**Patents**

1. “Multi-core CPU and GPU Implementation of Discrete Periodic Radon Transform and Its Inverse”, Inventors: Cesar Carranza, Daniel Llamocca, and **Marios S. Pattichis**, filed on December 16th, 2015.
2. “Fast and Scalable Architectures and Algorithms for the Computation of the Forward and Inverse Discrete Periodic Radon Transform with Application to 2D Convolutions and Cross-Correlations”, Inventors: Cesar Carranza, Daniel Llamocca, and **Marios S. Pattichis**, filed on December 16th, 2015.
3. “System and Methods for Adaptive Optimization for Video Coding and Video Delivery,” Inventors: **Marios S. Pattichis**, Yuebing Jiang, Cong Zong, Gangadharan Esakki, Venkatesh Jatla, and Andreas Panayides, *Patent filed on* 07/31/2015.
4. “System and Methods for Dynamic Management of Hardware Resources,” Inventors: **Marios S. Pattichis**, Yuebing Jiang, and Daniel Llamocca, STC Ref. No. 2013-028-03, Continuation patent filed on July 6th, 2015.
5. “System And Methods For Computing Forward and Inverse Discrete Periodic Radon Transform,” Inventors: Cesar Carranza, Daniel Llamocca, and **Marios S. Pattichis**, *Patent* filed on December 16th, 2014.
6. “Role Specific Views for Laparoscopic Surgery,” Inventors: Timothy Perez, Yuebing Jiang, and **Marios S. Pattichis**, *Patent* filed on October 31st, 2013.
7. “System and Methods for Dynamic Management of Hardware Resources,” Inventors: **Marios S. Pattichis**, Yuebing Jiang, and Daniel Llamocca, U.S. Pattent 9,111,059 B2, approved on Aug. 18th, 2015.
8. "System and Methods of Regularized Optimization For Matrix Factorization And Image and Video Reconstruction," Inventors: Paul Rodriguez-Valderrama, **Marios S. Pattichis**, and Victor Manuel Murray-Herrera, U.S. Patent 8,908,992 B1, approved on Dec. 9th, 2014.
9. “System and Methods of Amplitude-Modulation Frequency-Modulation (AM-FM) Demodulation for Image and Video Processing,” Victor Manuel Murray Herrera, **Marios S. Pattichis**, Peter Soliz, Carla Paola Agurto Rios and Herbert T. Davis III, U.S. Patent 8,515,201 B1, approved on Aug. 20th, 2013, biomedical applications licensed to VisionQuest Biomedical, LLC.

**Journal editorials**

1. Loizou, C., Morega, M., Kyriacou, E., Pasca, S., Petroudi, S., Bamidis, P., **Pattichis, M.S.**, and Pattichis, C.S. “Guest Editorial to Special Issue on Biomedical Monitoring Technologies,” *International Journal of Monitoring and Surveillance Technologies Research* (IJMSTR), Parts 1 and 2, vol. 1, no. 4, pp. October-December 2013.
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**Journal papers that are in review or pending submission**

1. Carranza, C., Llamocca, D., and **Pattichis, M.S.**, “Fast 2D Convolutions and Cross-Correlations Using Scalable Architectures,” *IEEE Transactions on Image Processing*, submitted in July 2016*.*
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3. Stone, V., and **Pattichis, M.S.**, “Motion-based decomposition of digital video,” in preparation.
4. Kyriacou, E.C., **Pattichis, M.S.**, Murray, V., Petroudi, S., Nicolaides, A., and Pattichis, C.S., “Prediction of High Risk Asymptomatic Ultrasound Imaging Carotid Plaques Based on Multiscale Amplitude-Modulation Frequency-Modulation (AM–FM) Texture Features,” in preparation.
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**Books/Proceedings**

1. **Pattichis, M.S.**, General Chair, *2008 IEEE Southwest Symposium on Image Analysis and Interpretation,* Santa-Fe, New Mexico, March 2008.

**Book chapters**

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2. **Pattichis, M.S.,** Hock, R., Henney, C., Arge, C., DeMarch, S., Delgado, A.P., Darsey, C., and Jatla, V., “Identifying Coronal Holes: Can we learn any lessons from Computer Aided Diagnosis?,” invited presentation, *2014 Solar Heliospheric & Interplanetary Environment* (*SHINE),* Telluride, Colorado, June 2014.
3. Celedón-Pattichis, S., LópezLeiva, C. A., **Pattichis, M.S.**, & Llamocca, D., “At first it was very hard, then it was fun”: Conjecturing a learning trajectory for underrepresented middle school students in mathematics and engineering,” In K. Gomez (Chair), *Creating contexts of pedagogical and curricular support for non-English background students in mathematics and science*. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, Pennsylvania, *2014 American Educational Research Association (AERA)*, April 2014.
4. LópezLeiva, C. A., Celedón-Pattichis, S., **Pattichis, M.S.**, & Llamocca, D., “Image representation in a middle school afterschool program**,”** *4th International Realistic Mathematics Education Conference*, Boulder, Colorado, 2013.
5. LópezLeiva, C., Celedón-Pattichis, S., **Pattichis, M.S.**, & Llamocca, D., “Successes and challenges of supporting interactive learning in a mathematics and engineering afterschool program for middle school students,” *Annual meeting of the American Educational Research Association*, San Francisco, California, April, 2013.
6. Celedón-Pattichis, S., LópezLeiva, C. A., **Pattichis, M. S.**, & Llamocca, D., “Advancing out-of-school learning in mathematics and engineering,” In J. Aguirre (Chair), Learning to do math inside and outside of school—fostering productive mathematical practices and identity development for Latin@ youth, *Scientific Research Symposium*, *Annual meeting of the Society for the Advancement of Chicanos and Native Americans in the Sciences*, San Antonio, Texas, October, 2013.
7. LópezLeiva, C., & **Pattichis, M. S.**, “With our feet on the ground”: Affordances and challenges of developing an integrated STEM approach for Latina/o middle school students. In S. Celedón-Pattichis (Chair), Making our voices heard: Negotiating the promises and challenges of STEM education for historically underrepresented youth. Scientific Research Symposium presented at the annual meeting of the *Society for the Advancement of Chicanos and Native Americans in the Sciences*, Seattle, Washington, October, 2012.
8. Murray, V., Llamocca, D., Yuebing, J., Lyke, J., **Pattichis, M.S.**, Achramowicz, S., and Keith A., “Adaptive Wiring Panels using Cell-based Architectures: A First Approach,” *Reconfigurable Systems Workshop*, Albuquerque, New Mexico, 2010.
9. Murillo S, Zamora G., Barriga S., Nemeth S., Crammer R., Edwards A., Bauman W., Soliz P., **Pattichis M.**, "Low-Cost Super Resolution Retinal Imaging with Embedded Denoising: Quantitative and Qualitative Assessment of Reconstructed Images from a Scanning Laser Ophthalmoscope,” in the *2010 Meeting for Research in Vision and Ophthalmology*, ARVO 2010, *Investigative Opthalmology and Visual Sciences*, Abstract number 1803.
10. Barriga, E.S., Murray, V., Agurto, C., **Pattichis, M.S.**, Russel, S.R., and Soliz, P., “Automatic Computer-Based Grading for Age Related Maculopathy,” in the *2010 Meeting for Research in Vision and Ophthalmology*, ARVO 2010, *Investigative Opthalmology and Visual Sciences*, Abstract number 1793.
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