

# Curriculum Vitae

**NAME:** Marko B Popovic

**POSITION/TITLE:**

Assistant Research Professor  
Physics Department, Biomedical Engineering, Robotics Engineering Program  
Worcester Polytechnic Institute

Director, Popovic Labs  
Worcester Polytechnic Institute

**EDUCATION/TRAINING:**

MIT (Cambridge, Massachusetts), Postdoc and Research Scientist, AI Lab, CSAIL, Media Lab, 2001-08  
Harvard University (Cambridge, Massachusetts), Postdoc, Physics, 2001-02  
Boston University (Boston, Massachusetts), PhD, Physics, 2001(2002 Award)  
Ohio State University (Columbus, Ohio), MS, Physics, 1996  
Belgrade University (Belgrade, Serbia), BS, Physics, 1995

**RESEARCH AND PROFESSIONAL EXPERIENCE:**

2012- Assistant Research Professor, Worcester Polytechnic Institute, Physics Department, Biomedical Engineering Department and Robotics Engineering Program  
2010-2012 Adjunct Assistant Professor, Worcester Polytechnic Institute, Physics Department, Biomedical Engineering Department and Robotics Engineering Program  
2008-2008 Research Scientist, Massachusetts Institute of Technology, Media Lab  
2008-2008 Founding Projects Manager, Massachusetts Institute of Technology, Center for Future Banking  
2007-2008 Visiting Professor, Belgrade University, Mechanical Engineering Department  
2007-2008 Associate, Innovation Center, Belgrade University, Belgrade  
2007-2008 Director, High-tech Startups Incubator, Belgrade  
2007-2007 Manager, quality control & sales, Boston Trade Technologies LLC, @ old Boston Stock Exchange, Boston, MA, USA  
2006-2007 Co-founder, Venture Capital Firm, STEP Fund LLC, Boston, Massachusetts, USA  
2001-2007 Postdoctoral Associate, Massachusetts Institute of Technology, Artificial Intelligence Lab, Computer Science and Artificial Intelligence Lab, Media Lab  
2001-2002 Postdoctoral Fellow, Harvard University, Physics Department  
1996-2001 Research and Teaching Assistant, Boston University, Physics Department  
1995-1996 Research and Teaching Assistant, Ohio State University, Physics Department

#### **SELECTED PUBLICATIONS, BOOKS:**

- M. B. Popovic (2019), Biomechatronics, 1st Edition, Elsevier, Imprint: Academic Press, Published Date: 8th April 2019, Page Count: 668. Book. Hardcover ISBN: 9780128129395, eBook ISBN: 9780128130414, <https://www.elsevier.com/books/biomechatronics/popovic/978-0-12-812939-5>
- M. B. Popovic, (2014) "Biomechanics and Robotics", 364 pages, book, Copyright © 2014 Pan Stanford Publishing Pte. Ltd., Singapore, ISBN 978-981-4411-37-0 (Hardcover), 978-981-4411-38-7 (eBook)

#### **SELECTED PUBLICATIONS, BOOK CHAPTERS:**

- Shannon Moffat, Julia D'Agostino, Ellie Clarrissimeaux, Eric Carkin, Matthew Bowers, and Marko Popovic, "The Hydro Muscle and CRFC Valve: An Efficient and Compact Fluidic Robotic System," in "Smart Materials: Considerations in Space and on Earth", editor Lenore Rasmussen, to be published by Springer in 2020.
- M. B. Popovic and H. Herr (2006) "Ground Reference Points in Legged Locomotion: Definitions, Biological Trajectories and Control Implications," Mobile Robots Towards New Applications, Pro-Literatur-Verlag, Edited by A. Lazinica, pp. 79-104, International Journal of Advanced Robotics Research, ARS/pIV, Germany, December 2006.

#### **SELECTED PUBLICATIONS, JOURNAL PAPERS:**

- M. Vukobratovic, H. Herr, B. Borovac, M. Rakovic, M. B. Popovic, A. Hofmann and V. Potkonjak (2008). "Biological principles of control selection for a humanoid robot's dynamic balance preservation," International Journal of Humanoid Robotics, World Scientific Publishing Company, Vol. 5, No. 4 (2008) 639–678.
- H. Herr and M. B. Popovic (2008). "Angular Momentum in Human Walking," Journal of Experimental Biology 211, pp 467-481.
- M. B. Popovic, A. Goswami and H. Herr (2005). "Ground Reference Points in Legged Locomotion: Definitions, Biological Trajectories and Control Implications," International Journal of Robotics Research, Vol. 24, No. 12, pp. 1013-1032.
- A. Hofmann, M. B. Popović, and H. Herr (2002). "Humanoid standing control: Learning from human demonstration." Journal of Automatic Control 12.1 (2002): 16-22.
- M. B. Popovic (2001). "Third Generation Seesaw Mixing with new Vector-Like Weak-Doublet Quarks" Physical Review D, vol. 64, 035001.
- M. B. Popovic and E. H. Simmons (2000). "Weak-Singlet Fermions: Models and Constraints," Physical Review D, vol. 62, 035002.
- M. B. Popovic and E. H. Simmons (1998). "A heavy top quark from flavor-universal colorons", Physical Review D, vol. 58, 095007.

#### **SELECTED PUBLICATIONS, CONFERENCE PROCEEDINGS:**

- Julia D'Agostino, Ellen Clarrissimeaux, Shannon Moffat, Juan D. Florez-Castillo, Felix Sanchez, Matthew Bowers, and Marko Popovic "Development of Bioinspired Exosuit Actuated with Hydro Muscles and Novel Compact Robotic Flow Control Valve", Biodevices 2020 - The 13th International

Joint Conference on Biomedical Engineering Systems and Technologies, Valletta, Malta, February 24-26, 2020 (ON THE SHORT LIST FOR THE BEST CONFERENCE PAPER AWARD)

- Agarwal, Shlok, and Marko Popovic. "Study of toe joints to enhance locomotion of humanoid robots." In *2018 IEEE-RAS 18th International Conference on Humanoid Robots (Humanoids)*, pp. 1039-1044. IEEE, 2018.
- Elina Saint-Elme, Mervyn A. Larrier, Jr., Casey Krcinovich, Dylan Renshaw, Karen Troy, and Marko Popovic, "Design of a Biologically Accurate Prosthetic Hand", IEEE RAS International Symposium on Wearable & Rehabilitation Robotics, Houston, TX November 5-8, 2017.
- Matthew Bowers, Chinmay Harmalkar, Saivimal Sridar, Corey Majeika, Christian Kaan, Germano Iannacchione, and Marko Popovic, "An approach to HydroBone and other variable stiffness structures," Proceedings of The 20th International Conference on Composite Structures (ICCS20) in Paris, France, 4-7 September 2017.
- Muller, M. and Popovic, M, (2017) "Shoulder Mounted Gyroscopic Prosthesis for Assisting Arm Amputees During Walking", In Dynamic Walking Conference 2017. Mariehamn, Finland, June 4-9 2017.
- Muller, M. and Popovic, M, Shoulder Mounted Gyroscopic Prosthesis for Assisting Arm Amputees During Walking, Northeast Bioengineering Conference 2017, Newark, New Jersey, US, April 1-2, 2017.
- Matthew Bowers, Chinmay Harmalkar, Ankur Agrawal, Abhishek Kashyap, Jonathan Tai, and Marko Popovic (2017) "Design and test of biologically inspired multi-fiber Hydro Muscle actuated ankle," Proceedings of 2017 IEEE International Workshop on Advanced Robotics and its Social Impacts, March 8-10, 2017, University of Texas at Austin, Austin, TX, USA
- Saivimal Sridar, Corey J Majeika, Phillip Schaffer, Matthew Bowers, Seiichiro Ueda, Andrew J Barth, Jon L Sorrells, Jon T Wu, Thane R Hunt, and Marko Popovic (2016) "Hydro Muscle - a novel soft fluidic actuator," 2016 IEEE International Conference on Robotics and Automation (ICRA), pp 4014-4021.
- G. McCarthy, D. Effraimidis, B. Jennings, N. Corso, C. Onal and M. B. Popovic (2014) "Hydraulically Actuated Muscle (HAM) Exo-Musculature," in "Robot Makers: The future of digital rapid design and fabrication of robots" (RoMa) Workshop, the 2014 Robotics: Science and Systems Conference, Berkeley, CA, July 12, 2014.
- T. Hunt, C. Berthelette, and M. B. Popovic (2013). "Linear One-to-Many (OTM) system." In Technologies for Practical Robot Applications (TePRA), 2013 IEEE International Conference on, pp. 1-6. IEEE, 2013.
- I. Galiana, F. L. Hammond, R. D. Howe and M. B. Popovic (2012). "Wearable Soft Robotic Device for Post-Stroke Shoulder Rehabilitation: Identifying Misalignments" 2012 IEEE/RSJ International Conference on Intelligent Robots and Systems, October 7-12, 2012. Portugal.
- T. Hunt, C. Berthelette, G. S. Iannacchione, S. Koehler, and M. B. Popovic (2012). "Soft Robotics Variable Stiffness Exo-Musculature, One-To-Many Concept, and Advanced Clutches." In IEEE ICRA 2012 WORKSHOP: Variable Stiffness Actuators moving the Robots of Tomorrow, St. Paul, Minnesota, May, vol. 14. 2012.
- S. B. Kesner, L. Jentoft, F. L. Hammond, R. D. Howe and M. B. Popovic (2011). "Design Considerations for an Active Soft Orthotic System for Shoulder Rehabilitation" 33rd Annual International IEEE EMBS Conference, August 30 - September 02, 2011, Boston, USA.

- A. Hofmann, H. Herr and M. B. Popovic (2009). "Exploiting Angular Momentum to Enhance Bipedal Center-of-Mass Control" Accepted to 2009 IEEE International Conference on Robotics and Automation, May 12 - 17, 2009, Kobe, Japan.
- S. Seitinger, E. Sylvan, O. Zuckerman, M. B. Popovic, and O. Zuckerman, (2006). "New Playground Experience: Going Digital?", International Conference on Human Factors in Computing Systems, CHI 2006, April 22–27, 2006, Montréal, Québec, Canada. ACM Press, pp. 303-308.
- M. B. Popovic and H. Herr (2005). "Global Motion Control and Support Base Planning," Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems, Alberta, Canada, pp. 3795-3802.
- M. B. Popovic, A. Hofmann and H. Herr (2004). "Angular Momentum Regulation during Human Walking: Biomechanics and Control," Proceedings of the IEEE International Conference on Robotics and Automation, New Orleans, Louisiana, U.S.A., pp. 2405-2411.
- A. Hofmann, M. B. Popovic, S. Massaquoi and H. Herr (2004). "A Sliding Controller for Bipedal Balancing Using Integrated Movement of Contact and Non-Contact Limbs," Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems, Sendai, Japan, pp.1952-1959.
- M. B. Popovic, A. Hofmann and H. Herr (2004). "Zero spin angular momentum control: definition and applicability," Proceedings of the IEEE-RAS/RSJ International Conference on Humanoid Robots, Santa Monica, California, USA.
- M. B. Popovic, A. Englehart and H. Herr (2004). "Angular Momentum Primitives for Human Walking: Biomechanics and Control," Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems, Sendai, Japan, pp. 1685-1691.

#### SELECTED PATENTS AND PATENT APPLICATIONS:

- M. B. Popovic, M. P. Bowers, T. R. Hunt, L. R. Koesterman, M. Pickett, R. M. Rafferty, S. Sridar, S. Ueda, V. Visnudas, A. Zia, and A. Jonnavittula. "Biologically-Inspired Joints and Systems and Methods of Use Thereof ". United States Patent and Trademark Office, Assignee Worcester Polytechnic Institute. Patent issued April 28, 2020: **US 10,632,626**.
- Marko Popovic, Cagdas Onal, Daniil Effraimidis, Brian Jennings, Gregory D. McCarthy, and Nicholas Corso. "Actuators and methods of use". United States Patent and Trademark Office, Assignee Worcester Polytechnic Institute. Patent issued October 29, 2019: **US 10,456,316**
- Marko Popovic, Saivimal Sridar, Corey Majeika, Nicholas Deisadze, and Erika Giancarlo (Publication date 2016/5/13) "Variable Stiffness Devices and Methods of Use". United States Patent and Trademark Office, Assignee Worcester Polytechnic Institute. Patent Issued July 24, 2018: **US 10,028,855**
- M. B. Popovic, C. J. Berthelette, M. DiPinto, J. D. Sareault, and T. R. Hunt (Publication date 2016/5/19) "Actuation Systems and Methods". United States Patent and Trademark Office, Assignee Worcester Polytechnic Institute. Patent Issued January 30, 2018: **US 9,879,767**
- H. Herr, A. Hoffman, and M. B. Popovic, (Accepted December 25 2007). "Biomimetic motion and balance controllers for use in prosthetics, orthotics and robotics," **US Patent 7,313,463**; United States Patent, Massachusetts Institute of Technology, Cambridge MA, Serial No.: 499853, Series Code: 11. , HUMANOID CONTROL.

- *Patent Application*: PCT International Patent Application No. PCT/US2020/017302 Filed February 7, 2020; U.S. Provisional Patent Application of Popovic, et al., Application No.: 62/802,933 Filed February 8, 2019, Title: "Fluid Flow Control Valve" WPI Ref. No.: W19-032, see <https://www.wpi.edu/offices/technology-commercialization/catalog/fluid-flow-control-valve>
- *Patent Application*: U.S. Provisional Patent Application of Popovic, et al., Application No.: 62/835,844, Filed: April 18, 2019, Title: "Force Controlled Assistive Arm Exoskeleton"
- *Patent Application*: Mitchell K. Muller and Marko B. Popovic "Shoulder and Arm Prosthesis" U.S. Provisional Patent Application, Application No.: 62/482,780, Filed: April 7, 2017;

**SELECTED ARCHIVED PAPERS, REPORTS, INVITED TALKS, RESEARCH ABSTRACTS, POSTERS, PhD THESIS:**

- M. B Popovic (2013) "Designing Large Ornithopter for Human Transport via ExoMusculature and Sensitive Robotics", Robotics Science and Systems (RSS) 2013, International Conference, Berlin, Germany, June 28, 2013.
- M. B. Popovic, (2012)"The Composite Particles Model (CPM), Vacuum Structure and~ 125 GeV Higgs Mass." arXiv preprint arXiv:1206.1507 (2012).
- D. O. Girardo and M. B. Popovic (2011), "Physics applied to post-stroke rehabilitation, Shoulder Soft Robotics Brace; December 31, 2011 report", American Institute of Physics SPS award December 2011 final report. ( [http://www.spsnational.org/programs/awards/2011/ugr11\\_WPI.pdf](http://www.spsnational.org/programs/awards/2011/ugr11_WPI.pdf) )
- Blumenau, A., Girardo, D., O., Lin, E., L., Mandala, S., and Popovic, M. B, "Physics applied to post-stroke rehabilitation", AIP SPS award June 2011 interim report. ( [http://www.spsnational.org/programs/awards/2011/ugr2011\\_Worcester.pdf](http://www.spsnational.org/programs/awards/2011/ugr2011_Worcester.pdf) )
- M. B. Popovic (2011) "~ 115 GeV and~ 143 GeV Higgs mass considerations within the Composite Particles Model." arXiv preprint arXiv:1104.3111 (2011).
- M. B. Popovic (2010) "Thanks to 2D and maybe even beyond: 115 GeV and 140 GeV almost Standard Model Higgs without problems." arXiv preprint arXiv:1009.5054 (2010).
- M. B. Popovic, A. Englehart and H. Herr (2004). "The partition of Spin Angular Momentum in Human Walking," Proceedings of the XVth Congress of the International Society of Electrophysiology & Kinesiology, Boston, Massachusetts, USA, pp. 117.
- M. B. Popovic, W. Gu, and H. Herr (2002). "Conservation of angular momentum during human locomotion." MIT, Artificial Intelligence Laboratory Research Abstracts (2002): pp 264-265.
- M. B. Popovic, A. Seyfarth, and H. Herr (2002). "Angular Momentum Conservation in Human Movement," The IVth World Congress of Biomechanics, August, Calgary, Alberta, Canada.
- M. B. Popovic (2002), "The Standard Model hierarchy, fine-tuning, and negativity of the Higgs mass squared." arXiv preprint hep-ph/0204345 (2002).
- Popovic, Marko Berislav. "Dynamical generation of the top quark mass." (2002). ProQuest Dissertations And Theses; Thesis (Ph.D.)--Boston University, 2002.; Publication Number: AAI3031585; ISBN: 9780493437514; Source: Dissertation Abstracts International, Volume: 62-10, Section: B, page: 4604.; 140 p.
- M. B. Popovic (2001), "Upper limit on the Higgs Particle mass" or "Limits on the Standard Model Higgs without infinities", arXiv preprint hep-ph/0106355 (2001).

- M. B. Popovic (2001) "Top-Bottom Color and Weak Doublets Seesaw." 10 pages, 5 figures; Talk given at the Thinkshop<sup>2</sup> - top quark physics for RUN II and beyond, Fermilab, November 10-12, 2000; arXiv preprint hep-ph/0102027 (2001).

#### SELECTED INVITED TALKS:

- "Wearable, bioinspired robots, and universal manipulation" WPI RBE Colloquium, February 14, 2020.
- "Meet the Author: Marko B. Popovic", WPI George C. Gordon Library, September 16, 2019.  
<https://www.wpi.edu/news/calendar/events/meet-author-marko-b-popovic>
- "Artificial muscles, bones, and bio-inspired control", WPI @ Start Up and Commercialization Opportunities From WPI Research, The Venture Forum, February 28, 2017.
- "Hydro Muscles", MIT Media Lab, Jan 13, 2015.
- "Hydraulically Actuated Muscle (HAM) Exo-Musculature," in "Robot Makers: The future of digital rapid design and fabrication of robots" (RoMa) Workshop, the 2014 Robotics: Science and Systems Conference, Berkeley, CA, July 12, 2014. (presented by G. McCarthy; joint work with G. McCarthy, D. Effraimidis, B. Jennings, N. Corso, and C. Onal)  
[<http://users.wpi.edu/~mpopovic/media/pubs/HAMproceedingSubmitted1.pdf>]
- "Tesla and robotics", Tesla Memorial Conference, New York, NY, Jan 5-7, 2013.
- "Soft Robotics Variable Stiffness Exo-Musculature, One-To-Many Concept, and Advanced Clutches" (presented by Thane Hunt and Chris Berthelette), IEEE International Conference on Robotics and Automation, ICRA 2012 WORKSHOP: 'Variable Stiffness Actuators moving the Robots of Tomorrow' St. Paul, Minnesota, May 14, 2012.
- "Biomechanics and Robotics", WPI Robotics Engineering Seminar, RBE February 2011.
- "Lecture by Dr. Marko B Popovic II: High Energy Physics", Physics Department Colloquia, WPI Physics Department, December 2010.
- "Lecture by Dr, Marko B Popovic I: Biophysics and Biomedical Engineering" Physics Department Colloquia, WPI, November 2010.
- "Many endeavors a few successes; an ordinary story of the 21st century "renaissance" = multidisciplinary researcher" Spring Seminar Series ECE Department, University of New Hampshire, February 2010
- "We will make it happen" Summit Conference on Future Networks: Economy, Energy, Health", MIT, October 2009.
- "Media Lab, Biomechatronics, Center for Future Banking" Festival of New Communications B-LINK 2008, October 2008
- "Multi/omni directional locomotion platform: walking and running in VR worlds" X Reality lunch meeting, MIT Media Lab, March 2008
- "STEP Fund & Belgrade Business Incubator" Economic Cooperation with Diaspora – Expert Support, Vidovdan Days, Sava Center, Belgrade, Serbia, June 2007.
- "Biological Movement Control Strategies for Humanoid Robots, Orthoses and Prostheses" School of Computer Science and Robotics Institute, Carnegie Mellon University, Pennsylvania, USA, April 2006.

- “Biological Movement Control Strategies for Humanoid Robotics, Orthotics and Prosthetics” Olin College, School of Engineering, Massachusetts, USA, March 2006
- “Biological Movement Control Strategies for Humanoid Robotics, Orthotics and Prosthetics” Colorado School of Mines, School of Engineering, Golden, Colorado, USA, March 2006.
- “Evolution of prosthetics” Med Development Group meeting at the Silicon Valley Bank, Massachusetts, USA, April 2005.
- “Biologically Realistic Humanoid Robot Control,” MIT, CSAIL, Graphics and Vision, Massachusetts, USA, March 2005.
- “Human Movement Control: The Regulation of Angular Momentum in the CM frame,” Boston University, NMR Center Lecture Series, Massachusetts, USA, March 2003.
- “New Horizons for Orthotic & Prosthetic Technology: Merging Body and Machine,” , (joint work with A. Hofmann and H. Herr presented by H. Herr) ZIF International Conference on Walking Machines, Bielefeld, Germany, 2003.
- Invited Lecture, (joint work with W. Gu and H. Herr presented by H. Herr) (August 2002) The IVth World Congress of Biomechanics, Calgary, Alberta, Canada.
- “Human standing and walking: linear control in the horizontal plane,” AI Lab, MIT, Massachusetts, USA, February 2002.
- “Playing with top strong dynamics?” (presented joint work with E. Simmons) High Energy Physics Theory Division Argonne National Lab, Illinois, USA, February 2001.
- “Top-Bottom Color and Weak-Doublets Seesaw” “Thinkshop2 - top quark physics for RUN II & beyond”, Fermilab, Illinois, USA, November 2000.

#### **ORGANIZATION OF SEMINARS, COLLOQUIUM SERIES, WORKSHOPS, CONFERENCES:**

- Serving on the Executive Program Committee of the 2020 IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics (BioRob 2020) as an Associate Editor.
- Co-chair for the IEEE ICRA 2016 "Flexible and Deformable Robotic Structures"
- In charge of weekly WPI Robotics Colloquium, 2015-2016 academic year.
- Program Committee : IEEE RO-MAN 2014 Workshop on "Wearable Technology and Human - Wearable Robot Interaction", Edinburgh, U.K., August 25, 2014.
- In charge of weekly WPI Physics Department Colloquium, 2013-2014 academic year.
- Chair of Scientific Committee, (IEEE supported) Tesla Memorial Conference, New York, NY, January 5-7, 2013.
- Chair of the Biomechanics and Robotics Grand Theme, 33<sup>rd</sup> IEEE Engineering in Medicine and Biology Society Conference, EMBC 2011, Boston, USA, August 30 – September 2, 2011.
- Chair of the IEEE EMBC 2011 session on “Optimization and Machine Learning”
- Chair of the Summit Conference on Future Networks: Economy, Energy, Health ; MIT, October 2, 2009.
- Hosted summit “Prospective Serbia, new perspectives” with Serbian Deputy Prime Minister Djelic, Minister for Diaspora Cubrilo, and MIT/Harvard students, staff and press on October 18th 2007 at the MIT Media Lab.

- Chair of the International (Serbia, Greece & US) seminar/workshop on Entrepreneurship at the Innovation Center, Department of Mechanical Engineering, Belgrade University, June 27th 2007.
- Program Committee, IEEE-RAS/RSJ International Conference on Humanoid Robots, Tsukuba, Japan, December 5-7, 2005.
- Co-organized, OUTSIDE:INSIDE seminar series at the MIT Media Lab (2005-2006); hosted Professor James Kuffner (computer graphics) CMU, Professor Oussama Khatib (robotics) from Stanford University etc.

**PROFESSIONAL AND OTHER SOCIETIES:**

IEEE Robotics and Automation Society,  
 IEEE Engineering in Medicine and Biology Society,  
 Sigma Xi, The Scientific Research Society,  
 American Physical Society (APS).  
 Rotary International, Belgrade (Center), Honorary Member  
 National Academy of Inventors

**REVIEWER FOR:**

The International Journal of NeuroEngineering and Rehabilitation,  
 The International Journal of Control and Intelligent Systems,  
 Journal of Biomechanics,  
 Journal of Intelligent and Robotic Systems,  
 The IEEE Robotics and Automation Letters  
 The IEEE Transactions on Robotics,  
 The IEEE International Conference on Robotics and Automation,  
 The IEEE-RAS/RSJ International Conference on Humanoid Robots  
 The IEEE/RSJ International Conference on Intelligent Robots and Systems

**RECOGNITIONS, GRANTS AND AWARDS:**

- WPI Trustee’s Celebration of Faculty Achievement Award, 2020
- Co-PI on the NSF Phase II I/UCRC WPI: Center for Robots and Sensors for the Human Well-Being (2020-2025) Award Number:1939061; Awarded up to date (May 2020) \$99,999.00
- WPI Trustee’s Celebration of Faculty Achievement Award, 2019
- PI on the New Balance grant (2018-2019); ~\$47K plus usage of ~\$200K industrial 2 arm robot, industrial grade sewing/stitching station and unlimited supplies, material, and tools. Theme of this research is automated sewing and soft matter manipulation.
- Prof Popovic’s Variable Stiffness Device patent was selected by the Boston Patent Law Association "Invented Here!" program. Just 12 patents were selected from more than 12,000 granted in New England as part of BPLA’s initiative to honor the region’s newest and most innovative technologies.
- Inducted into the WPI Chapter of the National Academy of Inventors (NAI) on May 7, 2018.

- PI on the New Balance grant (2017-2018); ~\$12K plus usage of ~\$200K industrial 2 arm robot and unlimited supplies, material, and tools. Theme of this research is Sewing Automation with Tactile Feedback for Athletic Footwear Industry.
- Graduate Project “Gait Assistive Shoulder Prosthesis: Shoulder Control Moment Gyroscope (SCMG)” advised by Professor Popovic received 1st overall place award at Investing in Ideas with Impact (i3), WPI, April 2017 — i3 promotes the spirit of entrepreneurship by allowing student researchers to give a 3-minute pitch advertising their research's commercial viability to a panel of distinguished entrepreneurs and business leaders. Selected first overall from a pool of 20 finalists.
- Co-PI alongside WPI Professors Karen Troy and Mike Gennert on WPI Toyota collaboration (2016-), project titled “Actuation, sensing, and control of posture in dynamic environments for improved vehicle safety”. Anticipated duration is three years with \$150K annually from Toyota. During first year, Prof Popovic received two months’ summer salary and \$10K was allocated for non-exclusive research only license fee for Prof Popovic’s Hydro Muscle and Hydro Bone technologies.
- WPI Trustee’s Celebration of Faculty Achievement Award, 2015
- License for non-exclusive rights for Hydro Muscle (invented by Prof Popovic in 2014) was issued by WPI to Lockheed Martin for \$235K (2014); in reference to the non-exclusive rights to the Hydro Muscle technology which have been sold for the largest sum ever received for intellectual property at WPI.
- Recognized as one of the 200 most prominent Serbian-Americans during last 200 years. Recognized as one of the 20 most significant Serbian-Americans in category Science and Technology (alongside Pupin and Tesla and youngest on this list). The anniversary celebration of “200 Years of Serbs in America” co-organized by Tesla Science Foundation, Philadelphia, PA, June 27 – 29, 2014.
- Professor Popovic, by invitation from Pan Stanford Publishing which is publishing house within CRC Press, single-authored the first university textbook on Biomechanics and Robotics. The book was peer reviewed by top authorities in this field from MIT, University of Maryland, Tokyo Institute of Technology, Royal Veterinary College UK, CMU, WPI; it received excellent reviews. It is currently used at several universities as main textbook for this subject.
- The 2014 Robotics Engineering (RBE) 2nd place, Provost's MQP Award Runner up: D. Effraimidis, B. Jennings, G. McCarthy, N. Corso, C. Onal (Co-advisor), and M. B. Popovic (primary advisor), “Hydro Artificial Muscle (HAM) Exo-Musculature”.
- The 2013 WPI Mechanical Engineering Department Best MQP in Robotics Engineering Award: C. J. Berthelette, M. DiPinto, J. D. Sareault, E. C. Cobb (co-advisor), F. Hoy (co-advisor), and M. B. Popovic (primary advisor), “Rotary One-To-Many (OTM) Novel Actuator”; MQP Presentation Day, April 19, 2013.
- MQP "Elbow ExoMusculature" (Popovic, co-advisor). M. Brauckmann, E. Calamari, S. Lipkind, B. Leone, C. Molica, A. Piscopiello, W. Terry, M. Delph, E. Torres-Jara, M. Popovic, E. Clancy, and G. S. Fischer, Provost's honorable mention 2013. The Winner of the 2013 Provost's "Runner-up" MQP Award in Robotics Engineering.
- Professor Popovic's Society of Physics Students (SPS) team received the Sigma Pi Sigma Undergraduate Award at the national level by the American Institute of Physics (AIP) in 2011 for the project “Physics Applied to Post-Stroke Rehabilitation: Shoulder Soft Robotics Brace.” (accompanied with small ~\$3K monetary award)

- Member of the team, within the MIT Biomechatronics Group, praised for the best innovation in Health in 2007 by CNN and Time Magazine for the state-of-the-art actively powered ankle-foot prosthesis which may be controlled directly by the user.

#### CONSULTING:

- Department of Defense SBIR Phase II (2016-2019) ~\$72K out of ~\$2M; *Upper Limb Assistive and Rehabilitation and Orthotic Device*; in collaboration with Liberating Technologies, Inc. Helping lead and assist in applying the hydraulic muscles developed in Popovic labs into novel advanced hand orthosis.
- Food industry (2017) ~12K, *Robotic Packaging* for MA based distributor for the US East Coast.
- Department of Defense SBIR Phase I (2014-15) ~\$36K out of ~\$300K; DHP14-010 - *Upper Limb Assistive and Rehabilitation and Orthotic Device*; in collaboration with Liberating Technologies, Inc. Helping lead and assist in applying the hydraulic muscles developed in Popovic labs into novel advanced hand orthosis.
- Legal assistance to George Royster, certified civil trial advocate and Big Lots Stores, Inc by providing expertise in physics (2014), ~\$5K.
- Assistance to the Consortia for Improving Medicine with Innovation and Technology (CIMIT), Massachusetts General Hospital; the review process for proposals submitted in response to the A\*STAR Biomedical Engineering Programme 2013 Grant Call in Singapore. ~\$1K.
- MIT, Biomechatronics Group, (pro bono)

#### ADVISEES/TRAINEES:

at WPI (see <http://users.wpi.edu/~mpopovic/pages/people.html>):

#### (2019-2020)

David Barber, Project(s): Next Gen Wearable Robotics

Tina Barsoumian, Project(s): Active Knee Device

Matthew Bowers, **graduate, PhD**, Project(s): Advanced Hydro Muscle actuated Leg (Robotics, Orthotics & Prosthetics, Augmentation);

Calum Briggs, **graduate student, MS**, Project(s): Soft Matter Manipulation -- New Balance sponsored research with dual arm Yaskawa robot.

Mia Buccowich, Project(s): Prosthetics Index Finger and Thumb

Davis Catherman, **graduate student, PhD**, Project(s): TBD

Ellen Clarrissimeaux, Project(s): New generation valves, robot architectures, biomimetic systems.

Julia D'Agostino, Project(s): Artificial skin; novel actuators, valves, robot architectures, biomimetic systems. Prosthetics Index Finger and Thumb

Connor Field, Project(s): Next Gen Wearable Robotics

Juan D. Florez Castillo, **graduate student, PhD**, Project(s): Multi-limb robot and variable stiffness actuators;

Mervyn Larrier, **graduate student, MS**, Project(s): Accurate Prosthetic Hand, EEG and EMG controlled;  
Abraham Masse, Project(s): Next Gen Wearable Robotics  
Jason McGrath, Project(s): Active Knee Device  
Mitchell Reid, Project(s): Next Gen Wearable Robotics  
Felix Sanchez, **graduate student, PhD**, Project(s): Multi-limb robot and variable stiffness actuators;  
Zachary Shaffer, Project(s): Next Gen Wearable Robotics  
Jakob Sperry, Project(s): Prosthetics Index Finger and Thumb  
Christina Steele, Project(s): Active Knee Device  
Andrew Strauss, Project(s): Prosthetics Index Finger and Thumb  
Kassidy Utheim, Project(s): Active Knee Device  
Zachary Zlotnick, Project(s): Active Knee Device

### **(2018-2019)**

Matthew Bowers, **graduate, PhD**, Project(s): Advanced Hydro Muscle actuated Leg (Robotics, Orthotics & Prosthetics, Augmentation);  
Maddie Brennan, Project(s): Investigation of UCL Tears in Baseball Pitchers using Hydro Muscle actuated robot, UCL brace;  
Calum Briggs, **graduate student, MS**, Project(s): Soft Matter Manipulation -- New Balance sponsored research with dual arm Yaskawa robot.  
Eric Carkin, Project(s): The Rehabilitative/Assistive Arm Exoskeleton for assistance with feeding and other tasks (Muscular Dystrophy);  
Nikhil Castelino, **graduate student, MS**, Project(s): Robot arms' manipulation based on the pupil tracking;  
Ellen Clarrissimeaux, Project(s): New generation valves, robot architectures, biomimetic systems.  
Julia D'Agostino, Project(s): Artificial skin; novel actuators, valves, robot architectures, biomimetic systems.  
Juan D. Florez, **graduate student, PhD**, Project(s): Wearable Robotics and variable stiffness actuators;  
Steven Gallagher, Project(s): Investigation of UCL Tears in Baseball Pitchers using Hydro Muscle actuated robot, UCL brace;  
Parker Grant, Project(s): The Rehabilitative/Assistive Arm Exoskeleton for assistance with feeding and other tasks (Muscular Dystrophy);  
Evan Hallberg, Project(s): Wearable robotics, teleoperation.  
Alexander Krasa, **graduate student, MS**, Project(s): Robot arms' manipulation based on the pupil tracking;  
Ben Kurtze, Project(s): Investigation of UCL Tears in Baseball Pitchers using Hydro Muscle actuated robot, UCL brace;  
Mervyn Larrier, **graduate student, MS**, Project(s): Accurate Prosthetic Hand, EEG and EMG controlled;

Shannon Moffat, **graduate student, MS**, Project(s): Biomimetic humanoid walking robot, new valves.

Lauren Morgan-Evans, Project(s): actively powered, gait (FSR, IMU) and environment (sonic sensors) sensitized exosuit (robotic sock) for drop foot;

Alberto Ramirez, **graduate student, MS**, Project(s): Robot arms' manipulation based on the pupil tracking;

Felix Sanchez, **graduate student, MS**, Project(s): Wearable robotics, teleoperation.

Paula Sardi, Project(s): Investigation of UCL Tears in Baseball Pitchers using Hydro Muscle actuated robot, UCL brace;

Mingqi Shuai, Project(s): Soft Matter Manipulation device (for robotic sewing);

Bryan Therrien, Project(s): The Rehabilitative/Assistive Arm Exoskeleton for assistance with feeding and other tasks (Muscular Dystrophy);

Hannah Yeung, Project(s): actively powered, gait (FSR, IMU) and environment (sonic sensors) sensitized exosuit (robotic sock) for drop foot;

Michelle Zhang, Project(s): Soft Matter Manipulation device (for robotic sewing);

#### **(2017-2018)**

Shlok Agarwal, **graduate, MS**, Project(s): Bipedal locomotion, balance & stability, simulation & control;

Matthew Bowers, **graduate, PhD**, Project(s): Advanced Hydro Muscle actuated Leg (Robotics, Orthotics & Prosthetics, Augmentation);

Thomas Brown, Project(s): Tactile robot sewing -- New Balance sponsored research (with dual arm Yaskawa robot);

Kenneth Colpritt, Project(s): Biomimetic humanoid walking robot

Andrew Curran, Project(s): Biomimetic humanoid walking robot

Ryan Eastwood, Project(s): Robo dog

Walter Gallati, Project(s): EEG based non-invasive neural controller

Hannan (Ben) Liang, Project(s): Robo dog

Melissa McCormick, Project(s): Hydro Muscle actuated Hand Brace

Sarah O'Grady, Project(s): Tactile robot sewing -- New Balance sponsored research (with dual arm Yaskawa robot);

Evan Stelly, Project(s): Hydro Muscle actuated Hand Brace

Mariah Sullivan, Project(s): Biomimetic humanoid walking robot

William Sullivan, Project(s): Tactile robot sewing -- New Balance sponsored research (with dual arm Yaskawa robot);

Caleb Wagner, Project(s): RoboDog;

Sahawat Amonlikitsin, Project(s): Biped walking robot

Andrew Lewis, Project(s): Tactile robot sewing -- New Balance sponsored research (with dual arm Yaskawa robot);

Namrita Madhusoodanan, **graduate student, MS**, Project(s): Tactile robot sewing -- New Balance sponsored research (with dual arm Yaskawa robot);

Albert Nanabeka, Project(s): Hydro Muscle actuated Hand Brace  
Thananart Piyajawong, Project(s): Biped walking robot  
Patrick Polley, Project(s): EEG based non-invasive neural controller  
Michael Steidel, Project(s): Robo dog  
Zhengxing Yang, Project(s): Biped walking robot

#### **(2016-2017)**

Shlok Agarwal, **graduate, MS**, Project(s): Bipedal locomotion, balance & stability, simulation & control;  
Matthew Bowers, **graduate, PhD**, Project(s): Advanced Hydro Muscle actuated Leg (Robotics, Orthotics & Prosthetics, Augmentation);  
Erika Giancarlo, research assistant, Project(s): Electromagnetic Metamaterial Energy Harvesting  
Chinmay Harmalkar, **graduate, MS**, Project(s): Hydro Muscles dynamics, simulation and control;  
Shannon Harrington, Project(s): The Automated Cochleostomy, **collaboration with University of Zürich Hospital (Universitätsspital Zürich, USZ)**;  
Casey Kracinovich, Project(s): Accurate Prosthetic Hand, EEG and EMG controlled;  
Mervyn Larrier, Project(s): Accurate Prosthetic Hand, EEG and EMG controlled;  
Yunda Li, Project(s): RoboDog;  
Abhishek Kashyap, **graduate, MS**, Project(s): Fluid actuation, system architecture, and control;  
Mitchell K Muller, **graduate, MS**, Project(s): Gait Assistive Shoulder Prosthesis: Shoulder Control Moment Gyroscope (SCMG)  
Stephen Olis, Project(s): Aquatic locomotion: A First-Principle's Approach to Propeller-Intrinsic Losses;  
Lucius Park, Project(s): Novel valves, fluid actuators, system architecture, and control;  
Michael Pickett, Project(s): RoboDog;  
Dylan Renshaw, Project(s): Accurate Prosthetic Hand, EEG and EMG controlled;  
Elina Saint-Elme, Project(s): Accurate Prosthetic Hand, EEG and EMG controlled;  
Christopher Salomone, Project(s): The Automated Cochleostomy, **collaboration with University of Zürich Hospital (Universitätsspital Zürich, USZ)**;  
Jonathan Tai, Project(s): Novel valves, fluid actuators, system architecture, and control;  
Caleb Wagner, Project(s): RoboDog;

#### **(2015-2016)**

Brian Baggaley, undergraduate, Project: Ornithopter, flapping wings robotic bird;  
Nicholas Benson, undergraduate, Project: Hydro Muscles actuated Exo-legs for therapy & games;  
Matthew Bowers, **graduate, PhD**, Project: Advanced Hydro Muscle actuated Leg (Robotics, Orthotics & Prosthetics, Augmentation); Legchair; new generation of valves;  
Daniel Felix, undergraduate, Project: Advanced fitting for more lifelike prosthetic limbs;  
Connor Flanigan, undergraduate, Project: Gamified Music Learning System w/ VR Force Feedback  
Chinmay Harmalkar, **graduate, MS**, Project: Hydro Muscles dynamics, simulation and control;  
Jason Hyacinthe, undergraduate, Project: Hydro Muscles actuated Exo-legs for therapy & games;

Ananth Jonnavittula, **graduate, MS**, Project: Legchair;  
Christian Kaan, **graduate, MS**, Project: Hydro Bones; Variable stiffness Exoskeleton;  
John Kelly, **graduate, MS**, Project: Legchair;  
Lynn Koesterman, **graduate, MS**, Project: Legchair;  
William Manning, undergraduate, Project: Gamified Music Learning System w/VR Force Feedback;  
Elizabeth Martino, undergraduate, Project: Gamified Music Learning System w/VR Force Feedback;  
Jourdan McKenna, undergraduate, Project: Ornithopter, flapping wings robotic bird;  
Triet Pham, undergraduate, Project: Shoulder elbow exomusculature;  
Michael Pickett, undergraduate, Project: Legchair; Hydro Dog II;  
Richard Matthew Rafferty, **graduate, MS**, Project: Legchair;  
Steven Ruotolo, undergraduate, Project: Hydro Muscles actuated Exo-legs for therapy and games;  
Daniel Sanderson, undergraduate, Project: Ornithopter, flapping wings robotic bird;  
Saivimal Sridar, **graduate, MS**, Project: Hydro Muscles with and without granular media; Hydro Bones; Variable stiffness Exoskeleton;  
Selim Tanriverdi; undergraduate, Project: Advanced fitting for more lifelike prosthetic limbs;  
Crystal Trivedi, undergraduate, Project: Advanced fitting for more lifelike prosthetic limbs;  
Seiichiro Ueda, **graduate, MS**, Project: Hydro Muscle Sensors and Control; Legchair  
Varun Verlenkar, **graduate, MS**, Project: Legchair;  
Everett Wenzlaff, undergraduate, Project: Advanced fitting for more lifelike prosthetic limbs  
Frederick Wight, undergraduate, Project: Ornithopter, flapping wings robotic bird;  
Chenwei Zhang, undergraduate, Project: Hydro Muscles actuated Exo-legs for therapy and games;  
Amaid Zia, **graduate, MS**, Project: Legchair;

#### **(2014-2015)**

Barth, Andrew John, undergraduate, Project: Hydro Muscle and Exomusculature;  
Berdeguer, Carlos Enrique, undergraduate, Project: Wing Dynamics Platform;  
Canga, Alphan, undergraduate, Project: Ornithopter;  
Coffey, Daniel Patrick, undergraduate, Project: Kangaroo Robot;  
Deisadze, Nicholas, **lab technician** (back to Popovic Labs after receiving MS from Cornell Univ.);  
Delia, Michael Kurt, undergraduate, Project: Ornithopter;  
Delph, Michael, **graduate, PhD**, Project: Exoskeleton;  
Fitzgerald, Daniel John, undergraduate, Project: Cheetah Robot;  
Giancarlo, Erika V, undergraduate, Project: Metamaterials for manipulation of B field;  
Hunt, Thane Robert, undergraduate, Project: Cheetah Robot;  
Hyman, Alexander M, undergraduate, Project: Ornithopter;  
Leiro, Andres Francisco, undergraduate, Project: Cheetah Robot;  
Majeika, Corey, **graduate, MS**, Project: Hydro Muscle;  
Nagelin, Angela Marie, undergraduate, Ornithopter;  
Hannah Sattler, undergraduate, Project(s): Fluid Foot  
Selahaddin (Dean) Ozkan, undergraduate, Project(s): Fluid Foot  
Schmidtman, Hanna Lynn, undergraduate, Project: Wing Dynamics Platform;

Sorrells, Jonathan Lee, undergraduate, Project: Hydro Muscle and Exomusculature;  
Sridar, Saivimal, **graduate, MS**, Project: Jamming of Granular Media;  
Starek, Peter Christopher, undergraduate, Project: Kangaroo Robot;  
Ueda, Seiichiro, undergraduate, Project: Hydro Muscle and Exomusculature ;  
Waid-Jones, Austin Charles, undergraduate, Project: Wing Dynamics Platform;  
Wu, Jonathan T, undergraduate, Project: Hydro Muscle and Exomusculature ;

#### **(2013-2014)**

Alexandra Beando, undergraduate, Project(s): Test Bed for Ornithopters (MQP) and Fluid Foot  
Adam Blumenau, **graduate, MS**, Project: Hydro Muscles and Exomusculature  
Jesus Chung, undergraduate, Project(s): Test Bed for Ornithopters (MQP)  
Nicholas Corso, undergraduate, Project: Hydro Artificial Muscle (HAM) Exo-Musculature (MQP)  
Daniil Effraimidis, undergraduate, Project: Hydro Artificial Muscle (HAM) Exo-Musculature (MQP)  
Anne Harris, undergraduate, Project(s): Hydro Artificial Muscle (HAM) Exo-Musculature  
Thane R. Hunt, undergraduate, Project(s): Exomusculature and Linear One-to-Many System  
Brian Jennings, undergraduate, Project: Hydro Artificial Muscle (HAM) Exo-Musculature (MQP)  
Greg McCarthy, undergraduate, Project: Hydro Artificial Muscle (HAM) Exo-Musculature (MQP)  
Chris Overton, undergraduate, Project(s): Test Bed for Ornithopters (MQP)  
Tyler Pietri, undergraduate, Project(s): Test Bed for Ornithopters (MQP)  
Kevin Ramirez, undergraduate, Project(s): Test Bed for Ornithopters (MQP)  
Eric Reich, graduate, Project(s): Theoretical Particle Physics and General Relativity  
Hannah Sattler, undergraduate, Project(s): Fluid Foot  
Brian Scholwin, undergraduate, Project(s): Experimental and Theoretical Study of Novel  
Magnetic Field Based Propulsion (MQP)

#### **(2012-2013)**

Christopher Berthelette, undergraduate, Project: Exomusculature , Linear One-to-Many System,  
and Rotary One-to-Many System  
Nicholas Deisadze, undergraduate, Project: Bio-inspired flapping bird robot & flying studies  
Matthew DiPinto, undergraduate, Project: Exomusculature and Rotary One-to-Many System  
Woo Chan Jo, undergraduate, Project: Bio-inspired flapping bird robot & flying studies  
Christopher J. Molica, undergraduate, Project(s): Artificial Muscles for Elbow Brace (MQP)  
Stanley Mui, undergraduate, Project: Actuated Shoulder Cap & Arm Movements in Walking  
Philip D. O'Sullivan, undergraduate, Project: Bio-inspired flapping bird robot and flying studies  
J.D. Sareault, undergraduate, Project: Exomusculature and Rotary One-to-Many System  
Bo Rim Seo, undergraduate, Project: Bio-inspired flapping bird robot and flying studies  
Kevin Vanslette, **graduate, MS**, Project(s): Theoretical Particle Physics: Higgs and Plank

#### **(2011-2012)**

Adam Blumenau (back to Popovic Labs in 2013/14),  
David Orion Girardo,

Alec Ishak,  
Ephedyn L. Lin,  
Sahit Mandala,  
Benjamin Morrison (IQP),  
Franco Antonio Oshiro,  
Daniel Topping (IQP),  
Garrett Irgens Yablonski

**at MIT:**

Andreas Hofmann, MIT Electrical Engineering and Computer Science Department, **Ph.D. Graduate Student** (2002-2005).

Ben Swilling, MIT Mechanical Engineering Department, **M.Sc. Graduate Student** (2003-2005).

Amy Englehart, MIT Electrical Engineering and Computer Science Department, **M.Sc. Graduate Student** (2003-2004).

Wendy Gu, MIT Physics Undergraduate Student (2002-2003).

Hataitep Wongsuwarn, **visiting Ph.D. student**, Thailand (2005-2006).

Matthew T Farrell, MIT Intelligent Vehicles & Biomechatronics, **M.Sc. Graduate** (2005-2007).

Alice M Ainsworth & numerous other MIT UROP students (2001-2007).

Center for Future Banking undergraduate students:

Irum Amjad, Ana Chen, Leslie Gee, Erik Feng, Mary ZheChen Hong, Steven Hong, Ryan MacDowell, Andrew E Okoh, Oscar Ricardo Moll Thomae etc (2008)

**SERVICES TO WPI:**

- Chair of the RBE MQP committee. (2020-)
- Chair of the committee for Robotics Engineering Program Safety / Security (2017-).
- On committee for Robotics Engineering Program Curriculum (2017-2018).
- Presenter at WPI Venture Forum (February 2017; November 2017)
- In charge of weekly Robotics Engineering Colloquium (2015-2016).
- Chair of WPI Robotics Engineering Curriculum committee (2014-2015)
- In charge of weekly Physics Department Colloquium (2013-2014).
- On 3-member committee for Robotics Engineering Program Curriculum (2013-2014).
- On graduate student admission for Robotics Engineering Program (2012-).
- Popovic Labs is one of the top groups at WPI for public outreach as documented by numerous presentations and demonstration of new technologies invented in Popovic Labs; notable events: Cambridge Science Festival (2014-2018), Touch Tomorrow (2014-2019), State Science Fair (2014) etc.

**COURSES TAUGHT at WPI:**

RBE 520            BIOMECHANICS AND ROBOTICS  
PH 597 ME 593 BME 595 RBE 595

	SP TOP: INTRO TO BIOMECH & ROBOTICS
RBE 595	ST: SPACE & PLANETARY ROBOTICS
PH 1110	GENERAL PHYSICS-MECHANICS
PH 1111	PRINC OF PHYS-MECH
PH 1120	GEN. PHYSICS-ELEC-MAGNET
PH 1121	PRIN OF PHYSICS: E & M
PH 1130	MODERN PHYSICS
PH 2301	ELECTROMAGNETIC FIELDS
PH 3301	ELECTROMAGNETIC THEORY
PH 3401	QUANTUM MECH I
PH 3402	QUANTUM MECH II
PH 597	INTRO TO PARTICLE PHYSICS
ISP MBP	GENERAL RELATIVITY
ISP MBP	QUANTUM FIELD THEORY

### POPOVIC LABS

Professor Popovic is founder and director of WPI Popovic Labs (about 20 students) where researchers study physics, biomechanics and robotics with goal to answer how living systems function and to synthesize systems that have resembling architecture and functionality and/or may improve life.

Website: [Popovic Labs](#)

### Popovic Labs, Press

- [WPI Researchers Developing Open-Source Designs to Speed Creation of Low-Cost Ventilators](#) WPI News by Sharon Gaudin, April 1, 2020
- [Meet the Author: Marko B. Popovic](#) Join us at Gordon Library for a talk by [Marko B. Popovic](#), Professor of Physics, Biomedical Engineering, and Robotics Engineering and author of the new book [Biomechatronics](#).
- [Patently Innovative](#) discusses Prof Popovic Variable Stiffness Device patent selected by the Boston Patent Law Association "Invented Here!" program. Just 12 patents were selected from more than 12,000 granted in New England in 2018 as part of BPLA's initiative to honor the region's newest and most innovative technologies. (by Andy Baron, Daily Herd, March 5, 2019)
- [Boston Patent Law Association Honors Professor Marko Popovic for Innovative Patent](#) (WPI News, November 28, 2018)
- [U.S. Patent issued to Professor Popovic, and his team: Title "Actuation Systems and Methods"](#) in reference to the "One-To-Many" (OTM) concept (WPI News, February 15, 2018)
- [What Robots Can Teach You About Healthy Movement](#) featured in the Utmost Newsletter, Oct 10 2017 (by Andrew Schaeffer).
- [Technology Transfer 2.0: Finding economic value in university R&D](#) students working in Popovic Labs featured in Brookings, Metropolitan Revolution, June 7 2016 (by Scott Andes)
- [Hydro Dog](#) featured in WPI Magazine, Fall 2015 (Journal staff, illustration by Chi Birmingham)

- Prof Popovic's new book "[Biomechanics and Robotics](#)" featured in *Highlights*, page 43, [WPI Research, Spring 2015](#),
- Daily Herd, [Vecna Robot Sprint](#), April 27, 2015 (by Dave Greenslit)
- The Boston Globe, [At Robot Zoo, a menagerie of mechanical creatures](#), April 11, 2015 (by Eryn Carlson)
- Reuters, [Robot racing sparks scientific enthusiasm in U.S. students](#), March 24, 2015 (by Scott Malone) also featured in: The New York Times, [Robot racing sparks...](#), March 24, 2015 (editing by Lisa Von Ahn); Channel News Asia, [Robot...](#); Business Insider, [Robot...](#); CNBC; Yahoo! News; the Toronto Sun; Daily Times Pakistan; etc. UK Eurosport [Prof. Marko Popovic gestures to an artificial muscle design...](#); Yahoo! News, entertainment [Prof. Marko Popovic...](#);
- Daily Herd, [Faculty Recognition](#), March 2, 2015 (by Jennifer Wyglinski) [in reference to the non-exclusive rights to the Hydro Muscle technology which have been sold for the largest sum ever received for intellectual property at WPI]
- Physics Department News, [Cambridge Science Festival](#), April 19, 2014

**Popovic Labs, YouTube videos:**

[WPI Popovic Labs, Cambridge Science Festival 2018](#), posted April 28, 2018

[Advanced Accurate Prosthetic Hand controlled by thought alone](#), Demonstration @ 2017 Cambridge Science Festival, May 15, 2017

[WPI Popovic Labs, Cambridge Science Festival 2017 \(Science Carnival and Robot Zoo\)](#), May 4, 2017

[Welcome to Popovic Labs: December 2016 Edition](#), March 3, 2017

[WPI Popovic Labs, Shoulder Control Moment Gyroscope](#), February 14, 2017

[WPI Popovic Labs Hydro Muscle ICRA2016 Slides Movie](#), November 11, 2016

[WPI Popovic Labs Hydro Muscle video material for ICRA 2016](#), November 10, 2016

[WPI Popovic Labs at Cambridge Science Festival 2016](#), April 16, 2016

[WPI Popovic Labs, Cambridge Science Festival 2015 \(Robotics Zoo\)](#), April 20, 2015

[Hydro Muscle Test 5 2014](#), October 17, 2014

**LANGUAGE PROFICIENCY**

English (fluent), French (moderate), Serbian (native)

**MISCELLANEOUS:**

- Translated book for kids from English into Serbian – Brian Southworth and Georges Boixader (1978). “The world of particles” European Organization for Nuclear research, European Laboratory for Particle Physics, CERN Desktop Publishing, 2002, 67 pages.
- Proposed first the name of the MIT Computer Science and Artificial Intelligence Lab (MIT CSAIL) during employee-blog based solicitation for the name of the new lab.
- Plays piano. Composes.
- Father of two girls, teenagers interested among other in science and engineering.