measurements, including proper motions and parallax.*
- *Optical and infrared imaging.*
- *Adaptive optics imaging, including with laser guide star systems.*

Expertise in data-mining / analysis / science programming:

- **Data-mining of large astronomical database**, including the Digitized Sky Surveys (DSS), two-micron all sky survey (2MASS), Sloan Digital Sky Survey (SDSS), Hubble Space Telescope archive, GALEX archive, etc...
- **Extensive knowledge and experience with large astronomical catalogs** (Hipparcos, Tycho-2, USNO-B1.0, UCAC-2.0, GSC-2.2, ROSAT, Yale Parallax Catalog, etc...)
- **Extensive experience with various programming languages**, including FORTRAN, C++, IDL, SUPERMONGO.

Synergistic activities in astronomy:

- **Panelist in the Telescope Allocation Committee (TAC)** for the National Optical Astronomical Observatories (NOAO): member of the Galactic TAC panel. (2008-2010)
- **Member of the working group on stellar populations** for the planned Large Synoptic Survey Telescope (LSST).
- **Member of LAMOST-PLUS**, a U.S.-China collaboration on the Large Aperture Multi-Object Spectrograph Telescope (funded by NSF).

Teaching / supervision experience:

After-school program for high-school students:

Administrator of the Science Research and Mentoring Program (SRMP), funded by a grant from NASA. Development of a curriculum of five after-school classes (each one a 6-weeks course) for high-school students. Teaching duties on some of the classes. Also responsible for hiring and training junior scientists (grad students and post-docs) to teach the other classes. Development of an internship program pairing students with scientists for an 8-month, 4 hours/week research internship.

Internet science teacher (for science educators):

Internet classes (“The Solar System”, “Space, Time and Motion”) from the National Center for Science Literacy, guidance of 15-20 on-line students per semester. Part of the “Seminars on Science” series, where most students are science educators at the high-school level. Update on current discoveries in astronomy, tips on science education methods, use of internet tools. Tips on how to convey scientific ideas. Help in developing teaching plans.

Supervision of graduate students :

- **Josh Schlieder (State University of New York, Stonybrook):** Ph.D. candidate, Thesis title: “A Search for Young Low-Mass Stars as Members of Nearby Moving Groups”, (Co-supervision with Prof. Michal Simon). **Thesis successfully defended, July 2011.**
- **Marie-Michèle Limoges (Université de Montréal):** Ph.D. candidate, Thesis title: “Physical Parameters of White Dwarfs in the Solar Neighborhood”, (Co-supervision with Prof. Pierre Bergeron). Expected defense date: Spring 2013.
- **Julie Skinner (Dartmouth College):** Ph.D. candidate, Thesis title: “A Search for Cataclysmic Variable Progenitors”, (Co-supervision with Prof. John Thorstensen). Expected defense date: Summer 2012.

Supervision of college undergraduates :

Supervision of college undergraduates in semester-long research programs, several as part of the NSF Research Experience for Undergraduates (REU) program:

- 2003: **Drew McCourt, Maria Halmó.**
- 2004: **Bethany Bongiorno.**
- 2005: **Amanda Moffett.**
- 2007: **Elisa Corin, Marina Zaiats, Kelly Patton.**
- 2008: **Jacob Hummel, Monica Huang.**
- 2009: **Jacqueline Stone, Bryndis Cruz.**
- 2010: **Faith Pilacik, Naomi Alpert, Helga Wong, Hannah Bish.**
- 2011: **Olivia James, Matt Wilde, Anne Mennen, Daniel Dutcher.**

Mentoring of high-school students :

Mentoring of high-school juniors and seniors in small, focused research programs, for participation in local/national science fairs and the “Intel Talent Search” competition:

- 2006-2007: **Christopher Jordan, Katherine Bedkowski** (Intel national semi-finalist).
- 2007-2008: **Amy Secundi.**
- 2008-2009: **Grace Guo, Philip Schmiede, Michal Yardeni.**
- 2009-2010: **Kevin Chon** (Siemens regional semi-finalist).
- 2010-2011: **Chui Yu Lau, Spencer Hamilton, Hema Lochan, Gina Kwon.**
- 2011-2012: **Jennifer Mizhquiri, Brett Barshay, Douglas Riegel.**

Education / public outreach :

- **Credits:** *“Journey to the Stars” - A planetarium space show produced by the American Museum of Natural History (2009), simulations and 3-D representation of stars in the Galaxy (positions and motions), realistic rendition of the Solar neighborhood, positions and motions of all the stars.*
- **Science presentations to local elementary school and high school students, various groups, through the AMNH summer school program.**
- **Presentations and hands-on activities to local kindergarten, 3rd grade, 4th grade, and 6th grade classes in local schools with under-represented minorities.** *Hands-on activities to stimulate interest in the space sciences, and teach about Earth, the Sun, and the Solar System. Over 400 children reached so far. Volunteer work. (Schools with ethnic distribution: 60% latino, 25% black, 10% caucasian, 5% asian - Hackensack New Jersey School district).*

Invited Talks and Lectures (since 2003):

- November 2011: Department of Physics, Rutgers University, New Brunswick, NJ.
- November 2011: Department of Physics and Earth Science, York College, New York, NY.
- March 2011: Department of Physics and Astronomy, Villanova University, Philadelphia, PA.
- February 2011: Department of Physics, Lehmann College, New York, NY.
- February 2011: Department of Physics and Astronomy, Dartmouth College, Hanover, NH.
- November 2010: Department of Terrestrial Magnetism, Carnegie Institution of Washington, Washington, DC.
- November 2009: Department de Physique, Université de Montréal, Montréal, Canada.
- August 2009: Department of Physics & Astronomy, College of Staten Island, New York, NY.
- August 2008: United States Naval Observatory, Flagstaff, AZ.
- March 2008: Department of Physics, Hofstra University, New York, NY.
- December 2007: Max Planck Institute fuer Astronomie, Heidelberg, Germany
- October 2007: Department of Physics, Stony Brook University, Stony Brook, NY
- February 2007: Department of Physics, Michigan State University, East Lansing, MI.
- September 2006: Department of Physics & Astronomy Georgia State University, Atlanta, GA.
- March 2006: SDSS Collaboration Meeting, Santa Fe, NM.
- October 2005: Department of Astronomy, Yale University, New Haven, CT.
- October 2005: Department of Physics, Massachusetts Institute of Technology, Cambridge, MA.
- January 2005: Department of Physics & Astronomy, Ohio State University, Columbia, OH.
- February 2004: Department of Physics, University of Western Ontario, London, Canada.
- May 2004: Department of Physics, New York University, New York, NY.
- January 2004: Department de Physique, Université de Montréal, Montreal, Canada.
- September 2003: Department of Physics & Astronomy, Queens University, Kingston, Canada.

List of Scientific Publications:

A) Publications in refereed journals:

56. **Lépine, S.**, and Rich, R. M. 2012, “A catalog of high proper motion white dwarfs detected in the GALEX survey,” *The Astronomical Journal*, *submitted*
55. **Lépine, S.**, and DiStefano, R. 2012, “On the detectability of a predicted mesolensing event associated with the high proper motion star VB 10,” *The Astrophysical Journal Letters*, *in press*
54. Schlieder, J. E., **Lépine, S.**, and Simon, M. 2012, “Cool Young Stars in the Northern Hemisphere: Beta Pictoris and AB Doradus Moving Group Candidates,” *The Astronomical Journal*, *in press*
53. Gaidos, E., Fischer, D., Mann, A. W., and **Lépine, S.**, 2012, “On the Nature of Small Planets around the Coolest Kepler Stars,” *The Astrophysical Journal*, *in press*
52. Fischer, D. A., Gaidos, E., Howard, A., Giguere, M., Johnson, J. A., Marcy, G. W., Wright, J. T., Clubb, K. I., Isaacson, H., Apps, K., **Lépine, S.**, Mann, A., Moriarty, J., Brewer, J., Spronck, J., Schwab, C., Szymkowiak, A. 2012, “M2K: II. A Triple-Planet System Orbiting HIP 57274,” *The Astrophysical Journal*, 745, 21
51. Schaefer, B. E., Pagnotta, A., LaCluyze, A., Reichart, D. E., Ivarsen, K. M., Haislip, J. B., Nysewander, M. C., Moore, J. P., Oksanen, A., Worters, H. L., Sefako, R. R., Mentz, J., Dvorak, S., Gomez, T., Harris, B. G., Henden, A., Guan Tan, T., Templeton, M., Allen, W. H., Monard, B., Rea, R. D., Roberts, G., Stein, W., Maehara, H., Richards, T., Stockdale, C., Krajci, T., Sjoberg, G., McCormick, J., Revnivtsev, M., Molkov, S., Suleimanov, V., Darnley, M. J., Bode, M. F., Handler, G., **Lépine, S.**, and Shara, M. 2011, "Eclipses During the 2010 Eruption of the Recurrent Nova U Scorpii", *The Astrophysical Journal*, 742, 113
50. **Lépine, S.**, Gaidos, E. 2011, “An All-Sky Catalog of Bright M Dwarfs,” *The Astronomical Journal*, 142, 138
49. **Lépine, S.**, Koch, A. , Rich, R. M., and Kuijken, K. 2011, “A first measurement of the Proper Motion of the Leo II dwarf spheroidal galaxy,” *The Astrophysical Journal*, 741, 100
48. **Lépine, S.**, Bergeron, P., & Lanning, H. 2011, “Spectroscopic confirmation of UV-bright white dwarfs from the Sandage Two-Color Survey of the Galactic Plane,” *The Astronomical Journal*, 141, 96
47. Schlieder, J. E., **Lépine, S.**, and Simon, M. 2010, “β Pictoris and AB Doradus Moving Groups: Likely New Low-mass Members,” *The Astronomical Journal*, 140, 119
46. Apps, K., Clubb, K. I., Fischer, D. A.; Gaidos, E., Howard, A., Johnson, J. A., Marcy, G. W., Isaacson, H., Giguere, M. J., Valenti, J. A., Rodriguez, V., Chubak, C., and **Lépine, S.** 2010, “M2K: I. A Jupiter-Mass Planet Orbiting the M3V Star HIP 79431,” *Publications of the Astronomical Society of the Pacific*, 122, 156
45. Yanny, B., Rockosi, C., Newberg, H. J., Knapp, G. R., Adelman-McCarthy, J. K., Alcorn, B., Allam, S., Al-lende Prieto, C., An, D., Anderson, K. S. J., Anderson, S., Bailer-Jones, C. A. L., Bastian, S., Beers, T. C., Bell, E., Belokurov, V., Bizyaev, D., Blythe, N., Bochanski, J. J., Boroski, W. N., Brinchmann, J., Brinkmann, J., Brewington, H., Carey, L., Cudworth, K. M., Evans, M., Evans, N. W., Gates, E., Gänsicke, B. T., Gillespie, B., Gilmore, G., Nebot Gomez-Moran, A., Grebel, E. K., Greenwell, J., Gunn, J. E., Jordan, C., Jordan, W., Harding, P., Harris, H., Hendry, J. S., Holder, D., Ivans, I. I., Ivezić, Z. Z., Jester, S., Johnson, J. A., Kent, S. M., Kleinman, S., Kniazev, A., Krzesinski, J., Kron, R., Kuropatkin, N., Lebedeva, S., Lee, Y. S., Léger, R., **Lépine, S.**, Levine, S., Lin, H., Long, D. C., Loomis, C., Lupton, R., Malanushenko, O., Malanushenko, V., Margon, B., Martinez-Delgado, D., McGehee, P., Monet, D., Morrison, H. L., Munn, J. A., Neilsen, Jr., E. H., Nitta, A., Norris, J. E., Oravetz, D., Owen, R., Padmanabhan, N., Pan, K., Peterson, R. S., Pier, J. R., Platson, J., Re Fiorentin, P., Rich-

ards, G. T., Rix, H.-W., Schlegel, D. J., Schneider, D. P., Schreiber, M. R., Schwobe, A., Sibley, V., Simmons, A., Snedden, S. A., Allyn Smith, J., Stark, L., Stauffer, F., Steinmetz, M., Stoughton, C., SubbaRao, M., Szalay, A., Szkody, P., Thakar, A. R., Thirupathi, S., Tucker, D., Uomoto, A., Vanden Berk, D., Vidrih, S., Wadadekar, Y., Waters, S., Wilhelm, R., Wyse, R. F. G., Yarger, J., and Zucker, D. 2009, "SEGUE: A Spectroscopic Survey of 240,000 Stars with $g = 14-20$," *The Astronomical Journal*, 137, 4377

44. Lépine, S., Thorstensen, J. R., Shara, M. M., & Rich, R. M. 2009, "New Neighbors: Parallaxes of 18 nearby stars selected from the LSPM-north catalog," *The Astronomical Journal*, 137, 4109

43. Dong, S., Gould, A., Udalski, A., Anderson, J., Christie, G. W.; Gaudi, B. S., The OGLE Collaboration, Jaroszyński, M., Kubiak, M., Szymański, M. K., Pietrzyński, G., Soszyński, I., Szewczyk, O., Ulaczyk, K., Wyrzykowski, Ł., The μ FUN Collaboration, DePoy, D. L., Fox, D. B., Gal-Yam, A., Han, C., **Lépine, S.**, McCormick, J., Ofek, E., Park, B.-G., Pogge, R. W., The MOA Collaboration, Abe, F., Bennett, D. P., Bond, I. A., Britton, T. R., Gilmore, A. C., Hearnshaw, J. B., Itow, Y., Kamiya, K., Kilmartin, P. M., Korpela, A., Masuda, K., Matsubara, Y., Motomura, M., Muraki, Y., Nakamura, S., Ohnishi, K., Okada, C., Rattenbury, N., Saito, To., Sako, T.; Sasaki, M.; Sullivan, D., Sumi, T., Tristram, P. J., Yanagisawa, T., Yock, P. C. M., Yoshioika, T., The PLANET/Robo Net Collaborations, Albrow, M. D., Beaulieu, J. P., Brilliant, S., Calitz, H., Cassan, A., Cook, K. H., Coutures, Ch., Dieters, S., Prester, D. Dominis, Donatowicz, J., Fouqué, P., Greenhill, J., Hill, K., Hoffman, M., Horne, K., Jørgensen, U. G., Kane, S., Kubas, D., Marquette, J. B., Martin, R., Meintjes, P., Menzies, J., Pollard, K. R., Sahu, K. C., Vinter, C., Wambsganss, J., Williams, A., Bode, M., Bramich, D. M., Burgdorf, M., Snodgrass, C., Steele, I., Doublie, V., Foellmi, C., 2009, "OGLE-2005-BLG-071Lb, the Most Massive M Dwarf Planetary Companion?," *The Astrophysical Journal*, 695, 970

42. Sivarani, T. , **Lépine, S.**, Kembhavi, A. K., & Gupchup, J. 2009, "SDSS J125637-022452: a high proper motion L subdwarf," *The Astrophysical Journal Letters*, 694, L140

41. Lépine, S., & Simon, M. 2009, "Nearby young stars selected by proper motion. I. Four new members of the Beta Pictoris moving group from the TYCHO-2 catalog," *The Astronomical Journal*, 137, 3632

40. Woolf, V. M., **Lépine, S.**, & Wallerstein, G. 2009, "Calibrating M Dwarf Metallicities Using Molecular Indices: Extension to Low Metallicity Stars", *Publications of the Astronomical Society of the Pacific*, 121, 117

39. Thorstensen, J. R., **Lépine, S.**, & Shara, M. 2008, "Parallax and Distance Estimates for Twelve Cataclysmic Variable Stars," *The Astronomical Journal*, 136, 2107

38. Lépine, S., & Moffat, Anthony F. J. 2008, "Direct Spectroscopic Observations of Clumping in O-Star Winds," *The Astronomical Journal*, 136, 548

37. Lépine, S., & Scholz, R.-D. 2008, "Twenty-Three New Ultracool Subdwarfs from the Sloan Digital Sky Survey," *The Astrophysical Journal Letters*, 681, L33

36. Lépine, S. 2008, "New High Proper Motion Stars from the Digitized Sky Survey. Iv. Completion of the Southern Survey and 170 Additional Stars with $\mu > 0.45'' \text{ yr}^{-1}$," *The Astronomical Journal*, 135, 2177

35. Adelman-McCarthy, J. K., and 153 coauthors including **Lépine, S.** 2008, "The Sixth Data Release of the Sloan Digital Sky Survey," *The Astrophysical Journal Supplement*, 175, 297

34. Burgasser, A. J., Vrba, F. J.; **Lépine, S.**, Munn, J. A., Luginbuhl, C. B.; Henden, A. A., Guetter, H. H., & Canzian, B. C. 2008, "Parallax and Luminosity Measurements of an L Subdwarf, *The Astrophysical Journal*," 672, 1159

33. Lépine, S., Rich, R. M., & Shara, M. M., 2007, "Revised metallicity classes for low-mass stars: dwarfs (dM), subdwarfs (sdM), extreme subdwarfs (esdM), and ultra subdwarfs (usdM)," 2007, *The Astrophysical Journal*, 669, 1235

- 32. Lépine, S.**, Rich, R. M.; Shara, M. M., Cruz, K. L., Skemer, A. 2007, "An astrometric companion to the nearby metal-poor, low-mass star LHS 1589," *The Astrophysical Journal*, 668, 507
- 31.** Shara, M. M., Martin, C. D., Seibert, M., Rich, R. M., Salim, S., Reitzel, D., Schiminovich, D., Deliyannis, C. P., Sarrazine, A. R., Kulkarni, S. R., Ofek, E. O., Brosch, N., **Lépine, S.**, Zurek, D., de Marco, O., Jacoby, G. 2007, "An ancient nova shell around the dwarf nova Z Camelopardalis," *Nature* 466, #7132, pp.159-162
- 30.** Kalirai, J. S., Anderson, J., Richer, H. B., King, I. R., Brewer, J. P., Carraro, G., Davis, S. D., Fahlman, G. G., Hansen, B. M. S., Hurley, J. R., **Lépine, S.**, Reitzel, D. B., Rich, R. M., Shara, M. M., & Stetson, P. B. 2007, "The Space Motion of the Globular Cluster NGC 6397," *The Astrophysical Journal Letters*, 657, L93.
- 29.** Yost, S. A., Swan, H. F., Rykoff, E. S., Aharonian, F., Akerlof, C. W., Alday, A., Ashley, M. C. B., Barthelmy, S., Burrows, D., Depoy, D. L., Dufour, R. J., Eastman, J. D., Forgey, R. D., Gehrels, N., Gogus, E., Guver, T., Halpern, J. P., Hardin, L. C., Horns, D., Kizilovglu, U., Krimm, H. A., **Lépine, S.**, Liang, E. P., Marshall, J. L., McKay, T. A., Mineo, T., Mirabal, N., Ozel, M., Phillips, A., Prieto, J. L., Quimby, R. M., Romano, P., Rowell, G., Rujopakarn, W., Schaefer, B. E., Silverman, J. M., Siverd, R., Skinner, M., Smith, D. A., Smith, I. A., Tonnesen, S., Troja, E., Vestrand, W. T., Wheeler, J. C., Wren, J., Yuan, & F., Zhang, B. 2007, "Exploring Broadband GRB Behavior During gamma-ray Emission," *The Astrophysical Journal*, 657, 925.
- 28. Lépine, S.**, & Bongiorno, B. 2007, "New Distant Companions to Known Nearby Stars. II. Faint Companions of HIPPARCOS Stars and the Frequency of Wide Binary Systems," *The Astronomical Journal*, 133, 889
- 27.** Lanning, H. H., & **Lépine, S.** 2006, "Proper Motions of Faint UV-Bright Sources in the Sandage Two-color Survey of the Galactic Plane," *PASP*, 118, 1639
- 26.** Thorstensen, J. R., **Lépine, S.**, & Shara, M. 2006, "The Unusual Cataclysmic Binary Star RBS 0490 and the Space Density of Cataclysmic Variables," *PASP*, 118, 1238
- 25. Lépine, S.**, Rich, R. M., & Shara, M. M. 2005, "Discovery of a nearby halo white dwarf with proper motion $\mu = 2.55$ arcsec/yr," *The Astrophysical Journal Letters*, 633, L121
- 24. Lépine, S.** 2005, "Nearby Stars from the LSPM-North Proper-Motion Catalog. I. Main-Sequence Dwarfs and Giants within 33 Parsecs of the Sun," *The Astronomical Journal*, 130, 1680
- 23. Lépine, S.** 2005, "New High Proper Motion Stars from the Digitized Sky Survey. III. Stars with proper motions $0.45 < \mu < 2.0'' \text{ yr}^{-1}$ south of Decl. = -30," *The Astronomical Journal*, 130, 1247
- 22.** Udalski, A., Jaroszynski, M., Paczynski, B., Kubiak, M., Szymanski, M. K., Soszynski, I., Pietrzynski, G., Ulaczyk, K., Szewczyk, O., Wyrzykowski, L., Christie, G. W., DePoy, D. L., Dong, S., Gal-Yam, A., Gaudi, B. S., Gould, A., Han, C., **Lépine, S.**, McCormick, J., Park, B.-G., Pogge, R. W., Bennett, D. P., Bond, I. A., Muraki, Y., Tristram, P. J., Yock, P. C. M., Beaulieu, J.-P., Bramich, D. M., Dieters, S. W., Greenhill, J., Hill, K., Horne, K., & Kubas, D. 2005, "A Jovian-Mass Planet in Microlensing Event OGLE-2005-BLG-071," *The Astrophysical Journal*, 628, L109
- 21.** Lefèvre, L., Marchenko, S. V., **Lépine, S.**, Moffat, A. F. J., Acker, A., Harries, T. J., Annuik, K., Bohlender, D. A., Demers, H., Grosdidier, Y., Hill, G. M., Morrison, N. D., Knauth, D. C., Skalkowski, G., & Viti, S. 2005, "Spectroscopic study of the long-period dust-producing WC7pd+O9 binary HD192641," *Monthly Notices of the Royal Astronomical Society*, 360, 141
- 20. Lépine, S.**, & Shara, M. M. 2005, "A Catalog of Northern Stars With Annual Proper Motions Larger Than 0.15 Seconds of Arc (LSPM-north Catalog)," *The Astronomical Journal*, 129, 1483
- 19. Lépine, S.**, Rich, R. M., & Shara, M. M. 2004, "The esdM6.5 star LSRJ0822+1700: a new ultracool extreme subdwarf," *The Astrophysical Journal Letters*, 602, L125

18. **Lépine, S.**, Shara, M. M., & Rich, R. M. 2003, "New High Proper Motion Stars from the Digitized Sky Survey. II. Northern Stars with $0.5 < \mu < 2.0'' \text{ yr}^{-1}$ at High Galactic Latitudes," *The Astronomical Journal*, 126, 921.
17. **Lépine, S.**, Rich, R. M., & Shara, M. M. 2003, "LSR1610-0040: the first early-type L subdwarf," *The Astrophysical Journal Letters*, 591, L49.
16. Salim, S., **Lépine, S.**, Rich, R. M., & Shara, M. M. 2003, "LSR 0602+3910: Discovery of a Bright Nearby L-Type Brown Dwarf," *The Astrophysical Journal Letters*, 586, L149.
15. **Lépine, S.**, Rich, R. M., & Shara, M. M. 2003, "Spectroscopy of New High Proper Motion Stars in the Northern Sky. I. New Nearby Stars, New High Velocity Stars, and an Enhanced Classification Scheme for M Dwarfs," *The Astronomical Journal*, 125, 1598.
14. **Lépine, S.**, Shara, M. M., & Rich, R. M. 2003, "Discovery of an Ultracool Subdwarf: LSR 1425+7102, the First Star with Spectral Type sdM8.0," *The Astrophysical Journal Letters*, 585, L69.
13. **Lépine, S.**, Rich, R. M., Neill, J. D., Caulet, A., & Shara, M. M. 2002, "Discovery of an M8.5 Dwarf With Proper Motion $\mu = 2.38'' \text{ yr}^{-1}$," *The Astrophysical Journal Letters*, 581, L47.
12. **Lépine, S.**, Shara, M. M., Rich, R. M. 2002, "New High Proper Motion Stars from the Digitized Sky Survey. I. Northern Stars with $0.5'' \text{ yr}^{-1} < \mu < 2.0'' \text{ yr}^{-1}$ at Low Galactic Latitudes," *The Astronomical Journal*, 124, 1190.
11. **Lépine, S.**, Shara, M. M., & Rich, R. M. 2002, "New Distant Companions to Known Nearby Stars. I. GJ 4047B, GJ 718B, GJ 747.2C, GJ 4100B and GJ 4153B," *The Astronomical Journal*, 123, 3434.
10. **Lépine, S.**, Wallace, D., Shara, M. M., Moffat, A. F. J., & Niemela, V. S. 2001, "Spatially Resolved STIS Spectra of WR+OB Binaries with Colliding Winds," *The Astronomical Journal*, 122, 3407.
9. **Lépine, S.**, Moffat, A. F. J., St-Louis, N., Marchenko, S. V., Dalton, M. J., Crowther, P. A., Smith, L. J., Willis, A. J., Antokhin, I. I., & Tovmassian, G. H. 2000, "Wind Inhomogeneities in Wolf-Rayet Stars. IV. Using Clumps to Probe the Wind Structure in the WC8 Star HD 192103," *The Astronomical Journal*, 120, 3201.
8. **Lépine, S.**, Shara, M.M., Livio, M., & Zurek, D. 1999, "First Direct Measurement of Acceleration in the Outflow of a Nova: U Scorpii (1999)," *The Astrophysical Journal Letters*, 522, L121.
7. **Lépine, S.**, Eversberg, T., & Moffat, A.F.J. 1999, "Wind Inhomogeneities in Wolf-Rayet Stars. III. Unusual Emission-Line Profile Variations in $\gamma 2$ Velorum," *The Astronomical Journal*, 117, 1441.
6. **Lépine, S.**, & Moffat, A.F.J. 1999, "Wind Inhomogeneities in Wolf-Rayet Stars. II. Investigation of Emission-Line Profile Variations," *The Astrophysical Journal*, 514, 909.
5. **Lépine, S.** 1998, "Observations of Stellar Wind Instabilities and Variability on Small and Large Scales," *Astrophysics and Space Sciences*, 260, 101-112.
4. Eversberg, T.E., **Lépine, S.** & Moffat, A.F.J. 1998, "Outmoving Micro-Structures in the Wind of ζ Puppis," *The Astrophysical Journal*, 494, 799-805.
3. **Lépine, S.**, Moffat, A.F.J. & Henriksen, R.N. 1996, "Wind Inhomogeneities in Wolf-Rayet Stars. I. Search for Scaling Laws Using Wavelet Transforms," *The Astrophysical Journal*, 466, 392-403.
2. **Lépine, S.** 1994, "Wavelet Analysis of Wolf-Rayet Emission Lines: Evidence for Clumping," *Astrophysics and Space Sciences*, 221, 371-382.
1. Moffat, A.F.J., **Lépine, S.**, Henriksen, R.N. & Robert, C. 1994, "First Wavelet Analysis of Emission Line Variations in Wolf-Rayet Stars: Turbulence in Hot Star Outflows," *Astrophysics and Space Sciences*, 216, 55-60.

B) Publications in conference proceedings, and other publications:

43. Koch, A., **Lépine, S.**, and Caliskan, S. 2011, "The puzzling assembly of the Milky Way halo - contributions from dwarf Spheroidals and globular clusters," proceedings of: "Assembling the Puzzle of the Milky Way", Le Grand Bornand (Apr. 17-22, 2011), C. Reylé, A. Robin, M. Schultheis (eds.)
42. Faherty, J., Bartel, K, Stoner, R., Wilansky, S., and **Lépine, S.** 2011, "Multiple Systems Abound!: New Wide Common Proper Motion Multiple Star Systems in the Lepine-Shara Proper Motion North and South Catalogs," American Astronomical Society Meeting #218, #326.11, Bulletin of the American Astronomical Society, Vol. 43.
41. Skinner, J. N., Thorstensen, J., and **Lépine, S.** 2011, "First Results from a Search for Nearby Cataclysmic Variables and Related Objects," American Astronomical Society Meeting #218, #127.10, Bulletin of the American Astronomical Society, Vol. 43.
40. Pilacik, F., and **Lépine, S.** 2011, "New Stars In The Solar Neighborhood ($d < 15$ Parsecs) From The Southern Sky Extension Of The Superblink Survey," American Astronomical Society Meeting #217, #348.01, Bulletin of the American Astronomical Society, Vol. 43.
39. Schlieder, J., **Lépine, S.**, Rice, E., and Simon, M. 2011, "A Survey for Low-Mass Members of Nearby Young Moving Groups," American Astronomical Society Meeting #217, #307.05, Bulletin of the American Astronomical Society, Vol. 43.
38. Feldman, D., Cruz, K., and **Lépine, S.**, and Rich, R. M. 2011, "Youth Indicators of Late-M Dwarfs," American Astronomical Society Meeting #217, #242.17, Bulletin of the American Astronomical Society, Vol. 43.
37. Alpert, N., and **Lépine, S.** 2011, "Spectroscopic Classification of 3,717 Nearby M Stars", American Astronomical Society Meeting #217, #242.11, Bulletin of the American Astronomical Society, Vol. 43.
36. **Lépine, S.**, and Rich, R. M. 2011, "The MuGSHOTS Program, Multiplicity for Galactic Stars of the Halo and Traceable Systems: First Detection of Low-mass, Metal-Poor Pairs with Mappable Orbits.", American Astronomical Society Meeting #217, #226.06, Bulletin of the American Astronomical Society, Vol. 43.
35. Limoges, M. -M., Bergeron, P., **Lépine, S.** 2011, "A Census of White Dwarfs Within 40 Parsecs of the Sun", AIP Conference Proceedings for the 17th European White Dwarf Workshop, in press
34. Mann, A., Gaidos, E., Fischer, D., & **Lépine, S.** 2010, "M2K Planet Search: Spectroscopic Screening and Transit Photometry", American Astronomical Society, DPS meeting #42, #27.04; Bulletin of the American Astronomical Society, Vol. 42, p.1060.
33. Schlieder, J., Simon, M., and **Lépine, S.** 2009, "New Low-Mass Members of the AB Doradus Nearby Young Moving Group", American Astronomical Society Meeting #215, #455.09, Bulletin of the American Astronomical Society, Vol. 42, p.474.
32. Stone, J., **Lépine, S.**, Cruz, B., and Jordan, C. 2009, "New Stars Within 33 parsecs of the Sun from the SUPERBLINK Survey", American Astronomical Society Meeting #215, #424.09, Bulletin of the American Astronomical Society, Vol. 42, p.332.
31. Cruz, B., **Lépine, S.**, Stone, J., and Jordan, C. 2009, "New Binary Systems in the Northern Sky from the SUPERBLINK Survey", American Astronomical Society Meeting #215, #419.25, Bulletin of the American Astronomical Society, Vol. 42, p.280.

- 30. Lépine, S.** 2009, “Proper Motions Of Ultra-violet Sources In The GALEX Database: White Dwarfs, Subdwarfs, And Other Nearby Hot Stars”, American Astronomical Society Meeting #215, #300.09, Bulletin of the American Astronomical Society, Vol. 42, p.296.
- 29. Malz, A., Rich, R., and Lépine, S.** 2009, “Low-mass Binaries in the Galactic Halo Resolved by Adaptive Optics”, American Astronomical Society Meeting #213, #602.04, Bulletin of the American Astronomical Society, Vol. 42.
- 28. Mille, F. Di, Ciroi, S., Navasardyan, H., Lépine, S., Zee, L. V., Barnes, K. L., Hartmann, D. H., Brittain, S. D., Updike, A. C., Kaur, A., Williams, G. G., Pietsch, W., Siviero, A., Saguner, T., Orio, M., Rafanelli, P., Bianchini, A.** 2009, “Optical Spectroscopy of the M31 nova M31N-2009-10b”, The Astronomer's Telegram, #2248
- 27. Schlieder, Joshua E., Simon, M., and Lépine, S.** 2009, “New Low-Mass Members of Nearby Young Moving Groups”, American Astronomical Society Meeting #214, #421.02
- 26. Hummel, J., Lépine, S., and Huang, M.** 2009, “Local Stellar Kinematics from the SUPERBLINK Database”, American Astronomical Society, American Astronomical Society Meeting #213, #407.11
- 25. Lépine, S., Lee, Y. S., Yanni, B. and the SEGUE collaboration** 2009, “Cool Subdwarfs As Tracers Of The Galactic Halo: A Massive Spectroscopic Survey Of Low-mass, Metal-poor Stars In SDSS”, American Astronomical Society, American Astronomical Society Meeting #213, #303.04
- 24. Lépine, S.** 2008, “Metal-poor stars don't blush: Broadband colors of confirmed cool subdwarfs in the SDSS”, Cool Stars Meeting #15, *in press*
- 23. Burgasser, A. J.; Lépine, S.; Lodieu, N.; Scholz, R.-D.; Delorme, P.; Jao, W.-C.; Swift, B. J.; Cushing, M. C.** 2008, “Ultracool Subdwarfs: The Halo Population Down to the Substellar Limit”, Cool Stars Meeting #15, *in press*
- 22. Lépine, S.; Shara, M. M.; Rich, R.-M.; Wittenberg, A.; Halmo, M.; Bongiorno, B.** 2008, “A new all-sky catalog of stars with large proper motions”, A Giant Step: from Milli- to Micro-arcsecond Astrometry, Proceedings of the International Astronomical Union, IAU Symposium, Volume 248, p. 74-77
- 21. Corin, E.; Lépine, S.; Jordan, C.; Patton, K.; Zaiats, M.** 2007, “Kinematics Of Low-mass Stars In The Vicinity Of The Sun From The SUPERBLINK Survey”, American Astronomical Society meeting 211, #104.09, Bulletin of the American Astronomical Society.
- 20. Zaiats, M.; Lépine, S.; Corin, E.; Patton, K.; Jordan, C.** 2007, “New Low-mass Stars With Small Proper Motions In The Solar Neighborhood From The Superblink Database.” American Astronomical Society meeting 211, #103.20, Bulletin of the American Astronomical Society.
- 19. Lépine, S.; Bongiorno, B.; Corin, E.; Halmo, M.; Jordan, C.; Moffett, A. J.; Patton, K.; Shara, M. M.; Wittenberg, A.; Zaiats, M.** 2007, “Slow Neighbors: A Search for Nearby Stars With Small Proper Motions”, American Astronomical Society meeting 211, #73.06, Bulletin of the American Astronomical Society.
- 18. Thorstensen, John R.; Lépine, S.; Shara, M.; Peters, C. S.** 2007, “Parallaxes and Distance Estimates for Eleven Cataclysmic Binary Stars”, American Astronomical Society meeting 211, #51.17, Bulletin of the American Astronomical Society.
- 17. Lanning, Howard H.; Lépine, S.** 2007, “Spectroscopic Confirmation and Classification of New White Dwarfs from the Sandage Two-color Survey of the Galactic Plane”, American Astronomical Society meeting 211, #15.05, Bulletin of the American Astronomical Society.
- 16. Lanning, H., & Lépine, S.** “The Search for White Dwarfs in the Sandage Two-color Survey of the Galactic Plane”, American Astronomical Society Meeting 209, # 103.02; Bulletin of the American Astronomical Society.

15. **Lépine, S.**, & Shara, M. M. 2006, "The LSPM-south: new catalog of southern stars with proper motions $\mu > 0.15''/\text{yr}$ ", American Astronomical Society Meeting 207, # 150.01; Bulletin of the American Astronomical Society.
14. **Lépine, S.** 2006, "High Proper Motion Stars in SEGUE and the Local Kinematics of the Galactic Halo", American Astronomical Society Meeting 207, # 147.05.
13. Lefèvre, L., **Lépine, S.**, Acker, A., Marchenko, S. V., & Moffat, A. F. J. 2005, "Variability of the dust forming binary Wolf-Rayet Star HD192641 (WR137)", SF2A-2004: Semaine de l'Astrophysique Française, EdP-Sciences, Conference Series, p. 297.
12. Burgasser, A. J., Kirkpatrick, J. D., **Lépine, S.**, Gizis, J. E., Reid, I. N., Cushing, M. 2005, "Metallicity Diagnostics in the Spectra of Ultracool M and L Subdwarfs", American Astronomical Society Meeting 205, # 11.06.
11. **Lépine, S.** 2002, "Emission-Line Profile-Variability Induced by the Rotation of a Structured Wind", Interacting Winds from Massive Stars. ASP Conference Proceedings, Vol. 260. Edited by Anthony F. J. Moffat and Nicole St-Louis, p.185.
10. Moffat, A.F.J., & **Lépine, S.** 1999, "The Structure of Wolf-Rayet Stars from an Observational Viewpoint", in proceedings: "Thermal and Ionization Aspects of Flows from Hot Stars, ASP Conference Series, Vol. 204. Edited by Henny Lamers and Arved Sapar, p.15.
9. **Lépine, S.**, & Moffat, A.F.J. 1999, "Inhomogeneous Winds: The Nature of Emission-Line Profile Variations in Wolf-Rayet Spectra.", in: Proceedings of the IAU symposium # 193, "Wolf-Rayet Stars Phenomena in Massive Stars and Starburst Galaxies", K.A. van der Hucht, Gloria Koenigsberger, & P.R.J. Eenens eds. pp.250-251.
8. **Lépine, S.**, & Moffat, A.F.J., 1996, "The mystery of Wolf-Rayet emission-line variability: a shocking behaviour from a clumpy wind," Journal of the Royal Astronomical Society of Canada, Vol.92/6, p.311.
7. Eversberg, T.E., **Lépine, S.** & Moffat, A.F.J. 1997, "First Detection of Structures in O Star Winds (The last run with the Reticon).", in: Bulletin of the Canada-France-Hawaii Telescope, No.36, p.3.
6. **Lépine, S.** 1997, "Wolf-Rayet emission lines varying all together : the case of the WC9 star HD164270", in: Proceedings "Wolf-Rayet Stars in the Framework of Stellar Evolution"; 33rd Liège Int. Astroph. Coll., J.M. Vreux et al. eds., pp.253-256.
5. **Lépine, S.**, Eversberg, T.E. & Moffat, A.F.J., 1996, "The Wolf-Rayet Star gamma-2 Velorum Under Close Scrutiny: Very Fine Detail of the Variations in the Broad CIII 5696 Emission Line.", Journal of the Royal Astronomical Society of Canada, Vol.90/5-6, p.321.
4. Eversberg, T.E., **Lépine, S.** & Moffat, A.F.J. 1997, "Blobs Also in O Star Winds.", in: Proceedings of the International Astrophysical Liège Meeting "Wolf-Rayet Stars in the Framework of Stellar Evolution"; 33rd Liège Int. Astroph. Coll., J.M. Vreux et al. eds., pp.225-228.
3. **Lépine, S.** 1996, "Effects of Wind Clumping on Colliding Winds.", in: Proceedings of the IAU symposium # 163, "Wolf-Rayet Stars: Binaries, Colliding Winds, Evolution", K.A. van der Hucht & P.M. Williams eds., pp.411-415.
2. **Lépine, S.** 1995, "Wavelet Analysis of variable Wolf-Rayet Emission Lines.", in: Proceedings of the IAU symposium # 163, "Wolf-Rayet Stars: Binaries, Colliding Winds, Evolution", K.A. van der Hucht & P.M. Williams eds., pp.60-61.
1. Moffat, A.F.J., Robert, C., **Lépine, S.** & Henriksen, R.N., 1994, "Turbulence in Outflows from Hot Stars.", in: Bulletin of the Canada-France-Hawaii Telescope, No.31, p.14.