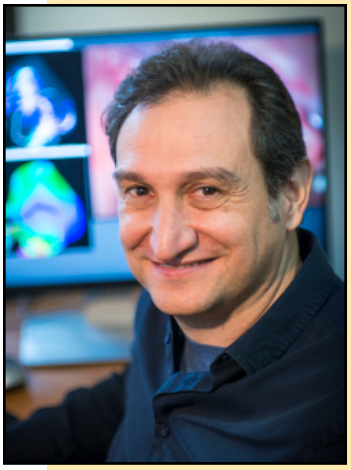

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Education

PhD, Computational Sciences, George Mason University

Key Interests

Stroke | Cerebral Aneurysms | Blood Flow | Image-Based Modeling | Patient-Specific Modeling | Computational Fluid Dynamics | Hemodynamics | Modeling Medical Devices

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SELECT PUBLICATIONS

- Hadad, S. *et al*. (2021). Regional aneurysm wall enhancement is affected by local hemodynamics: A 7T MRI study. *Am. J. Neuroradiol*, 42(3), 464-470.
- Salimi Ashkezari, S. *et al*. (2021). Hemodynamics in aneurysm blebs with different wall characteristics. *J. Neurointerv. Surg*., 13(7), 642-646.
- Salimi Ashkezari, S. *et al*. (2021). Analysis of hemodynamic changes from aneurysm inception to large sizes. *Int J Number Method Biomed Eng*, 37(1).
- Salimi Ashkezari, S. *et al*. (2021). Blebs in intracranial aneurysms: Prevalence and general characteristics. *J. Neurointerv. Surg*., 13(3), 226-230.

Research Focus

I conduct research in cerebral aneurysms with three main objectives: 1) understanding the interactions between blood flows and vascular wall biology that govern the processes of wall degeneration and aneurysm growth and rupture, 2) improving aneurysm evaluation and risk assessment using statistical models based on patient, anatomical, geometric and hemodynamic characteristics of aneurysms as well as aneurysm databases, 3) improving and personalizing aneurysm treatment procedures by better understanding the effects of different medical devices and treatment options.

Current Projects

- Improving cerebral aneurysm risk assessment through understanding wall vulnerability and failure modes, the National Institutes of Health - U. Pittsburgh: The objective of this project is to connect flow conditions to wall structure and strength in cerebral aneurysms using resected tissue samples and computational modeling, and use this information to identify unruptured aneurysms at risk of rupture
- Computational and Biological Approach to Flow Diversion, National Institutes of Health - Mayo Clinic: The major goal of this project is to model the hemodynamic alteration produced by flow diverting devices on animal models of cerebral aneurysms and relate them to long term aneurysm occlusion rates.