**FACULTY NAME:** \_\_\_\_\_\_Nicholas J. Tustison\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Purpose:** The Annual Faculty Review is used as an opportunity to celebrate faculty successes, develop mechanisms for continued success, and provide guidance and feedback for professional advancement. *Please understand that the more accurate the information you provide the more productive and meaningful your review will be.* Thank you for your thoughtful reporting efforts.

**SECTION I: CURRICULUM VITAE**

**Please submit an updated CV, following the School of Medicine P&T formatting, when you submit this report.**

**Reference website:** [**http://www.medicine.virginia.edu/administration/faculty/faculty-dev/pandt**](http://www.medicine.virginia.edu/administration/faculty/faculty-dev/pandt)

* **Click “Resources for Faculty” and then click “CV format guide”**

**SECTION II: SCHOLARLY AND ADMINISTRATIVE ACTIVITIES**

1. **BIBLIOGRAPHY**
   1. **Peer Reviewed Papers/Publications between April 1, 2015 – March 31, 2016**

**and Impact Factor**

(Note: Do not include manuscripts that are in press, accepted, or submitted.)

Qing K, Altes TA, **Tustison NJ**, Feng X, Chen X, Mata JF, Miller GW, de Lange EE, Tobias WA, Cates GD, Jr., Brookeman JR, Mugler JP, III. Rapid Acquisition of Helium-3 and Proton 3D Image Sets of the Human Lung in a Single Breath-hold using Compressed Sensing. *Magn Reson Med*, 74(4):1110-5, October 2015. Cited 1 time; IF = 3.571; Rank 20 out of 125 radiology, nuclear medicine & medical imaging.

Menze BH, …, **Tustison NJ**, …, Prastawa M, Reyes M, and Leemput KV. The Multimodal Brain Tumor Image Segmentation Benchmark (BRATS). *IEEE Trans Med Imaging*, 34(10):1993-2024, Oct 2015. Cited 96 times; IF = 3.390; Rank 5 out of 100 computer science, interdisciplinary applications, 12 out of 76 biomedical engineering, 18 out of 249 electrical & electronic engineering, 3 out of 24 imaging science & photographic technology, 21 out of 125 radiology, nuclear medicine & medical imaging.

Durst CR, Michael N, **Tustison NJ**, Patrie JT, Raghavan P, Wintermark M, and Velan SS. Noninvasive Evaluation of the Regional Variations of GABA using Magnetic Resonance Spectroscopy at 3 Tesla. *Magn Reson Imaging*, 33(5):611-7, June 2015. Cited 1 time; IF = 2.090; Rank 49 out of 125 radiology, nuclear medicine & medical imaging.

**Tustison NJ**, Shrinhidi KL, Wintermark M, Durst CR, Kandel BM, Gee JC, Grossman MC, and Avants BB. Optimal symmetric multimodal templates and concatenated random forests for supervised brain tumor segmentation (simplified) with ANTsR. *Neuroinformatics*, 13(2):209-225, April 2015. Cited 10 times; IF = 2.825; Rank 13 out of 102 computer science, interdisciplinary applications, 124 out of 252 neurosciences.

* 1. **Peer Reviewed Papers/Publications that are in press or accepted between April 1, 2015 – March 31, 2016** (Please differentiate)

Allen GI, …, **Tustison NJ**, …, Zhu S, Alzheimer's Disease Neuroimaging Initiative. Crowdsourced estimation of cognitive decline and resilience in Alzheimer's disease. *Alzheimers Dement*, In press. Cited 0 times; IF = 12.407; Rank 3 out of 192 clinical neurology.

Pustina DP, Coslett BH, Turkeltaub PE, **Tustison N**, Schwartz MF, and Avants B. Automated segmentation of chronic stroke lesions using LINDA: Lesion Identification with Neighborhood Data Analysis, *Hum Brain Mapp*, In press. Cited 0 times; IF = 5.969; Rank 2 out of 14 neuroimaging, 27 out of 252 neurosciences, 5 out of 125 radiology, nuclear medicine & medical imaging.

Hasan KM, Mwangi B, Cao B, Keser Z, **Tustison NJ**, Kochunov P, Frye RE, Savatic M, Soares J. Entorhinal cortex thickness across the human lifespan. *J of Neuroimaging*, In press. Cited 0 times; IF = 1.734; Rank 128 out of 192 clinical neurology, 12 out of 14 neuroimaging, and 65 out of 125 radiology, nuclear medicine & medical imaging.

Altes TA, Mugler JP, III, Ruppert K, **Tustison NJ**, Gersbach J, Szentpetery S, Meyer CH, de Lange EE, and Teague WG. Clinical Correlates of Lung Ventilation in Asthmatic Children. *J Allergy Clin Immun*, In press. Cited 0 times; IF = 11.476; Rank 1 out of 24 allergy, 6 out of 148 immunology.

**Tustison NJ**, Qing K, Wang C, Altes TA, Mugler JP, III. Atlas-based estimation of lung and lobar anatomy in proton MRI. *Magn Reson Med*, In press. Cited 0 times; IF = 3.571; Rank 20 out of 125 radiology, nuclear medicine & medical imaging.

* 1. **Peer Reviewed Papers/Publications that have been submitted between April 1, 2015 – March 31, 2016**

Stone JR, Wilde EA, Levin H, Taylor B, Bigler ED, Tate DF, Mayer AR, Black G, Scheibel RS, Newsome MR, Abildskov T, Lennon MJ, York GE, Agarwal R, DeVillasante J, Ritter JL, Walker PB, Ahlers ST, and **Tustison NJ**. Supervised learning technique for the automated identification of white matter hyperintensities in traumatic brain injury. *Brain Injury*, Submitted.

* 1. **Non-Peer Reviewed Manuscripts**

None.

* 1. **Book chapters published between April 1, 2015 – March 31, 2016**

None.

* 1. **Books published between April 1, 2015 – March 31, 2016**

None.

1. **EDITORIAL ACTIVITIES**
2. **Journal Editorships**

None.

1. **Journal Guest Editorships**

None.

1. **Journal Editorial Boards**

None.

1. **Book/Manuscript Reviews, and for which journals**

* Academic Radiology
* American Journal of Neuroradiology
* Annals of Biomedical Engineering
* Artificial Intelligence in Medicine
* Biomedical Signal Processing and Control
* Computers in Biology and Medicine
* Computerized Medical Imaging and Graphics
* Focused Ultrasound Foundation ad hoc grant reviewer
* Image and Vision Computing
* International Journal of Pattern Recognition and Artificial Intelligence
* IEEE Transactions on Medical Imaging
* IEEE Transactions on Pattern Analysis and Machine Intelligence
* IEEE Transactions on Biomedical Engineering
* Insight Journal
* International Conf. on Medical Image Computing and Computer Assisted Intervention
* International Journal of Biomedical Imaging
* International Journal of Computer Vision
* International Workshop on Medical Imaging and Augmented Reality
* IEEE International Symposium on Biomedical Imaging: From Nano to Macro
* Journal of Computed Tomography
* Journal of Electronic Imaging
* Journal of Magnetic Resonance Imaging
* Journal of Neurotrauma
* Journal of the Optical Society of America A
* Magnetic Resonance in Medicine
* Medical Physics
* Medical Image Analysis
* Neurobiology of Aging
* NeuroImage
* NeuroImage: Clinical
* Neuroradiology
* PLOS ONE
* Respirology
* SIAM Journal on Imaging Sciences

1. **RESEARCH ACTIVITIES**
   1. **Grants**
      1. **Active grants for which you are Principal Investigator, Co-Principal Investigator or site PI**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Title** | **Agency (NIH, State, Foundation, Internal, Industry)** | **Percent effort** | **UVa Direct Costs** | **UVa Total Costs** | **If industry, percent of total recruitment achieved** | **Expected end date** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

* + 1. **Active grants for which you are a Co-Investigator**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Title of Proposal** | **Agency (NIH, State, Foundation, Internal, Industry)** | **PI** | **Percent effort** | **Expected end date** |
| Simultaneous Xe129 MRI of Regional Lung Ventilation and Gas Uptake in COPD | NIH-NHLBI | JP Mugler |  | 5/31/2016 |
| Human Cerebral Vascular Autoregulation and Venous Outflow In Response to Microgravity-Induced Cephalad Fluid Redistribution | NASA | DR Roberts |  | 5/15/2018 |
|  |  |  |  |  |
|  |  |  |  |  |

* + 1. **Grants submitted (list as PI, co-PI, site PI, or co-I) between April 1, 2014 – March 30, 2015**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Title of Proposal** | **Agency (NIH, State, Foundation, Internal, Industry)** | **Date of Submission** | **Approximate Date of Review** | **Result of Review (Funded, Pending funding, Not funded, Pending review** | **NIH only**  **Priority Score/ %percentile, or date of review** | **UVa Direct Costs** |
| ITK-Lung: A Software Framework for Lung Image Processing and Analysis | NIH | 8/1/2015 | JC Gee (UPenn) | Not funded | 39/37 | $474,381 |
| Energy and Neural Circuit Excitability | NIH | 2/1/2016 | Mark Breenhaker (UVa) |  |  |  |
| Meningeal immunity in autism spectrum disorder | NIH | 12/1/2015 | Jonathon Kipnis (UVa) |  |  |  |
| Xe129 MRI of the Lung: A New Technology to Assess Treatment for COPD | NIH | September 2014 | Kun Qing (UVa) |  | 13/1 | 275,000 |

* 1. **Unfunded Research Efforts (Active)**
  2. **Cross-Grounds Collaboration (grants, papers, or other collaborations with faculty from other departments or UVA schools)**

(Title, dates, % effort, direct costs {current year}, indirect costs {current year}); name of funding organization or publication)

* 1. **\_\_\_0\_\_\_\_# of Patients Involved in Clinical Trials**
  2. **\_\_\_0\_\_\_\_# of Investigator Initiated Clinical Trials**
  3. **\_\_\_0\_\_\_\_# of Awarded Patents**
  4. **\_\_\_0\_\_\_\_# of Submitted Patent Applications**
  5. **\_\_\_0\_\_\_\_# of Disclosed Inventions**

1. **PRESENTATIONS/PUBLISHED ABSTRACTS AT MAJOR/SCIENTIFIC MEETINGS**
   1. **Peer-reviewed Scientific Oral Abstract Presentations between**

**April 1, 2015 – March 31, 2016 (i.e. RSNA, AUR)**

(Titles and co-authors)

None.

* 1. **Peer-reviewed Posters or Electronic Presentations between**

**April 1, 2015 – March 31, 2016**

(Titles and co-authors)

None.

* 1. **Published Abstracts between April 1, 2015 – March 31, 2016**

None.

* 1. **Invited Lectures between April 1, 2015 – March 31, 2016**

(Please include both internal and external lectures and list specific talk titles and organization)

None.

* 1. **Visiting Professorships between April 1, 2015 – March 31, 2016**

2016-present: **Visiting Assistant Researcher**, *Department of Neurobiology and Behavior*, University of California, Irvine, Irvine, CA.

Pending: **Adjunct Professor**, *Department of Radiology*, University of Pennsylvania, Philadelphia, PA.

1. **\_\_\_0\_\_\_ # OF CME CREDITS EARNED THIS ANNUAL PERIOD (April 1, 2015 – March 31, 2016)**

(Requirement: Please attach a detailed list of your CME credits to this document to include: course

name, date, and # of CMEs. Specific lecture titles are NOT required.)

Contact Denise Johnson [4-9377; [DW2UA@hscmail.mcc.virginia.edu](mailto:DW2UA@hscmail.mcc.virginia.edu)] if you require assistance.)

1. **SCIENTIFIC PROGRAM COMMITTEES**

(Ie. RSNA; **Include your role & note any committees you chair**)

None.

1. **NATIONAL/SOCIETY/NIH COMMITTEES**

(**Include your role & note any committees you chair**)

None.

1. **NIH STUDY SECTIONS**

(**Include your role & note any committees you chair**)

None.

1. **SCHOOL OF MEDICINE AND/OR UVA COMMITTEES**

(**Include your role & note any committees you chair**)

None.

1. **DEPARTMENT/DIVISION-LEVEL COMMITTEES**

*Note: Be sure to include education committees in this section.*

(**Include your role & note any committees you chair**)

None.

1. **PARTICIPATION IN DEVELOPMENT PROGRAMS**

(i.e. Leadership in Academic Matters [LAM], Promotion & Tenure Sessions, listed department development or institutional lecture )

None.

1. **OTHER FACTORS WHICH YOU FEEL SHOULD BE CONSIDERED**

(IE. Research equipment, consignments, undergraduate education, etc.)

None.

**SECTION III. PATIENT CARE ACTIVITIES**

1. **EXPANSION OF CLINICAL SERVICES FOR WHICH YOU ARE RESPONSIBLE**

Not applicable.

1. **NEW PROGRAMS**

Not applicable.

1. **CURRENT CLINICAL RESPONSIBILITIES (% TIME)**

Not applicable.

1. **MULTIDISCIPLINARY CLINICAL CONFERENCES, TUMOR BOARDS, OR CLINICAL ROUNDS (ie. PICU)**

(List name and frequency)

Not applicable.

1. **PLEASE DESCRIBE YOUR PQI PROJECT FOR FY ’16. THEN, DESCRIBE WHAT PQI PROJECT YOU PLAN TO DO FOR FY ’17.**

Not applicable.

**SECTION IV: TEACHING AND EDUCATIONAL ACTIVITIES**

(Include Basic Science, Practice of Medicine, Clerkship, Physical Diagnosis/Tutorials;

describe any new programs to which you have contributed.)

1. **MEDICAL STUDENTS AND/OR BASIC SCIENCE**

(lecture titles, course numbers, hours)

None.

1. **RESIDENTS/FELLOWS**

(lecture titles)

None.

1. **OTHER**

(Technologists, nurses, industry, insurance companies, etc. – include lecture titles; note to include any department/division level education committee work in Section II J., above.)

None.

1. **NEW EDUCATIONAL INITIATIVES DEVELOPED**

None.

1. **MENTORING** (Describe projects)
2. **\_\_\_0\_\_\_\_# of Pre-doctoral students mentored (lecture titles)**
3. **\_\_\_0\_\_\_\_# of Doctoral/Post-doctoral Research students mentored (lecture titles)**
4. **\_\_\_0\_\_\_\_\_# of Post-doctoral Fellows on training grants**
5. **\_\_\_0\_\_\_\_\_# of Post-doctoral Fellows on funded fellowships**
6. **\_\_\_0\_\_\_\_\_# of Post-doctoral Fellows on department funds**
7. **\_\_\_0\_\_\_\_# of Post-doctoral Fellows in School of Medicine for more than 3 years**
8. **\_\_\_0\_\_\_\_ Total # of Post-doctoral Fellows**
9. **\_\_\_0\_\_\_\_# of MSTP (Medical Scientist Training Program) Students (list projects)**
10. **GRADUATE STUDENT CONTACT HOURS**

(Mentorships, dissertation committees, etc.)

None.

1. **NEW COURSES/NEW CONFERENCES**

(Lecture titles, CME provided)

None.

1. **OTHER CONTRIBUTIONS**

(ie. Miscellaneous activities that have enhanced the growth, improvement and visibility of the department, such as volunteer work at the Free Clinic, Day of Caring, community service, Albemarle Medical Society, etc. Be sure to list titles and frequency.)

None.

**SECTION V: RECOGNITION, HONORS AND AWARDS**

(Include major and internal – i.e. positive comments and compliments from patients, staff, referring physicians, etc.)

1. **NATIONAL/INTERNATIONAL HONORS AND AWARDS/RECOGNITION**

None.

1. **INSTITUTIONAL HONORS/AWARDS**

None.

1. **DEPARTMENTAL HONORS/AWARDS**

None.

1. **INTERNAL RECOGNITION**

(i.e. letters of recognition from patients, referring physicians, etc.)

None.

**SECTION VI: LEAVE TIME AWAY FROM THE DEPARTMENT**

1. **\_\_0\_\_\_ # of academic days assigned**

(Please list an exact number, not “one per week worked” etc. – We will be requesting data from divisional assistants.)

1. **\_\_0\_\_\_ # of meeting/professional development days used**
2. **\_\_0\_\_\_ # of annual leave days used**
3. **\_\_0\_\_\_Total # of days away from the Department**

**SECTION VII: PERSONAL CAREER GOALS**

1. **Taking stock of your career and projecting a view into the future, what do you want to accomplish over the next one to three years? Five years?**

One to three years: promotion to associate professor. Five years: increase the number of external collaborations.

1. **How can the Department help you succeed in achieving these objectives?**

I do not really need anything from the department other than possible feasibility assessment of promotion as well as administrative support if deemed appropriate.

1. **In the next year, what specific steps will you take toward realizing your goals?**

Steps towards advancement have been discussed with Dr. Matsumoto. External collaborations are at the beginning stages. Concrete steps towards solidifying external collaborations include submission of a grant with my former group at UPenn (which did not get funded but we plan to resubmit in June). Another major collaborator is Dr. Mike Yassa at UC Irvine and we have just finished analyzing the well-known ADNI (Alzheimer’s Disease Neuro Initiative) data set. Mike and I plan to submit a paper (which will include Dr. James Stone) at the end of the summer and, hopefully, a grant soon thereafter.

1. **What objective criteria will you use to monitor your progress over the next year?**

1) A re-submitted grant and 2) a submitted paper on the ADNI data set.

1. **In five years, how will you measure your success?**

Honestly, I love my job and the unique situation I have with UVa. If I still have a job after five years, then I would count that as a success.

1. **Additional comments?**

**SECTION VIII: COMMENTS FROM THE CHAIR**

**SECTION IX ACKNOWLEDGMENT**

Your signature indicates your acknowledgement of having discussed your annual review and teaching evaluations with the Department Chair.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature: Faculty Member Date of Review

***(Leave blank until your meeting)***

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Signature: Department Chair Date of Review