

Advanced Radiology Services Foundation

2019 Annual Report



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Dear friends:

The ARS Foundation was initiated by the members of Advanced Radiology Services as a public charity with a mission to use charitable giving to improve the field of radiology. Our method is to be a catalyst, looking for strategic ways that our giving can be multiplied by outside resources to strengthen other organizations.

This has again been a successful year for the Foundation and this annual report provides a moment to report those successes to you.

- **Radiopaedia.org:** This year we began support of the excellent free open-access radiology website radiopaedia.org, lead by Dr. Frank Gaillard, in order to develop its technical capacity. The first step of a potential multi-year plan for its development is to permit easier uploading of teaching cases using DICOM standards.
- **Emory University Center for Ethics/Michigan State University:** In 2019, the ARS Foundation offered a grant to Dr. John Banja as the lead of an Emory University Center for Ethics / Michigan State University project on the non-interpretive aspects of artificial intelligence in radiology. Specifically, this will focus on the ethics, economics, and legal aspects that have been only superficially discussed until now. This grant has already generated conference presentations and article submissions. There are plans to produce educational podcasts for radiologists and radiology trainees beginning in 2020. An interview with Dr. Banja about his work for this grant can be read at: <https://www.healthimaging.com/topics/artificial-intelligence/radiologists-ethical-ai-key-successful-future>.

- **Harvey L. Neiman Health Policy Institute through the American College of Radiology (ACR) Foundation:** Our goal in strongly supporting this institute has been to create a national "think tank" for radiology health policy research. We have been recognized by the ACR for our leadership work on this issue. After our first year of funding, we created a challenge match to strengthen the institute's fundraising, now in its fourth year. This challenge has again received a much greater fundraising response than expected. Our challenge grant has been matched first by the ACR Foundation and then matched again by individual and group donors. Equally important, our leadership work on this topic has helped catalyze a shift in the ACR Foundation's strategic direction toward supporting health policy research.
- **Radiological Society of North America (RSNA):** Our continued support of the RSNA Research and Education Foundation was recognized as a visionary support group at the silver level. The RSNA Foundation has achieved for each \$1 donated an average of a \$50 match from other funding sources such as the National Institutes of Health.
- **Michigan State University:** We continue to work with Michigan State University towards funding support for an imaging-centered researcher.

In addition, with the second year of Cheryl Buehler as our Treasurer, we will continue a successful investment plan to promote our Foundation's financial future; this has resulted in a 2019 annual return with a net gain of \$87,485.

I am grateful that we have been given the opportunity to be good stewards of the Foundation's resources and in the faith of its donors. We plan to maintain this path for the upcoming years.

Warmly,

Dieter

Rolf Dieter Hollstein, MD MPH, on behalf of the ARS Foundation Board

MISSION

The ARS Foundation is dedicated to supporting organizations that improve the health of communities our members serve and investing in the future of radiology.

CORE VALUES

- The ARS Foundation is operated in a transparent fashion with a clear and consistent grant selection process in order to respect our supporters and maintain their confidence.
- Provide leadership for other radiology groups for their charitable activities.
- Make a positive difference.

2019 BOARD OF DIRECTORS

Thomas Archambeau, MD

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Brian Fedeson, MD

Rolf Dieter Hollstein, MD

Leena Mammen, MD

2019 OFFICERS

Rolf Dieter Hollstein, MD - President

Thomas Archambeau, MD - Vice President

Cheryl Buehler - Treasurer

Laura Perkovic - Secretary



2019 Projects

- **Radiopaedia.org**

The ARS Foundation made their first donation to Radiopaedia.org in 2019. Radiopaedia.org had become one of the leading online radiology and more broadly medical resources across the globe with over 2.5 million visitors. Our donation will assist their technical capacities, allowing easy upload of more teaching cases that will be available for free for all visitors including low and middle income countries.



EMORY
CENTER FOR
ETHICS

- **Emory University Center for Ethics / Michigan State University**

This grant was provided to Emory University Center of Ethics for the first time in 2019. Dr. John Banja is focusing on underappreciated critical issues for radiologist learning about artificial intelligence and radiology. This will focus on the non-interpretative aspects including ethics, economics, and legal issues, with plans for presentations, articles, and educational podcasts.



- **Harvey L. Neiman Health Policy Institute through the American College of Radiology (ACR) Foundation**

The ARS Foundation has donated to the ACR Foundation to support the Harvey L. Neiman Health Policy Institute since 2015. In 2016, we added a Match Challenge that provided the ACR an incredible incentive for radiologists and radiology organizations across the US to make an investment in the future of radiology. This program tripled the impact of our gift.



- **Radiological Society of North America (RSNA) - Research & Education Foundation**

The ARS Foundation has donated to the RSNA R&E Foundation through the Visionaries in Practice (VIP) Giving Program since 2013.

Assoc. Prof. Frank Gaillard

Founder CEO / Editor in Chief

Email: frank@radiopaedia.org

6th January 2020

Dear Advanced Radiology Services Foundation (ARSF),

2019 has been a very successful year for Radiopaedia. We served 180 million pages to over 24.3 million individuals from every single country on earth. Over 8.3 million (34.25%) of these readers were from the United States, and 280,000 from Michigan alone, making your state the home of the 8th/51 largest readership of Radiopaedia. During the year, over 3200 cases were contributed and 1138 new articles were written, bringing our total to public 34788 cases and 13438 articles.

On behalf of the entire Radiopaedia.org community I wanted to thank you for your generous support and for being our inaugural [feature sponsor](#). Your financial assistance is allowing us to pursue a long overdue refactor of our case uploading functionality. Since the last time we optimized this part of the site, the size of submitted cases, as well as their complexity, has grown tremendously and our current workflow is limiting. The new version will not only make uploading cases more efficient but also add functionality to optimize the presentation of these images by allowing, for example, cropping, zooming and contrast/level optimization.

This is progressing well and is setting the scene for the first directly funded ARSF feature, namely the ability to upload DICOM images rather than first needing to export them as JPG. To that end we have developed the first version of a DICOM anonymizer which we have made available as an open source project. A demonstration version is available at radiopaedia.org/standalone_dicom_anonymizer.

Once this new upload functionality is completed we will move onto implementing the second part of the ARSF supported feature which is optimizing the delivery of cases. As cases have grown in size and complexity, delivering them to users with slower internet connections has become more of a challenge. Our plan is to change the format of delivered images to something more compact while retaining image quality and the ability to scroll through cases in a manner similar to clinical PACS viewers. We expect to be able to make substantial improvements.

Again, I wanted to thank you for your willingness to support free open-access radiology education and I look forward to working with ARSF in the years to come.

Frank Gaillard
Founder/CEO Radiopaedia.org



EMORY
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January 16, 2020

Dear Advanced Radiology Services Foundation:

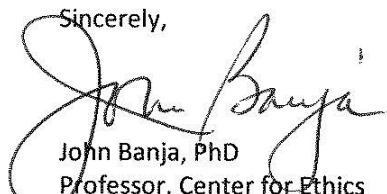
Although our project on the intersection of radiology and artificial intelligence ethics has only been underway since October 1, 2019, we believe it to have gotten off to a robust start. Two publications have been submitted acknowledging ARSF support—one to *Radiology: Artificial Intelligence* (which was accepted) and another to the *AMA Journal of Ethics* (which is presently under review). Emory radiology's multimedia department has consented to provide technical support for the podcasts that will complement the publications, while administrative personnel from the Center for Ethics will design and maintain a webpage that will post the podcasts, publication references, and other project-related news. Also, the principal investigator, John Banja, PhD, has delivered 3 presentations on ethical issues in AI that cited ARSF support.

Our project is dedicated to identifying and discussing issues on the implementation of artificial intelligence in health care delivery that are particularly relevant to radiologists. Indeed, ours may be the first project of its kind to join radiology faculty with faculty from a Center for Ethics. Even so, this project understands "ethics" very broadly and practically, such that the project will potentially include issues on the workflow impact of AI among radiology practices, liability issues as AI technologies are implemented, the economic relationship between radiology practices and the private sector, regulation of AI, AI education for radiologists and medical students, using "big data" for the public good, etc. We are simultaneously inspired and made wary by the old engineering axiom, "Build it first; ask for forgiveness later."

In addition to publications and podcasts, our agenda for 2020 includes a panel presentation abstract to the 2020 RSNA program conference committee; a draft agenda for an international conference on AI ethics in radiology; and developing a project that will secure additional grant support to enhance the deliverables of this ARSF project.

We are extremely grateful to the ARSF for the opportunity to do this work and are dedicated to disseminating our work products. We also welcome any content suggestions that the Foundation may have to inform our activities. We anticipate 2020 will be an exciting and productive year.

Sincerely,



John Banja, PhD
Professor, Center for Ethics
Emory University

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Atlanta, Georgia 30322

An equal opportunity, affirmative action university

Tel. 404.727.4954
Fax. 404.727.7399
www.emory.edu/ETHICS



- "I would like to add my thanks to you and the ARS Foundation for your generous support over the last 4 years. ARSF has had a significant impact on HPI by enabling growth in research projects and funding the acquisition of critical data sets to inform policy." – *Diane C. Mullis, Executive Vice President & CFO, American College of Radiology*

- "On behalf of the ACR Foundation, I'd like to thank you and the ARS Foundation for your continued commitment to our Foundation's health policy research initiatives by spearheading the 2019 HPR Match Challenge. I am thrilled to report that we were able to raise over \$160,000 from the Challenge for the Neiman Health Policy Institute." – *Brandy William, Fundraising Specialist ACR Foundation*

- "Let me add my thanks to you and all of your ARSF colleagues for once again demonstrating the vision and providing the "catalyst" that has resulted in yet another successful year for the ACR Foundation. The growing participation including our academic colleagues is a reflection of the recognition of the importance of this area of research.

When I look at the progress made over the past 4 years, ARSF should take great pride in having had an enduring impact on our specialty." – *William T. Thorwarth Jr. MD, FACR, CEO, American College of Radiology*



October 2, 2019

Dr. Rolf D. Hollstein
345 Whitehills Dr
East Lansing, MI 48823

Dear Dr. Hollstein,

Thank you for helping to fund radiology's future with your practice group donation of \$25,000 on 9/24/2019. Your gift to the RSNA Research & Education Foundation through the Visionaries in Practice (VIP) Program makes a difference as we strive to improve patient care through support of grant researchers and educators who will advance radiologic research, education and practice.

The generosity of practice group donors is critical to the R&E Foundation's ability to meet the challenge presented by an increasing need for grant funding. **The R&E Foundation Board of Trustees approved funding of over \$5 million, at a funding rate of over 30%! Your gift and sustained support ensures that the Foundation is able to meet the critical demand for grant funding in the years to come.**

To learn more about the Foundation and the work of our grant recipients, please visit RSNA.org/Foundation. If you have any questions about your gift, please contact Robert Leigh, Senior Manager in Fund Development, at rleigh@rsna.org or 630-590-7760.

Thank you for the generous support of Advanced Radiology Services Foundation! We value your leadership as a Visionary practice.

Sincerely,

A handwritten signature in blue ink that reads 'Thomas M. Grist'.

Thomas M. Grist, MD
Chair, Board of Trustees

Please use this letter as a statement of your donation should you require one for tax purposes. RSNA is a 501(c)(3) organization and no goods or services were provided to you in consideration for your contribution.

RSNA RESEARCH & EDUCATION FOUNDATION BOARD OF TRUSTEES

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Financial Position:

Advanced Radiology Services Foundation Statement of Financial Position December 31, 2019

	<u>December 31, 2019</u>
ASSETS	
Current Assets	
Cash: Investment	\$ 1,085,703
Cash: Operating	263,414
TOTAL Current Assets	\$ 1,349,117
TOTAL Assets	\$ 1,349,117
Net Assets	
Net Assets - Unrestricted	\$ 1,420,806
Change in Net Assets-Current Year	<u>(71,689)</u>
TOTAL Net Assets	\$ 1,349,117

Advanced Radiology Services Foundation Statement of Financial Activities For the Twelve Months Ending December 31, 2019

	<u>Year To Date</u>
Revenue	
Investment Income	\$ 93,251
Interest Income	1,653
Total Revenue	\$ 94,904
Expenses:	
Contributions-Restricted	\$ 100,000
Contributions-Unrestricted	57,500
Fees Other - Unrestricted	<u>9,093</u>
Total Expenses	\$ 166,593
NET INCOME / (LOSS)	\$ (71,689)

2019 Grants

**Advanced Radiology Services Foundation
Board of Directors Contribution Report
For the Year Ending December 31, 2019
As of 12/31/2019**

Charitable Organization - Unmatched	2015	2016	2017	2018		2019	
	Actual	Actual	Actual	Approved	Spent	Approved	Spent
American College of Radiology Foundation	100,000	-	100,000	100,000	100,000	100,000	100,000
Association of University Radiologists R & E Foundation			50,000	25,000			
Radiological Society of North America Foundation	75,000	75,000	75,000	75,000	75,000	75,000	25,000
Shumaker Scholarship Grant				25,000	21,413		
MSU PhD (Approved in 2015 \$450,000 over 3 years)							
Radiopaedia.org						60,000	7,500
Emory University						50,000	25,000
Unspecified				175,000			
Total Spent 2015-2017	\$ 175,000	\$ 75,000	\$ 225,000				
Total Approved				\$ 400,000		\$ 285,000	
Total Spent Year- to- Date					\$ 196,413		\$ 157,500



Future direction:

In 2020, we expect to continue support to radiopaedia.org . Early progress has been made in the technical improvements to this excellent radiology education website. We look forward to supporting their efforts with a second year grant as well as encouraging new sources for their future funding.

Noting its early success, in 2020 we look to continue our support of the Emory University Center for Ethics / Michigan State University grant on non-interpretative aspects of artificial intelligence and radiology for a second year and to begin the search for fundraising partners for the future.

Through four years of catalytic support of matching grants to the ACR Foundation directed to the Harvey L. Neiman Health Policy Institute, we have seen a positive restructuring of the fundraising infrastructure and they have demonstrated fundraising success. Based on this success, in 2020 our plan is to now begin to taper our support as they transition to a sustainable fundraising model.

In 2020, we will continue to support the RSNA Research and Education Foundation. We continue to explore possible support for a radiology education podcast in partnership with the RSNA.

We are now also actively exploring exciting additional grant opportunities in the area of education in radiology and artificial intelligence working with Michigan State University. The ARS Foundation is considering further funding for provider wellness programs in radiology. And as always, we continue to scout for new projects.

As we have done in the past, we plan to continue our strategies of:

- Identifying underappreciated opportunities;
- developing matching grants; and
- creating alliances in order to use our funding capacity as a catalyst for improving the health of our communities and investing in the future of radiology.