

Curriculum Vitae

PERSONAL INFORMATION

Lotti, Tommaso

ECAS (European Commission Authentication Service) user name: Tommaso_Lotti

Date and place of birth: 14/08/1982, Fiesole (Firenze, Italy)

Fiscal Code: LTTTMS82M14D575V

• EDUCATION

- 01/11/2008 - 31/10/2011 PhD
Environmental Engineering and Physics Department (DIFA), University of Basilicata, Italy
Civil and Environmental Engineering Department (DICEA), University of Florence, Italy
- 01/06/2009 - 31/12/2010 International training period during PhD fellowship
Department of Biotechnology -BT (Environmental Biotechnology group - EBT, Kluyver Lab.), Delft University of Technology, The Netherlands
- 01/10/2005 - 02/10/2008 Master
Faculty of Environmental Engineering/Civil and Environmental Engineering Department (DICEA), University of Florence, Italy
- 10/06/2009 - 24/06/2009 Advanced course on environmental biotechnology
Department of Biotechnology, Delft University of Technology, The Netherlands
- 01/09/2007 - 31/12/2007 Training period
WETSUS, Centre of Excellence for Sustainable Water Technology, The Netherlands
- 01/01/2007 - 31/09/2007 Erasmus project
Faculty of Civil Engineering, Universiteit van Amsterdam, The Netherlands

• CURRENT POSITION

- 01/12/2015 - present Postdoc, Marie Skłodowska-Curie Individual Fellowship
Department of Civil and Environmental Engineering (DICA), Polytechnic University of Milan, Italy
- 01/07/2014 - present Researcher - Professional Collaboration
Civil and Environmental Engineering Department (DICEA), University of Florence, Italy

• PREVIOUS POSITION

- 16/04/2014 – 30/11/2015 Postdoc
Dep. of Civil and Environmental Engineering (DICA), Polytechnic University of Milan, Italy
- 01/11/2011 - 01/02/2014 Postdoc
Environmental Biotechnology group (EBT), Delft University of Technology, The Netherlands
- 01/09/2010 - 31/10/2011 PhD
Environmental Biotechnology group (EBT), Delft University of Technology, The Netherlands

• AWARDS

- 13/01/2017 Waternet Watercycle Innovation Award 2016
Waternet, Amsterdam, the Netherlands

09/01/2015 Jaap van der Graaf Award 2014
Witteveen+Bos Raadgevende ingenieurs B.V., Deventer, the Netherlands

30/10/2009 Alberto Rozzi memorial prize 2009
Dep. of Civil and Environmental Engineering (DICA), Polytechnic University of Milan, Italy

• **SUPERVISION OF GRADUATE STUDENTS**

01/04/2014 - present 7 Master Students
Dep. of Civil and Environmental Engineering (DICA), Polytechnic University of Milan, Italy

01/11/2008 - present 7 Master Students
Dep. of Civil and Environmental Engineering (DICEA), University of Florence, Italy

01/09/2009 - 30/04/2015 8 Master Students
Environmental Biotechnology group (EBT), Delft University of Technology, The Netherlands

• **TEACHING ACTIVITIES**

01/10/2015 - present Lecturer – Granular sludge systems, University of Florence, Italy

08/01/2014 - 24/01/2014 Guest lecturer - Thermodynamics of biochemical reactions, Polytechnic University of Milan, Italy

28/11/2013 - 28/11/2013 Guest lecturer - The anammox process, Delft University of Technology, The Netherlands

07/05/2013 - 10/05/2013 Guest lecturer - Anammox process in the mainstream: research and perspectives, University of Florence, Italy

29/11/2012 - 01/12/2012 Guest lecturer - Future perspective in wastewater treatment: cold-anammox, Tallinn University of Technology and University of Tartu, Estonia

23/11/2012 - 25/11/2012 Guest lecturer - Anammox process in the mainstream: research and perspectives, University of Florence, Italy

19/11/2012 - 22/11/2012 Guest lecturer - Thermodynamics of biochemical reactions, Polytechnic University of Milan, Italy

15/11/2012 - 15/11/2012 Guest lecturer - Novel technologies and new perspectives in wastewater treatment, Delft University of Technology, The Netherlands

12/06/2012 - 22/06/2012 Lecturer and assignment supervisor during the Advanced Course Environmental Biotechnology - Fundamentals of environmental biotechnology: i) basic microbiology, stoichiometry and kinetics; ii) thermodynamics, dynamics and competition, Delft University of Technology, The Netherlands

15/06/2011 - 24/06/2011 Lecturer and assignment supervisor during the Advanced Course Environmental Biotechnology - Fundamentals of environmental biotechnology: i) basic microbiology, stoichiometry and kinetics; ii) thermodynamics, dynamics and competition, Delft University of Technology, The Netherlands

• **ORGANIZATION OF SCIENTIFIC MEETINGS**

23/06/2014 - 25/06/2014 Member of the YWP Organizing Committee at 2nd IWA specialized conference EcoTechnologies for Sewage Treatment Plants - EcoSTP2014, Italy

• **PUBLICATIONS IN MAJOR INTERNATIONAL PERR-REVIEWED JOURNALS**

Sguanci S., **Lotti T.**, Caretti C., Caffaz S., Dockhorn T., Lubello C. Inhibitory effects of veterinary antibiotics on anammox activity: short- and long-term tests (2017) Environmental Technology (United Kingdom), DOI:10.1080/09593330.2016.1272640

Scaglione D., **Lotti T.**, Ficara E., Malpei F. Inhibition on anammox bacteria upon exposure to digestates from biogas plants treating the organic fraction of municipal solid waste and the role of conductivity (2017) Waste Management 61, pp. 213-219. DOI: 10.1016/j.wasman.2016.11.014

Scaglione D., **Lotti T.**, Menin G., Niccolini F., Malpei F., Canziani R. Complete autotrophic process for nitrogen removal from ink-jet printing wastewater (2016) *Chemical Engineering Transactions* 49, pp. 499-504. DOI: 10.3303/CET1649084

Rodriguez-Sanchez A., Purswani J., **Lotti T.**, Maza-Marquez P., van Loosdrecht M.C.M., Vahala R., Gonzalez-Martinez A. Distribution and microbial community structure analysis of a single-stage partial nitrification/anammox granular sludge bioreactor operating at low temperature (2016) *Environmental Technology (United Kingdom)* 37 (18), pp. 2281-2291. DOI: 10.1080/09593330.2016.1147613

González-Martínez A., Rodríguez-Sánchez A., **Lotti T.**, García-Ruiz M.-J., Osorio F., Gonzalez-Lopez J., van Loosdrecht M.C.M. Comparison of bacterial communities of conventional and A-stage activated sludge systems (2016) *Scientific Reports* 6(18786), pp. 1-11. DOI: 10.1038/srep18786

Lotti T., Kleerebezem R., Abelleira-Pereira J.M., Abbas B., van Loosdrecht M.C.M. Faster through training: the anammox case (2015) *Water Research* 81, pp. 261-268. DOI: 10.1016/j.watres.2015.06.001

Lotti T., Kleerebezem R., van Loosdrecht M.C.M. Effect of temperature change on anammox activity (2015) *Biotechnology and Bioengineering* 112 (1), pp. 98-103

Lotti T., Kleerebezem R., Hu Z., Kartal B., de Kreuk M.K., van Erp Taalman Kip C., Kruit J., Hendrickx T.L.G., van Loosdrecht M.C.M. Pilot-scale evaluation of anammox based main-stream nitrogen removal from municipal wastewater (2015) *Environmental Technology*. 36 (9), pp. 1167-1177

González-Martínez A., Osorio F., Rodríguez-Sánchez A., Martínez-Toledo M.V., Gonzalez-Lopez J., **Lotti T.**, van Loosdrecht M.C.M. Bacterial community structure of a lab-scale anammox membrane bioreactor (2015) *Biotechnology Progress*. 31 (1), pp.186-193

Lotti T., Kleerebezem R., Hu Z., Kartal B., Jetten M.S.M., van Loosdrecht M.C.M. Simultaneous partial nitrification and anammox at low temperature with granular sludge (2014) *Water Research* 66, pp. 111-121

Lotti T., Kleerebezem R., van Erp Taalman Kip C., Hendrickx T.L.G., Kruit J., Hoekstra M., van Loosdrecht M.C.M. Anammox growth on pretreated municipal wastewater (2014) *Environ Sci Technol*. 48 (14), pp. 7874-7880

Lotti T., Kleerebezem R., Lubello C., van Loosdrecht M.C.M. Physiological and Kinetic Characterization of a Suspended Cell Anammox Culture (2014) *Water Research* 60(14), pp. 1-14

Pérez J., **Lotti T.**, Kleerebezem R., Picioreanu C., van Loosdrecht M.C.M. Outcompeting nitrite-oxidizing bacteria in single-stage nitrogen removal in sewage treatment plants: a model-based study (2014) *Water Research* 66 (1): 208-218

Lin Y.M., **Lotti T.**, Sharma P.K., van Loosdrecht M.C.M. Apatite accumulation enhances the mechanical property of anammox granules (2013) *Water Research* 47 (13), pp. 4556-4566

Hu Z., **Lotti T.**, de Kreuk M.K., Kleerebezem R., van Loosdrecht M.C.M., Kruit J., Jetten M.S.M., Kartal, B. Nitrogen removal by a nitrification-anammox bioreactor at low temperature (2013) *Applied and Environmental Microbiology* 79 (8), pp. 2807-2812

Hu Z., **Lotti T.**, van Loosdrecht M.C.M., Kartal B. Nitrogen removal with the anaerobic ammonium oxidation process (2013) *Biotechnology Letters* 35 (8), pp. 1145-54

Lotti T., Cordola M., Kleerebezem R., Caffaz S., Lubello C., van Loosdrecht M.C.M. Inhibition effect of swine wastewater heavy metals and antibiotics on anammox activity (2012) *Water Science & Technology* 66 (7), pp. 519-26

Lotti T., Van der Star W.R., Kleerebezem R., Lubello C., van Loosdrecht M.C.M. The effect of nitrite inhibition on the anammox process (2012) *Water Research* 46 (8), pp. 2559-69

Lotti T., Scaglione D., Teli A., Canziani R., ficara E., Malpei F. Rimozione completamente autotrofa dell'azoto con batteri anammox: passato, presente e futuro (2014) *Ingegneria dell'Ambiente* 1, 3-26.

• BOOKS

van Loosdrecht M.C.M., Nielsen P.H., Lopez-Vazquez C.M., Brdjanovic D. (2016) *Experimental Methods in Wastewater Treatment*. IWA Publishing. ISBN13: 978.17.8040.474.5.

Hendrickx T., Kruit J., Eggink G., Geilvoet S., van Erp Taalman Kip C., **Lotti T.**, Kartal B., Hu Z. (2013) *Toepassing van Anammox in de hoofdstroom van een rioolwaterzuivering*. Press: Kruyt Grafisch Adviesbureau. STOWA 2013-39. ISBN: 978.90.5773.620.9.

- **PEER-REVIEWED CONFERENCE PROCEEDINGS**

3rd IWA Specialized International Conference Ecotechnologies for Wastewater Treatment. Cambridge (UK), 27-30 June 2016

5th International Conference on Industrial Biotechnology. Bologna (Italy), 10-13 April 2016

10th SIDISA 2016. Rome (Italy), 19-23 June 2016

IWW Amsterdam International Water Week. Amsterdam (Netherlands), 2-6 November 2015

IWA International Conference on Nutrient Removal and Recovery. Gdansk (Poland), 18-21 May 2015

AD14 World Congress on Anaerobic Digestion. Vina del Mar (Chile), 15-18 November 2015

ICheaP12-International Conference on Chemical & Process Engineering. Milano, 19-22 May 2015

Keynote presentation at: 2nd IWA specialized conference EcoTechnologies for Sewage Treatment Plants - EcoSTP2014. Verona (Italy), 23-25 June 2014

11th IWA Leading Edge Conference on Water and Wastewater Technologies - LET 2014. Abu Dhabi (UAE), 26-29 May 2014

IWA/WEF Nutrient Removal and Recovery 2013: Trends in Resource Recovery and Use. Vancouver (Canada), 28-31 July 2013

WEFTECH 2013: the Water Environment Federation's Annual Technical Exhibition and Conference. Chicago, Illinois (USA), 5-9 October 2013

IWA Nutrient Removal and Recovery. Harbin (China), 23-25 September 2012

International IWA Conference on autotrophic nitrogen removal: from research to applications. SIDISA (International Symposium on Sanitary and Environmental Engineering). Milan (Italy), 26-29 June 2012

8th IWA Symposium on Waste Management Problems in Agro-Industries. Çeşme (Turkey), 22-24 June 2011

2nd IWA Specialized Conference: Nutrient Management in Wastewater Treatment Processes. Krakow (Poland), 6-9 September 2009

- **WORKSHOPS**

Invited speaker: Anammox: from Sidestream to Mainstream. Amsterdam International Water Week-AIWW, Amsterdam (The Netherlands), 2-6 November 2015

Invited speaker: Europe, environment and urban wastewater treatment: the policy, the economy and the ready-to-market innovations. EcoMondo-The green technologies expo, Rimini (Italy), 3-6 November 2015

Invited attendant: Engineering and Control of Natural and Synthetic Microbial Communities. Isaac Newton Institute for Mathematical Sciences, Cambridge (UK), 26-28 November 2014

Invited speaker: Anammox process in the mainstream: research and perspectives. IWA Nutrient Removal and Recovery. Harbin (China), 25 September 2012

- **SEMINARS/CONFERENCE LECTURES**

Conference Lecture (workshop): Hoekstra, M, Lotti, T, Kleerebezem, R, Erp Taalman Kip, C van, Hendrickx, T & Loosdrecht, MCM van (2014, May 28). Towards energy neutral wastewater treatment by implementing anammox in the mainstream, a pilot scale evaluation and implementation at Dokhaven WWTP. Abu Dhabi, United Arab Emirates, Lecture 11 th IWA Leading Edge Conference on Water and Wastewater Technologies, 26-29 May 2014, Abu Dhabi, United Arab Emirates.

Conference Lecture (workshop): Perez Canestro, JO, Aguirrezabala, T, Lotti, T, Kleerebezem, R, Picioreanu, C & Loosdrecht, MCM van (). Outcompeting NOB in granular sludge reactors at low temperatures. Gdansk, Poland, Lecture IWA Nutrient Removal and Recovery: moving innovation into practice, 18-21 May 2015, Gdansk, Poland.

Seminar for the Doctorate School: Thermodynamic in biochemical systems. Politecnico di Milano (Italy), 2012-2014-2015-2016.

Seminar at the event Kick-off Delft Urban Water Centre: Anammox in the main-stream. Delft (the Netherlands), 29 May 2012

Seminar for the Young Water Professionals Benelux at the workshop Technology Development: Nereda and Anammox as case studies. Epe (the Netherlands), 9 May 2012

Seminar at DHV-Royal Haskoning: Anammox in de hoofdstroom. Amersfoort (the Netherlands), 2 May 2012

- **PATENTS**

Patent WO/2014/171819 (Publication Date: 23-10-2014; International Application Number: PCT/NL2014/050204) Process for biological removal of nitrogen from wastewater. Inventors: **T. Lotti**, T.L.G. Hendrickx, M.C.M. van Loosdrecht, J. Kruit

Patent NL PD 015626 (Pending; International Application Number: PCT/SE01/01699). Extracellular polymers from granular sludge as sizing agents. Inventors: Y. Lin, **T. Lotti**, M.C.M. van Loosdrecht

Milano, 5 Ottobre 2015

Ing. Tommaso Lotti, Ph.D.